

Практическое руководство по GnuCash

The GnuCash Documentation Team

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This Guide contains a tutorial for using GnuCash and describes the concepts behind GnuCash.

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Содержание

Об авторах	xii
I. Введение	1
1. Обзор	4
Вступление	4
Характерные особенности	5
Легкость в использовании	5
Учет ваших инвестиций	6
Международная поддержка	6
Поддержка бизнеса	6
Особенности бухгалтерского учета	6
Об этой документации	7
Дополнительная помощь	8
Онлайн справка	8
GnuCash Wiki	9
GnuCash онлайн помощь	9
Установка	9
2. Основы	10
Основные понятия отчетности	10
Пять основных счетов	10
Формула отчетности	10
Двойная запись	11
Организация данных	12
Файлы	12
Счета	12
Транзакции	13
Интерфейс GnuCash	13
Советы дня GnuCash	13
Окно дерева счетов	14
Окно реестра счетов	15
Кнопки Панели Инструментов	16
Панель вкладок	16
Пункты Меню	16
Горячие клавиши	17
Получение помощи	17
Руководство помощи	17
Веб доступ	17
Поиск тем	18
Сохранение ваших финансовых данных	18
Создание файла	18
Сохранение данных	18
Открытие данных	21
Дублирование иерархии счетов	21
Резервные копии и восстановление данных	21
Резервная копия (.gnucash)	22
Журнал изменений (.log)	22
Файлы блокировки (.LNK and .LCK)	22
Управление файлами	23
Перенос GnuCash данных	23
Перенос финансовых данных	23
Перенос настроек	23
Объединяя все вместе	25

3. Счета	33
Основные понятия отчетности	33
Балансовые счета	33
Счета Доходов и Расходов	34
Счета GnuCash	34
Балансовые счета	34
Счета Доход и Расход	36
Прочие типы счетов	39
Объединяя все это вместе	39
Простой пример	39
Основные счета верхнего уровня	40
Создание суб-счетов	42
4. Транзакции	45
Basic Concepts	45
The Account Register	45
Features of the Account Register	45
Choosing a Register Style	45
Using Entry Shortcuts	47
Simple vs. Split Transactions	48
Simple Transaction Example	49
Split Transaction Example	50
Reconciliation	51
Reconcile windows	52
Scheduled Transactions	56
Creating from the Ledger	56
Creating from the Editor	58
Putting It All Together	64
Open GnuCash file	64
Opening Balances	65
Additional Transaction Examples	66
Save file	68
Reports	68
II. Организация личных финансов	71
5. Чековая книжка	75
Setting up Accounts	75
Entering Deposits	75
Entering Withdrawals	76
ATM/Cash Withdrawals	76
Reconciling Your Accounts	76
Putting It All Together	77
Opening Balances	77
Add some transactions	77
Opening Balances	78
Save file	80
Reports	81
6. Кредиты	85
Concepts	85
Setting Up Accounts	85
Simple Expense Account Setup	85
Complex Expense Account Setup	85
Entering Expense Transactions	85
Other Considerations for Expense Accounts	86
7. Кредитные карты	87
Concepts	87

Setting Up Accounts	87
Simple Setup	87
Complete Setup	88
Entering Charges	88
Entering Payments	89
Putting It All Together	90
Open GnuCash file	90
Purchases	91
Refund	92
Interest Charge	92
Reconciliation	93
Payment	94
Save file	96
Reports	96
8. Кредиты	99
Basic Concepts	99
Terminology	99
Setting Up Accounts	99
Calculations	100
Example: Monthly Payments	101
Example: Length of Loan	101
Advanced: Calculation Details	101
House Mortgage (How-To)	103
A Personal Loan to a friend (How-To)	106
Loan Specifications	106
Accounts for the loan	107
Lending the money	107
Receiving first payment	108
Receiving second payment	109
Automobile Loan (How-To)	110
Reconciling with the Loan Statements (How-To)	111
Selling a house or a car (How-To)	111
Simple Transaction	111
A More Complex Transaction	112
9. ИНВЕСТИЦИИ	114
Basic Concepts	114
Terminology	114
Types of Investments	116
Setting Up Accounts	116
Using Predefined Investment Accounts	117
Creating Investment Accounts Manually	117
Custom Accounts Example	118
Interest Bearing Accounts	119
Account Setup	119
Example	120
Setup Investment Portfolio	122
Setup Accounts for Stocks and Mutual Funds	122
Example Stock Account	123
Buying Shares	127
Entering Preexisting Shares	127
Buying New Shares	128
Setting Share Price	130
Initial Price Editor Setup	130
Setting Stock Price Manually	131

Configuring for Automatic Retrieval of Quotes	132
Displaying Share Value	133
The «Price Source» in Reports	134
Selling Shares	136
Selling Shares with Manual Calculation of Capital Gain or Loss	137
Examples of Selling Shares with Manually Entry of Capital Gain or Loss	139
Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots	143
Dividends	155
Dividends in Cash	155
Dividends Re-Invested	156
Return of Capital	156
Splits and Mergers	157
Simple Stock Split	157
Moderately Complex Stock Merger	160
10. Отчеты	163
Overview	163
Saved Reports Configurations Concepts	163
Standard Reports Overview	164
Assets & Liabilities Group	164
Budget Group	166
Business Group	167
Income & Expense Group	168
Sample & Custom Group	170
Other Reports	171
11. Доходы от прироста капитала	173
Basic Concepts	173
Estimating Valuation	173
Account Setup	174
Example	175
Unrealized Gains	175
Selling	176
Taxation	178
12. Мультивалютные операции	180
Basic Concepts	180
Manually Recording Currency Transaction	180
Account Setup	180
Recording and Updating Currency Exchange Rates	182
Recording Purchases in a Foreign Currency	186
Tracking Currency Investments	191
Reconciling Statements in a Foreign Currency	192
Automatically Recording Currency Transactions using Trading Accounts	192
Trading Account Concepts	192
Recording Foreign Currency Transactions with Trading Accounts	193
III. Организация бизнес финансов	196
13. Business Features	199
Introduction to Business Features	199
Business Setup	199
Account Setup	199
Setting up Sales Tax Tables	200
Enter Company Information	202
Setting Business Preferences	204
Setting Billing Terms	204
Accounts Receivable	205
System Components	206

Customers	206
Invoices	208
Customer Jobs	211
Process Payment	212
Changing the Invoice Appearance	213
Accounts Payable	215
System Components	215
Vendors	215
Bills	217
Vendor Jobs	220
Process Payment	220
Payroll	221
Basic Concepts	221
Account Setup	221
Payroll Protocol Sample	222
Business Payroll Example	224
14. Budgets	228
Basic Concepts	228
Terminology	228
Creating a Budget	228
Choose Which Accounts To Budget For	228
Choosing a Budget Period	229
Getting Started	229
Entering Budget Values	229
Budget Reporting	229
Budgeted Income Statement	230
Budgeted Balance Sheet	230
15. Other Assets	231
General Concepts	231
Other Assets Described	231
Current Assets	231
Long-term (Fixed) Assets	231
Current Assets	231
Short-term Receivables	231
Reimbursable Expenses	232
Travel Advances	233
Prepaid Premiums or Prepaid Rent	233
Suspense or Wash Accounts	234
Short or Long-term Assets	235
Long-term (Fixed) Assets	235
Land	235
Buildings	235
Leasehold Improvements	236
Vehicles or Equipment	236
Intangibles	236
16. Depreciation	237
Basic Concepts	237
Personal Finances	237
Business	237
Estimating Valuation	238
Depreciation Schemes	238
Account Setup	240
Example	241
17. Python Bindings	244

18. Importing Business Data	245
Importing Bills and Invoices	245
General	245
The format of the import file	245
Import your data	247
Feedback and statistics	247
What could go wrong?	248
Not supported invoice functionality	249
Importing Customers and Vendors	250
General	250
The format of the import file	250
Import your data	251
Feedback and statistics	252
What could go wrong?	252
Not supported customer/vendor functionality	253
IV. Приложения	254
GnuCash Glossary	256
A. Migration Guide	260
Using Accounts vs. Categories	260
Importing Data	260
Import of Financial Data by QIF Files	260
Import of Business Data by CSV Files	260
Converting XML GnuCash File	260
B. Auxiliary File Formats	263
Check Format Files (* .chk)	263
Overview	263
Example file	263
Field Descriptions	264
Creating Check Format Files	272
C. GNU Free Documentation License	274
0. PREAMBLE	274
1. APPLICABILITY AND DEFINITIONS	274
2. VERBATIM COPYING	275
3. COPYING IN QUANTITY	275
4. MODIFICATIONS	276
5. COMBINING DOCUMENTS	277
6. COLLECTIONS OF DOCUMENTS	277
7. AGGREGATION WITH INDEPENDENT WORKS	277
8. TRANSLATION	278
9. TERMINATION	278
10. FUTURE REVISIONS OF THIS LICENSE	278
Addendum	278

Список иллюстраций

2.1. Взаимосвязь основных типов счетов	11
2.2. Диалог сохранения данных при выборе XML или sqlite3.	19
2.3. Диалог сохранения данных при выборе mysql или postgres.	20
4.1. Entering a split transaction	51
9.1. Selling Shares - Capital Gains - Lots in Account window	144
9.2. Selling Shares - Capital Gains - Security register before scrubbing a single lot	147
9.3. Selling Shares - Capital Gains - Lots before scrubbing a single lot	147
9.4. Selling Shares - Capital Gains - Lots before scrubbing a single lot, after manual linking	148
9.5. Selling Shares - Capital Gains - Register after manual linking and scrubbing a single lot	148
9.6. Selling Shares - Capital Gains - Register before Scrub Account	150
9.7. Selling Shares - Capital Gains - Lots before Scrub Account	150
9.8. Selling Shares - Capital Gains - Lots after Scrub Account	151
9.9. Selling Shares - Capital Gains - Register after Scrub Account	152
9.10. Selling Shares - Capital Gains - Register after Scrub Account	153
9.11. Selling Shares - Capital Gains - Lot 0 after Scrub Account	153
9.12. Selling Shares - Capital Gains - Lot 1 after Scrub Account	154
9.13. Selling Shares - Capital Gains - Register after scrubbing a single lot	155
13.1. Sales Tax Tables Editor	201
13.2. New Sales Tax Table Entry	201
13.3. Entering Company Information	203
13.4. Billing Terms Editor	204
13.5. New Billing Term	205
13.6. New Customer Registration Window	207
13.7. Find Customer Window	208
13.8. Creating a New Invoice	209
13.9. Edit Invoice Window	209
13.10. Post Invoice Window	210
13.11. Invoice Print Output	211
13.12. New Customer Job	212
13.13. Process Customer Payment	213
13.14. The New Style Sheet Window	213
13.15. HTML Style Sheets Example Window	214
13.16. HTML Style Sheets Example Output	215
13.17. New Vendor Registration Window	216
13.18. Find Vendor Window	217
13.19. New Bill Registration Window	218
13.20. Edit Bill Window	219
13.21. Post Bill Window	219
13.22. New Vendor Job	220
13.23. Process Vendor Payment	221
13.24. Payroll Example: Initial Setup	224
13.25. Payroll Example: Employee Split Transaction	225
13.26. Payroll Example: Accounts After Salaries Paid	226
13.27. Payroll Example: Accounts After Paying Government	227

Список таблиц

2.1. Настройки GnuCash	24
2.2. Настройки отчетов	24
2.3. Настройки онлайн-банкинга	24
8.1. Buying a House Split Transaction	104
8.2. Personal loan to a Friend	107
8.3. Selling an asset (house) with a profit	112
8.4. Selling an asset (house) with a loss	112
8.5. Selling an asset (house) with a profit	113
8.6. Selling an asset (house) with a profit 2	113
9.1. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Gross Pricing	138
9.2. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Net Pricing	138
9.3. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction	138
9.4. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction	138
9.5. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction	139
9.6. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction	139
9.7. Selling Shares Split Scheme, Sale & Gain Combined, Gross Pricing	139
9.8. Selling Shares Split Scheme, Sale & Gain Combined, Net Pricing	141
9.9. Selling Shares Split Scheme, Sale Transaction, Gross Pricing	141
9.10. Selling Shares Split Scheme, Gain Transaction, Gross Pricing	142
9.11. Selling Shares Split Scheme, Sale Transaction, Net Pricing	142
9.12. Selling Shares Split Scheme, Gain Transaction, Net Pricing	142
9.13. Transaction 1 dealing with value received and the reduction of the number of shares	146
9.14. Transaction 2 capital gain/loss (loss in this example)	146
11.1. Turning an Accrued Gain into a Realized Gain	177
11.2. Turning an Accrued Gain into a Realized Gain	178
11.3. Turning an Accrued Gain into a Realized Gain	178
12.1. Selling a currency with a Split Transaction Scheme	192
13.1. Sample Tax Table Entries for EU country (e.g. 21% / 6% / 0% Belgium, 20% / 5% / 0% UK etc.) (2017)	202
13.2. Sample Tax Table Entries for Australia (2017)	202
13.3. Sample Tax Table Entries for Cook County, Illinois (2017)	202
13.4. Payroll Transaction Map	223
13.5. Payroll Transaction Map for Employee 1	225
16.1. Linear Depreciation Scheme Example	239
16.2. Geometric Depreciation Scheme Example	239
16.3. Sum of Digits Depreciation Scheme Example	240
B.1. Overall Page Description Fields	264
B.2. Multiple Checks Per Page Fields	266
B.3. Individual Check Item Fields	268
B.4. Individual Check Item Types	270

Об авторах

Группа документации GnuCash является открытой группой пользователей и разработчиков GnuCash, которые на добровольной основе пишут и улучшают эту документацию во благо более обширного сообщества пользователей. Пользователям, заинтересованным в написании документации на английском языке, предлагается выразить своё желание в списке рассылки GnuCash <gnucash-devel@gnucash.org> для координации дальнейших действий. Пользователей, заинтересованных в переводе оригинальной документации на русский язык, просим выразить свои пожелания или замечания к переводу в списке рассылки <gnucash-user@gnucash.org> или напрямую связаться с группой перевода.

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Часть I. Введение

Содержание

1. Обзор	4
Вступление	4
Характерные особенности	5
Легкость в использовании	5
Учет ваших инвестиций	6
Международная поддержка	6
Поддержка бизнеса	6
Особенности бухгалтерского учета	6
Об этой документации	7
Дополнительная помощь	8
Онлайн справка	8
GnuCash Wiki	9
GnuCash онлайн помощь	9
Установка	9
2. Основы	10
Основные понятия отчетности	10
Пять основных счетов	10
Формула отчетности	10
Двойная запись	11
Организация данных	12
Файлы	12
Счета	12
Транзакции	13
Интерфейс GnuCash	13
Советы дня GnuCash	13
Окно дерева счетов	14
Окно реестра счетов	15
Кнопки Панели Инструментов	16
Панель вкладок	16
Пункты Меню	16
Горячие клавиши	17
Получение помощи	17
Руководство помощи	17
Веб доступ	17
Поиск тем	18
Сохранение ваших финансовых данных	18
Создание файла	18
Сохранение данных	18
Открытие данных	21
Дублирование иерархии счетов	21
Резервные копии и восстановление данных	21
Резервная копия (.gnucash)	22
Журнал изменений (.log)	22
Файлы блокировки (.LNK and .LCK)	22
Управление файлами	23
Перенос GnuCash данных	23
Перенос финансовых данных	23
Перенос настроек	23
Объединяя все вместе	25
3. Счета	33
Основные понятия отчетности	33

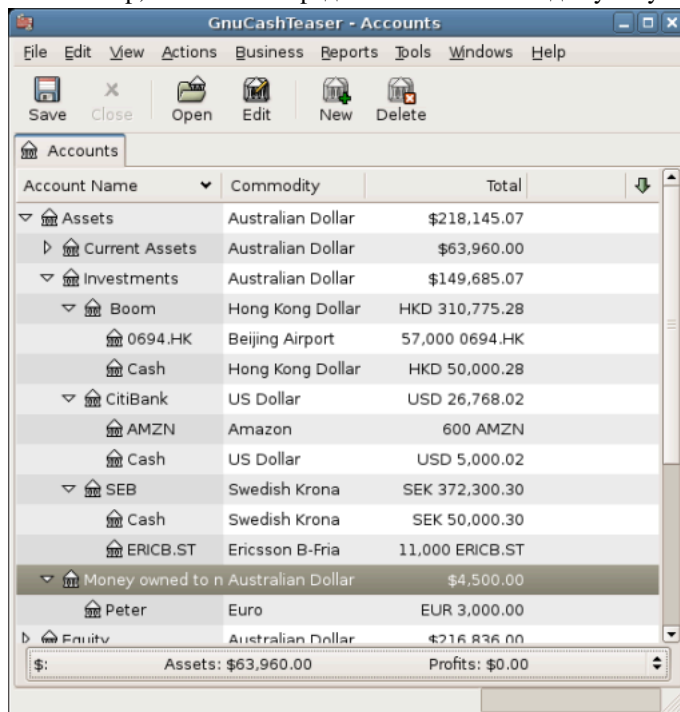
Балансовые счета	33
Счета Доходов и Расходов	34
Счета GnuCash	34
Балансовые счета	34
Счета Доход и Расход	36
Прочие типы счетов	39
Объединяя все это вместе	39
Простой пример	39
Основные счета верхнего уровня	40
Создание суб-счетов	42
4. Транзакции	45
Basic Concepts	45
The Account Register	45
Features of the Account Register	45
Choosing a Register Style	45
Using Entry Shortcuts	47
Simple vs. Split Transactions	48
Simple Transaction Example	49
Split Transaction Example	50
Reconciliation	51
Reconcile windows	52
Scheduled Transactions	56
Creating from the Ledger	56
Creating from the Editor	58
Putting It All Together	64
Open GnuCash file	64
Opening Balances	65
Additional Transaction Examples	66
Save file	68
Reports	68

Глава 1. Обзор

Вступление

GnuCash это пакет программного обеспечения для учета личных финансов, разработанный для вас. Его вполне достаточно для хранения всей вашей финансовой информации, от простой до очень сложной. Это один из немногих пакетов финансовых программ, который поддерживает глобальные валюты и это единственная программа с открытым исходным кодом в своём роде. Но самое главное, что GnuCash проста в изучении и использовании!

Итак, что же умеет GnuCash? Она может вести учет ваших личных финансов, причем количество параметров учета определяется вами. Если вы только начинаете пользоваться GnuCash, то попробуйте с ее помощью контролировать вашу чековую книжку. Затем, возможно, вы решите отслеживать ваши наличные траты и расходы по кредитной карте, чтобы лучше определять, куда вы тратите свои деньги. Когда вы займётесь инвестициями, вы можете использовать GnuCash, чтобы проводить мониторинг вашего инвестиционного портфеля. Вы купили машину или дом? GnuCash поможет вам спланировать инвестиции и отследить выплаты по ссуде. Если круг ваших финансовых интересов охватывает весь земной шар, то GnuCash предоставит вам необходимую мультивалютную поддержку.



Account Name	Commodity	Total
Assets	Australian Dollar	\$218,145.07
Current Assets	Australian Dollar	\$63,960.00
Investments	Australian Dollar	\$149,685.07
Boom	Hong Kong Dollar	HKD 310,775.28
0694.HK	Beijing Airport	57,000 0694.HK
Cash	Hong Kong Dollar	HKD 50,000.28
CitiBank	US Dollar	USD 26,768.02
AMZN	Amazon	600 AMZN
Cash	US Dollar	USD 5,000.02
SEB	Swedish Krona	SEK 372,300.30
Cash	Swedish Krona	SEK 50,000.30
ERICB.ST	Ericsson B-Fria	11,000 ERICB.ST
Money owned to n	Australian Dollar	\$4,500.00
Peter	Euro	EUR 3,000.00
Equity	Australian Dollar	\$216,836.00
\$:	Assets: \$63,960.00	Profits: \$0.00

На рисунке показана Номенклатура Счетов с мультивалютами и инвестициями.

GnuCash, являясь хорошим приложением для учета личных финансов, также обладает достаточной функциональностью для применения в бизнесе. В нее включено много бизнес-функций, от интегрированных счетов по дебету и кредиту, до составления налогового портфеля. Вы найдете эти и другие бизнес-функции удивительно мощными и простыми в применении.

Характерные особенности

Легкость в использовании

За считанные минуты вы сможете ввести информацию о личных финансах и создать цветные графики описывающие ваш финансовый статус. Если вы можете использовать реестр на обратной стороне вашей чековой книжки - то вы сможете использовать GnuCash! Вносите данные непосредственно в реестр, переключайтесь между полями ввода и используйте быстрое заполнение для автоматического завершения транзакций. Интерфейс может быть подстроен под ваши нужды непосредственно внутри приложения.

- *Простые в использовании меню:* меню GnuCash соответствуют требованиям интерфейсов для GNOME. Это значит, что они просты и схожи по виду со многими другими приложениями GNOME.
- *Документация:* GnuCash имеет встроенный раздел Помощи и подробное Руководство пользователя.
- *Способы импорта:* кроме ручного ввода GnuCash поддерживает также много других способов ввода транзакций. Если вы имеете онлайн доступ к своим банковским счетам, то это особенно удобно, так как большинство банков и компаний-владельцев кредитных карт поддерживают один из следующих методов импорта. Вы потратите меньше времени на ввод данных, и у вас останется больше времени на анализ результатов.
- *Протокол Quicken Import File (QIF) (Быстрый импорт файлов):* этот протокол поддерживает файлы типа QIF, популярный формат, который используется во многих коммерческих пакетах финансовых программ.
- *Протокол Open Financial Exchange (OFX) (Открытый финансовый обмен):* GnuCash является первой бесплатной программой, которая поддерживает протокол Открытого финансового обмена. Многие финансовые учреждения двигаются по направлению к использованию этого формата.
- *Протокол Home Banking Computer Interface (HBCI) (Компьютерный интерфейс домашнего банка):* GnuCash является первой программой, которая поддерживает немецкий протокол HBCI. Этот протокол поддерживает загрузку банковских выписок, создание банковских переводов и делает возможными прямые вклады.
- *Отчеты:* GnuCash имеет более 30 предварительно настроенных отчетов, включая Баланс по счетам, Доходы, Расходы, Отчет по транзакциям, Балансовый отчет, Доходы и убытки, Оценка стоимости портфеля и многие другие. Отчеты поддерживают графическое отображение данных, включая круговые и линейные диаграммы и графики. Отчеты можно экспортировать в HTML файлы и легко настраивать под свои требования.
- *Транзакции по расписанию:* GnuCash может автоматически создавать и выполнять транзакции или напомнить вам когда следует произвести эти транзакции. Программа дает возможность выбора между вводом, переносом или отменой автоматических транзакций.
- *Ассистент по погашению ипотеки и кредита:* поможет вам при создании транзакций для различных выплат по кредитам.
- *Возможность легкой сверки счетов:* встроенная подпрограмма поможет вам сверить ваши GnuCash счета с банковскими выписками просто и эффективно.
- *Мультиплатформенная совместимость:* GnuCash поддерживает множество платформ и операционных систем. Список полностью поддерживаемых операционных систем (и платформ) для

GnuCash 4.6 следующий: Linux (x86, x86_64), FreeBSD (x86, x86_64), OpenBSD (x86, x86_64), macOS (Intel) и Windows. Предыдущие версии GnuCash, насколько известно, работали с SGI IRIX (MIPS), IBM AIX 4.1.5 (RS/6000), Unixware 7 (Intel) SCO OpenServer 5.0.4 (Intel), и Solaris (SPARC) но сейчас их текущее состояние не известно.

Учет ваших инвестиций

GnuCash обладает рядом функций для контроля ваших инвестиций. При помощи GnuCash вы можете отслеживать каждую акцию индивидуально (одна акция про счет) или в портфеле счетов (группа счетов, которая показывается вместе).

GnuCash поддерживает онлайн котировки акций и инвестиционных фондов. Это значит, что вам больше не нужно будет искать стоимость ваших акций по отдельности. Процесс может быть автоматизирован и вы сможете видеть последние котировки ваших акций.

Международная поддержка

GnuCash это приложение, которое действительно работает и понимает пользователей по всему миру. Имеется много встроенных особенностей для облегчения взаимодействия со всем глобализованным миром, в котором мы сегодня живем.

- *Родные языки:* GnuCash полностью переведен на 12 языков: китайский, чешский, голландский, английский, французский, немецкий, итальянский, португальский, русский, словацкий, испанский и шведский. Более 25 других языков поддерживаются частично.
- *Поддержка интернациональных форматов данных:* GnuCash понимает, что в разных странах даты и числа отображают по-разному. Вы можете работать с тем форматом даты и чисел, к которому вы привыкли.
- *Мультивалюты и торговля валютами:* программой поддерживаются мультивалюты, которые можно покупать и продавать (торговать). Движение валют между счетами полностью заносится на баланс, если разрешены операции дублированного ввода.
- *Текущие курсы обмена:* с GnuCash вам больше не нужно искать курсы обмена валют по отдельности. Процесс может быть автоматизирован, чтобы всегда предоставлять вам суммы на ваших счетах, конвертированные в предпочитаемую вами валюту с использованием последних обменных курсов.

Поддержка бизнеса

GnuCash имеет много различных функций для поддержки учета коммерческих операций.

- *Дебиторская/Кредиторская задолженности:* GnuCash имеет интегрированную систему дебиторской и кредиторской задолженностей. Вы можете учитывать клиентов, поставщиков, накладные и оплату по счетам, используя различные налоговые и бухгалтерские особенности малого бизнеса.
- *Амортизация:* GnuCash может учитывать амортизацию разных активов.
- *Отчеты:* GnuCash предлагает широкий спектр разнообразных, готовых к использованию бизнес-отчетов.

Особенности бухгалтерского учета

Для хорошо разбирающихся в бухгалтерском учете, ниже приведен список имеющихся в GnuCash особенностей бухгалтерии.

- *Двойная запись*: каждая транзакция должна дебетовать один счет и кредитовать другой на равную сумму. Это гарантирует «книжный баланс» - что разница между доходами и расходами точно равна сумме всех банковских активов, наличных, акций и других активов.
- *Разделённые транзакции*: единичная транзакция может быть разделена на несколько частей для записи налогов, денежных сборов и других составляющих.
- *Иерархия счетов*: главный счет может иметь иерархию детализированных счетов под ним. Это позволяет похожим типам счетов, таким как Банк, Наличные или Акции, группироваться в главный счет, такой как «Активы».
- *Общий журнал*: одно окно реестра может показывать множество счетов одновременно. Это облегчает нахождение ошибок неправильного ввода. Также это помогает удобно просматривать портфель состоящий из нескольких акций, показывая все сделки в этом портфеле.
- *Типы счетов Доходы/Расходы (категории)*: это поможет правильно показать движение денежных средств и, при правильном использовании концепта двойной записи, обеспечит точный отчет по Прибыли/Убытку.

Об этой документации

Целью этой документации является экономия вашего времени. Она поможет вам как можно быстрее начать использовать GnuCash.

Каждая глава имеет довольно простую структуру. Глава начинается с обсуждения «Понятий», которые представляют общие темы и терминологию, использующиеся в пределах этой главы. Далее следуют разделы «Как», в которых описываются специфичные процедуры, раздел «Объединяя все вместе» заканчивает главу, предоставляя детальные конкретные примеры.

Начинающие пользователи найдут разделы «Понятия» очень полезными для себя. Они обеспечат ссылки на правильные методы учета ваших финансов и послужат общим вступлением в финансы и терминологию. Опытные пользователи могут перейти к разделам с практическими рекомендациями, чтобы быстро ознакомиться с процедурами. Эти разделы описывают пошаговые процедуры для выполнения специфичных задач. Разделы «Объединяя все вместе» представляют реальные примеры в форме руководства. Начиная с создания файла в Главе Глава 2, *Основы*, каждая последующая глава добавляется к обучающей программе предыдущей главы.

Эта документация поделена на три главные части:

- *Введение*
- *Организация личных финансов*
- *Организация бизнес финансов*

Первая часть *Введение* предоставит вам наиболее общую информацию, необходимую для начала использования GnuCash. В главах этой части объясняются основы использования GnuCash. Начиная пользователи GnuCash должны хорошо ознакомиться с этой информацией. Используйте эту часть как руководство по быстрому старту:

- Глава 1, *Обзор* - (эта глава) предоставляет общий обзор по GnuCash
- Глава 2, *Основы* - дает пользователям очень краткое введение в принципы бухгалтерского учета, а затем предоставляет информацию о структуре данных в GnuCash. Также здесь описываются базовые элементы интерфейса в GnuCash. Наконец, в этой главе объясняется, как GnuCash сохраняет и обрабатывает данные.

- Глава 3, *Счета* - дополнительная информация о счетах и порядке их организации.
- Глава 4, *Транзакции* - основная информация о транзакциях и о том, как их заносить.

Вторая часть *Организация личных финансов* описывает общее применение и особенности GnuCash более подробно. Здесь вы найдете конкретные примеры, основанные на часто задаваемых вопросах о применении GnuCash в ежедневных ситуациях. Применение и особенности описываются в следующих главах:

- Глава 5, *Чековая книжка*
- Глава 7, *Кредитные карты*
- Глава 8, *Кредиты*
- Глава 9, *Инвестиции*
- Глава 11, *Доходы от прироста капитала*
- Глава 12, *Мультивалютные операции*

В третьей части *Организация бизнес финансов* обсуждается применение GnuCash в деловом учете.

- Глава 13, *Business Features*
- Глава 14, *Budgets*
- Глава 15, *Other Assets*
- Глава 16, *Depreciation*
- Глава 17, *Python Bindings*
- Глава 18, *Importing Business Data*

Это руководство также имеет некоторые приложения, содержащие дополнительную информацию, которая вам возможно тоже будет интересна:

- GnuCash Glossary - Глоссарий терминов, используемых в GnuCash
- Приложение А, *Migration Guide* - руководство для бывших пользователей программ Quicken®, MS Money или других QIF-программ
- Приложение В, *Auxiliary File Formats*
- Приложение С, *GNU Free Documentation License* - Лицензия свободной документации GNU

Глоссарий и индекс помогут вам в быстром поиске интересующих вас тем.

Дополнительная помощь

Онлайн справка

Онлайн справка является аналогом этого руководства. Здесь вы найдете подробные инструкции по использованию GnuCash: меню, интерфейса и элементов управления. Чтобы открыть интерактивную справку выберите Помощь → Содержание .

GnuCash Wiki

Огромное количество неформальной документации, как о GnuCash, так и о его поддержке и разработки можно найти в GnuCash Wiki (english) [<https://wiki.gnucash.org/wiki/>]; Если вы столкнетесь с трудностями при использовании GnuCash, то посетите пожалуйста одной из первых страницу Часто задаваемые вопросы (english) [<https://wiki.gnucash.org/wiki/FAQ>].

GnuCash онлайн помощь

Список рассылки (mailing list)

Основным источником поддержки пользователей является пользовательский список рассылки (english) [<mailto:gnucash-user@gnucash.org>]. Если вы предпочитаете читать список рассылки в виде веб-форума, вы можете сделать это при помощи Nabble [<http://gnucash.1415818.n4.nabble.com/GnuCash-User-f1415819.html>]. Для того чтобы участвовать в списке рассылки и задавать вопросы, вам необходимо сначала подписаться [<https://lists.gnucash.org/mailman/listinfo/gnucash-user>] на него.

IRC

Некоторые из разработчиков мониторят канал #gnucash на irc.gnome.org. Они обычно заняты чем-то еще в это время, и конечно, не всегда находятся у компьютеров. Войдите в систему, задайте свой вопрос и оставайтесь в системе; Иногда может пройти несколько часов, пока ваш вопрос будет замечен и кто-нибудь ответит на него. Чтобы увидеть, пропустили ли вы что-нибудь, вы можете проверить IRC протоколы [<https://code.gnucash.org/logs>].

На GnuCash странице [<http://www.gnucash.org>] вы найдете более подробную информацию об этих каналах. Вы также найдете там ссылки на другие полезные ресурсы, например на такие как GnuCash wiki и система отслеживания ошибок.

Установка

Установить GnuCash обычно довольно просто.

На странице *Скачать GnuCash* [<http://www.gnucash.org/download.phtml>] вы найдете подробное описание по установке GnuCash для каждой поддерживаемой операционной системы.

Глава 2. Основы

Эта глава ознакомит вас с некоторыми основами использования GnuCash. Она рекомендуется к прочтению, прежде чем Вы начнете какую-либо реальную работу с GnuCash. В следующих главах будут приведены конкретные примеры.

Основные понятия отчетности

GnuCash настолько проста в использовании, что Вам нет необходимости иметь полное понимание принципов отчетности, для того чтобы убедиться в полезности программы. Однако, вы увидите, что знание некоторых основ отчетности будет полезным, так как GnuCash разрабатывалась на основе этих принципов. Настоятельно рекомендуется, чтобы вы ознакомились с этой главой руководства перед началом работы с программой.

Пять основных счетов

Основные правила отчетности группируют все финансы по пяти базовым типам «счетов». То есть, все что связано с отчетностью, можно поместить в один из этих типов счетов:

<i>Активы</i>	вещи, которыми вы владеете
<i>Пассивы</i>	вещи, которые вы должны
<i>Капитал</i>	чистая стоимость активов
<i>Доходы</i>	увеличивают стоимость ваших счетов
<i>Расходы</i>	уменьшают стоимость ваших счетов

Понятно, что ваш финансовый мир можно поместить в эти 5 групп. Например, наличные на вашем банковском счету являются активом, ваша ипотека на дом – это пассив, чек на зарплату является доходом, а стоимость ужина в ресторане следует записать в расходы.

Формула отчетности

Какая же связь существует между 5 основными типами счетов? Как один тип счетов воздействует на другой? Во-первых, капитал определяется активами и пассивами. Поэтому, ваша чистая стоимость активов определяется вычитанием пассивов из ваших активов:

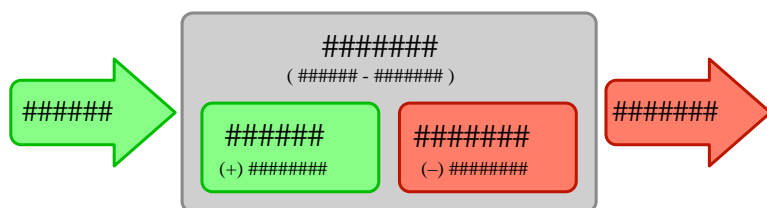
$$\text{Активы} - \text{Пассивы} = \text{Капитал}$$

К тому же, вы можете увеличить свой капитал через доходы и уменьшить его через расходы. Конечно, это имеет смысл – когда вы получаете чек на зарплату, вы становитесь «богаче», а когда вы платите за ужин – «беднее». Математически это представляется в так называемой Формуле отчетности:

$$\text{Активы} - \text{Пассивы} = \text{Капитал} + (\text{Доходы} - \text{Расходы})$$

Это уравнение должно быть всегда сбалансированным. Это условие можно выполнить, только при внесении ценностей на несколько счетов одновременно. Например: если вы получаете деньги в форме доходов, то вы должны видеть такое же увеличение ваших активов. Как другой пример, вы можете иметь увеличение активов, если параллельно у вас увеличиваются пассивы.

Рисунок 2.1. Взаимосвязь основных типов счетов



Графическое отображение связи между 5 основными счетами. Чистая стоимость активов (Капитал) увеличивается через доходы и уменьшается через расходы. Стрелки показывают движение средств.

Двойная запись

Формула отчетности является самым сердцем *бухгалтерской системы двойной записи*. Для каждого изменения суммы на одном счете в Формуле отчетности, должно быть балансирующее изменение на другом. Эта концепция известна как *Принцип баланса* и является фундаментально важной для понимания GnuCash и других бухгалтерских систем двойной записи. При работе с GnuCash вы всегда будете иметь дело, как минимум, с двумя счетами, чтобы сохранить Формулу отчетности уравновешенной.

Бухгалтерия двойной записи служит для двух целей. Во-первых, это отслеживание отчетности, деньги всегда приходят откуда-то и уходят куда-то. Поскольку числа вводятся во множество счетов одновременно, есть множество мест для проверки того, что общий итог совпадает. Конечно, с появлением компьютеров, шансы иметь проблемы с математикой низкие, но надо знать, что понятие все еще существует!

Бухгалтерия двойного ввода появилась примерно в конце 15-го столетия, когда она была описана итальянским монахом Лукой Пачиоли. Традиционно бухгалтерия двойной записи включает запись каждой операции в книгу, называемую гроссбух, затем копирование каждой части операции в книги, которые назывались журналы. Этот метод сегодня все еще используется в бизнесе как способ избежать ошибок ввода и определить источники таких ошибок. GnuCash упрощает эту традиционную бухгалтерию путем копирования части каждой транзакции за вас, что дает возможность избежать некоторых ошибок, которые могли бы появиться при традиционном создании отчетности. Программа просигнализирует вам о сделках, которые не сбалансированы и даст знать, если отсутствует название счета.

Балансирующие изменения (или перевод денег) между счетами осуществляются путем дебетования одного счета и одновременного кредитования другого. Учет *дебетов* и *кредитов* не означает «снижение» и «увеличение». Операции дебита и кредита увеличивают определенные типы счетов и уменьшают другие. В счетах актива и расходов дебетование увеличивает баланс, а кредитирование уменьшает баланс. В счетах пассива, капитала и доходов наоборот кредитирование увеличивает баланс, а дебетирование уменьшает баланс.

В традиционной системе двойной записи левый столбец в таблице транзакций используется для дебетов, в то время как правый столбец используется для кредитов. Бухгалтеры регистрируют увеличение счетов активов и расходов на дебетовой (левой) стороне, и фиксируют увеличение пассивов, капитала и доходов на кредитной (правой) стороне. GnuCash всегда следует этому правилу в таблице транзакций.

Примечание

Описание системы двойной записи в Википедии: https://ru.wikipedia.org/wiki/Двойная_запись

Примечание

Формальные термины бухгалтерского учета Дебит и Кредит могут ввести в заблуждение новых пользователей. Если вы хотите изменить заголовки столбцов учетной записи, вы можете это сделать во вкладке «Учетные записи» в разделе «Настройки» (дополнительную информацию о настройке параметров вы найдёте в справочном руководстве GnuCash).

Предупреждение

Общее использование слов *дебет* и *кредит* не соответствует тому, как бухгалтеры используют эти слова. В общем случае, *кредит* обычно имеет положительные ассоциации; В бухгалтерском учете, кредитные средства влияют на правую колонку листа учетной записи. Это означает уменьшение активов и расходов или увеличение доходов, долгов и капитала.

Подробнее см. https://ru.wikipedia.org/wiki/Дебет_и_кредит.

Организация данных

При введении данных в GnuCash вы должны знать о трех уровнях организации, на которые программа делит ваши данные: файлы, счета и транзакции. Эти уровни расположены в порядке их сложности: один файл содержит множество счетов и один счет содержит множество транзакций. Это деление является основой для понимания принципов использования GnuCash.

Файлы

GnuCash сохраняет информацию на самом верхнем уровне в виде файлов. Данные могут быть сохранены на вашем компьютере в виде XML файла (во всех версиях GnuCash) или в виде SQL базы данных (начиная с версии GnuCash 2.4).

С выбором формата XML, GnuCash сохраняет ваши данные как XML файлы. Как правило, файлы сохраняются в сжатом виде (вы можете изменить это во вкладке Общее в Настройках GnuCash).

С выбором SQL базы данных, GnuCash сохраняет ваши данные в SQL базе данных вашего выбора (SQLite3, MySQL или PostgreSQL).

Для каждого отдельного набора счетов, которые вы обрабатываете, вам надо выбрать между XML файлом и SQL базой данных. Чтобы узнать, как создавать и управлять файлами GnuCash, смотри «Сохранение ваших финансовых данных».

Примечание

Если вы думаете, что вам может понадобиться больше, чем один набор счетов, то вам лучше проконсультироваться с профессиональным бухгалтером, прежде чем продолжить дальше. Большинство пользователей, используют только один файл данных.

GnuCash автоматически генерируются резервные копии файлов и протоколы, когда это необходимо. Резервное копирование и протоколы описаны в «Резервные копии и восстановление данных».

Счета

Счет является местом для хранения информации о том, чем вы владеете, долгах, тратах и приобретениях. Каждый основной файл данных GnuCash может содержать множество счетов, которые

в свою очередь могут сосоять из множества других субсчетов и так далее до произвольного числа уровней. Эта простая функциональность делает GnuCash очень мощным инструментом в управлении вашими финансами, как вы увидите в последующих главах.

Примеры некоторых счетов: чековый счет, сберегательный счет, счет кредитной карты, ипотека и кредиты. Каждый счет GnuCash отслеживает активность для этого «реального» счета, и предоставляет вам информацию о его текущем статусе.

Кроме того, счета также используются для того, чтобы категоризировать ваши деньги, которые вы получаете или тратите. Например, вы можете создать счет расходов для отслеживания денег, которые вы тратите на коммунальные услуги или продукты. Даже если вы не получаете банковские выписки для этих счетов, вы можете при помощи этих счетов определять сколько денег вы тратите в каждой из этих областей.

Счета будут рассмотрены более подробно в Глава 3, *Счета*.

Транзакции

Транзакция представляет движение денег с одного счета на другой счет. Независимо от того, тратите вы или получаете деньги, переводите их между счетами - все это будет транзакцией.

Транзакциями являются например: оплата счета за телефон, перевод денег с накопительного на чековый счет, покупка пиццы или снятие денег. Глава 4, *Транзакции* более подробно углубляется в то, как надо вносить транзакции в GnuCash.

В бухгалтерском учете с системой двойной записи, транзакции всегда включают в себя по крайней мере два счета – исходный счет и целевой счет. GnuCash учитывает это путем вставки строки в транзакцию для каждого счета, указанного в транзакции, и записью соответствующих сумм в этих строках. Строка в транзакции, содержащая информацию о счете и соответствующей сумме денег, называется *записью*. Транзакция может содержать произвольное число записей.

Примечание

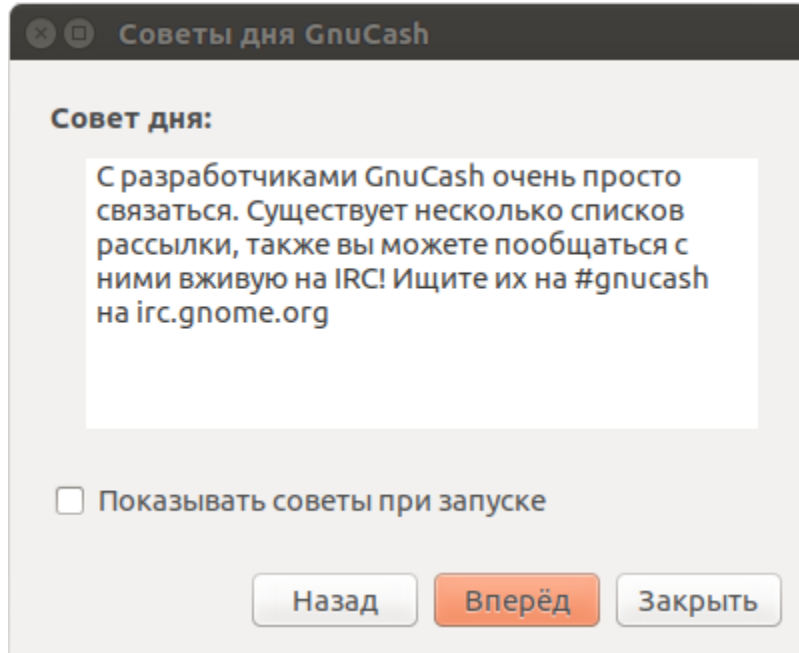
Разделение транзакций на несколько записей описывается в «Split Transaction Example»

Интерфейс GnuCash

Открыв GnuCash в первый раз, вы увидите диалог: Добро пожаловать в GnuCash! С этого момента программа предоставляет вам другие инструменты, чтобы помочь вам легко найти то, что вы ищете. Давайте взглянем на некоторые вспомогательные экраны и диалоговые окна, которые вы увидите.

Советы дня GnuCash

GnuCash предоставляет диалог Совет дня, который дает полезные советы по использованию программы:

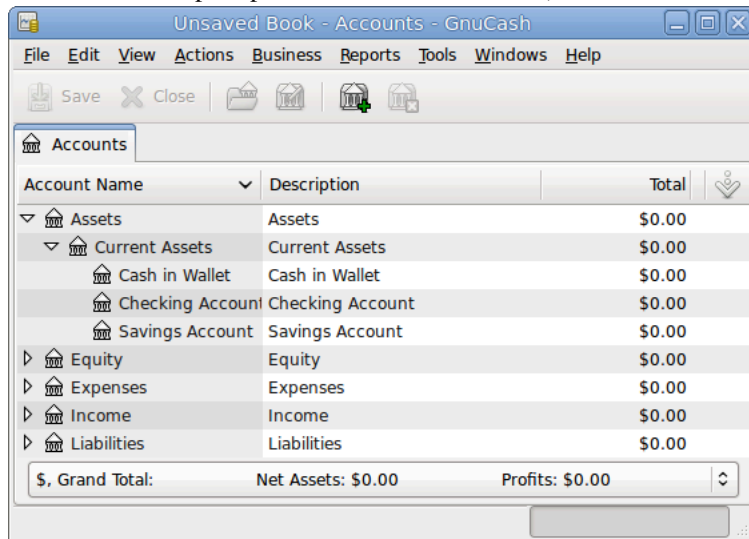


Это изображение показывает Совет дня.

Эти советы дают полезную информацию для начинающих пользователей. Чтобы посмотреть больше советов, кликните Вперед для продолжения. Если вы не хотите видеть это диалоговое окно при загрузке программы, снимите выделение с Показывать советы при запуске, чтобы диалог не показывался в следующий раз. Когда вы закончили просмотр полезных советов, кликните Закреть, чтобы закрыть диалоговое окно Совет дня.

Окно дерева счетов

Сейчас вы должны увидеть окно счетов, которое появится, как показано ниже. Точное расположение дерева счетов будет зависеть от счетов по умолчанию, которые вы выбрали при создании Нового Плана Счетов. В этом примере показаны Общие счета (Common Accounts).



Это изображение показывает окно счетов.

Окно счетов (также Дерево счетов) отображает данные содержащиеся в текущем файле. Оно содержит список названий счетов и их текущий баланс.

Из этого окна вы можете открыть любой из счетов - двойным щелчком мышкой по имени счета, нажатием правой клавиши по имени счета и выбором пункта Открыть Счет из контекстного меню или при помощи кнопки Открыть в строке инструментов. Окна отдельных счетов называются реестрами счетов. GnuCash позволяет открывать одновременно любое количество реестров счетов по желанию. Для дополнительной информации об использовании реестров счетов смотри «Окно реестра счетов».

Подсказка

Щелчком по маленькому треугольнику слева от счета с дочерними элементами вы сможете расширить древовидную структуру и отобразить соответствующие субсчета.

Сверху этого окна имеется *титовая строка*, которая отображает имя файла (так, как вы его указали при сохранении). Ниже расположено *главное меню*. Вы можете получить доступ к опциям меню либо кликнув по названию пункта меню, либо используя сокращения и горячие клавиши, которые будут рассмотрены в этой главе ниже (смотри «Горячие клавиши»). Следом идет *панель инструментов*, которая содержит кнопки наиболее общих функций.

Дерево счетов располагается под *панелью инструментов*. Как только вы начнете создавать счета, названия счетов будут появляться в дереве счетов. Вы можете отсортировать названия счетов, используя маленькую стрелку вниз, справа над деревом счетов.

Внизу расположена *информационная строка*, которая дает вам информацию о том, чем вы владеете (Чистые Активы) и сколько денег вы заработали (Прибыль).

Окно реестра счетов

Окно Реестр Счета используется для ввода и редактирования данных на вашем счету. Как можно предположить из имени, оно выглядит подобно реестру чековой книжки.

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
06/03/06		Transfer Money	Assets:Savings	y	100.00		679.79
06/03/06	106	ABC Hardware	-- Split Transaction --	y		100.00	579.79
14/03/06		Employers R Us	-- Split Transaction --	y	670.00		1,249.79
24/03/06		Transfer Money	Assets:Savings	y	500.00		1,749.79
25/03/06		ATM Withdrawal	Assets:Cash	y		100.00	1,649.79
28/03/06		Internet Subscription	Expenses:Internet	y		20.00	1,629.79
28/03/06	102	Light Company	Expenses:Electricity	y		78.00	1,551.79
28/03/06	103	Phone Company	Expenses:Phone	y		45.00	1,506.79
28/03/06	104	April Rent	Expenses:Rent	y		350.00	1,156.79
31/03/06		Service Charge	Expenses:Service Charge	y		5.00	1,151.79
28/04/06		May Rent	Expenses:Rent	n		350.00	801.79
05/05/06		Partial Payment of Visa Bill	Liabilities:Visa	n		300.00	501.79

Present:USD 1,151.79 Future:USD 501.79 Cleared:USD 1,451.79 Reconciled:USD 1,451.79 Projected Minimum:USD 501.79
Tuesday 18 April 2006

Это изображение показывает реестр счета с несколькими транзакциями.

Глава 4, *Транзакции* более подробно рассказывает об окнах реестра счета и том, как вводить в них данные. Для начала отметьте, что элементы окна реестра счета подобны элементам окна дерева счетов, описанным ранее. *Титовая строка* вверху содержит название счета. Ниже под ней расположено *главное меню*, которое содержит опции меню, относящиеся к реестру счета. *Панель инструментов* упрощает функции ввода данных. *Статусная строка* внизу окна показывает баланс счета, который описывается в Глава 4, *Транзакции*. Внизу окна реестра счета появляется информация о текущем положении курсора.

Примечание

Вы можете изменить размер различных колонок, отображаемых GnuCash, *но имейте в виду, что колонка Описание работает не так как все другие колонки.*

Колонка Описание автоматически расширяется, заполняя тем самым неиспользуемое место на экране. Поэтому вам вначале нужно настроить размер всех других колонок и только после этого поменять размер колонки Описание.

Размер колонки Balance можно настроить двойным щелчком по названию колонки.

Кнопки Панели Инструментов

Как окно дерева счетов, так и окно реестра счета содержат кнопки *панели* инструментов. Эти кнопки обеспечивают быстрый доступ к общим функциям, таким как Сохранить или Открыть в окне дерева счетов и Записать и Удалить в окне реестра счета. Если вы не уверены в том, что делает кнопка, проведите указатель мыши над ней, и вы должны увидеть появившееся описание выполняемой функции.

Ниже приведено краткое описание кнопок окна дерева счетов:

Сохранить (Save)	Используйте эту функцию, чтобы сохранить текущий файл на диск.
Закреть (Close)	Используйте эту функцию, чтобы закрыть текущую страницу.
Открыть (Open), Изменить (Edit), Создать (New) и Удалить (Delete)	Эти функции имеют отношение к счетам. Они рассматриваются в Глава 3, <i>Счета</i> .

Кнопки реестра счета рассмотрены в Глава 4, *Транзакции*.

Панель вкладок

GnuCash использует модель вкладок, которая позволяет открывать несколько реестров счетов и отчетов одновременно. Каждому открытому окну (которое может включать в себя счета, отчеты, или окно запланированных транзакций) присваивается вкладка, при нажатие на которую вы можете открыть это окно. В настройках GnuCash вы можете поменять место отображения вкладок (например отображения вкладок снизу или сбоку главного окна).

Чтобы увидеть полное название вкладки, наведите курсор мыши на вкладку.

Если вы открыли больше вкладок, чем может быть отображено на экране, то названия некоторых вкладок не будут показываться. Но вы можете перемещаться между вкладками, нажимая стрелки на любом конце панели вкладок. Полный список вкладок можно просмотреть, щелкнув правой кнопкой мыши на панели вкладок. В появившемся списке вкладок, вы можете выбрать нужную вкладку, нажав на щелкнув мышкой по соответствующему названию вкладки.

Пункты Меню

Как окно дерева счетов, так и окно реестра счета содержат названия пунктов меню в *главном меню*. Клик по названию пункта меню показывает список доступных пунктов меню для этого названия.

Вы можете кликнуть по названию пункта меню окна дерева счетов и затем провести указатель мыши по пунктам меню, чтобы увидеть, что они делают. При прохождении указателя мыши над пунктом меню, описание пункта появляется в левом нижнем углу окна (в *статусной строке*). Для выбора пункта меню кликните по нему.

Также вы можете получить доступ к большинству пунктов меню, кликнув правой кнопкой мыши в любом месте окна. В окне дерева счетов появится выпадающий список элементов счета. В окне реестра счета появится выпадающий список элементов транзакции.

Другим способом доступа к пунктам меню являются *горячие клавиши*, описанные ниже.

Горячие клавиши

Все пункты меню имеют кнопки быстрого доступа (горячие клавиши), которые обозначены подчеркнутым знаком в названии меню. Нажатие кнопки **Alt** совместно с подчеркнутым знаком покажет список подпунктов меню для этого пункта. Когда пункты меню показаны, нажмите подчеркнутый знак в названии, чтобы активировать этот пункт. Например, нажав **Alt+F** в главном меню, вы увидите подменю File (Файл), затем нажав **S** вы сохраните файл. Горячие клавиши зафиксированы в приложение и не могут быть изменены пользователем.

Некоторые из наиболее используемых пунктов меню также имеют клавиатурные сокращения, которые напрямую активируют команду без следования по всей структуре меню. В этих клавиатурных сокращениях обычно используется клавиша **Ctrl**, также они могут иметь любую клавиатурную комбинацию. Сокращения показаны в конце каждого пункта меню. Эти сокращения могут изменяться пользователем путем установки в панели настроек "Menu and Toolbar" (Меню и панель инструментов).

Получение помощи

GnuCash предоставляет помощь многими способами. Мы уже рассматривали диалог Совет дня, который дает вам полезные советы при запуске сеанса работы с GnuCash. Также GnuCash предлагает расширенное руководство помощи.

Руководство помощи

Открыв GnuCash вы увидите заголовок пункта меню Помощь в окне дерева счетов, который открывает онлайн руководство. Онлайн руководство организовано по темам, которые в свою очередь состоят из подтем.

Темы представлены в виде списка с левой стороны. Для выбора темы или подтемы кликните по ней - вы должны увидеть с правой стороны текст, относящийся к этой теме. Используйте кнопки Назад и Вперед для навигации по выбранной теме и печатайте любой текст с помощью кнопки Печать.

Веб доступ

Окно помощи GnuCash работает как простой браузер, поэтому вы можете посещать веб-сайты для дополнительной информации. Вы можете открыть любой веб-сайт в этом окне, кликнув по кнопке Открыть на *панели инструментов* и напечатав URL. Используйте кнопки Назад, Вперед, Обновить, Стоп и Печать так же, как и в обычном браузере.

Веб-сайт *GnuCash* [<https://www.gnucash.org/>] содержит полезную информацию о программе и о любых обновлениях к ней. Он также содержит ссылки на списки рассылки GnuCash для разработчиков и

пользователей. Вы можете найти архивы рассылок GnuCash, где рассматриваются определенные темы. Если вам не удастся найти ответы на вопросы, которые вас интересуют, вы можете написать ваш вопрос *GnuCash* *группе пользователей (английский)* [<https://lists.gnucash.org/mailman/listinfo/gnucash-user>] и кто-то из этой группы вам ответит.

Актуальную версию списка часто задаваемых вопросов GnuCash (FAQ) вы также найдете на сайте *GnuCash (FAQ)* [<http://wiki.gnucash.org/wiki/FAQ>]. Он содержит ответы на популярные вопросы.

Поиск тем

Онлайн руководство также поддерживает опцию поиска. Для поиска определенной темы, кликните по панели Поиск внизу окна помощи и укажите вашу тему в имеющемся поле. Кликните по кнопке Поиск для подтверждения вашего поиска. Список найденных вариантов появится в окне ниже, нажатие мышкой по нужному результату поместит этот текст справа.

Сохранение ваших финансовых данных

GnuCash может хранить ваши финансовые данные в файлах или базах данных SQL, так что они могут быть открыты и изменены позже. Но для начала вам нужно создать контейнер для данных.

Создание файла

Для создания нового GnuCash файла вам необходимо сделать следующее:

1. В *главном меню* GnuCash выберите Файл → Новый файл . Тем самым вы запустите диалог Создание новой иерархии счетов.

Примечание

Если вы запустили GnuCash в первый раз, то вы увидите диалог Добро пожаловать в GnuCash! Этот диалог описывается детально в руководстве GnuCash.

2. Установите ваши настройки в этом диалоге и перемещайтесь между окнами диалога при помощи кнопок Назад, Отменить и Вперед.

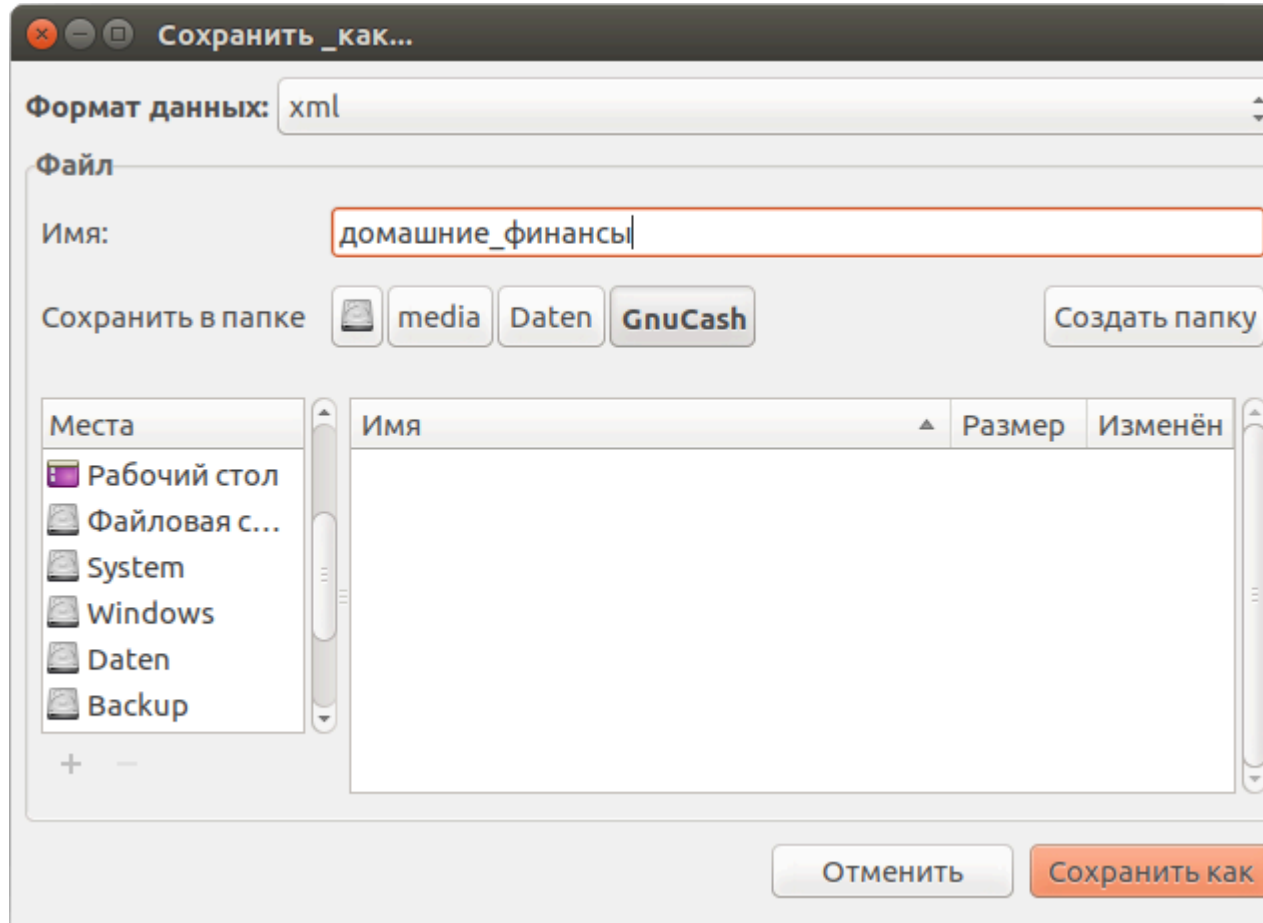
Сохранение данных

Выполните следующие действия, чтобы сохранить файл под выбранным вами именем:

1. Выберите Файл → Сохранить как... в *главном меню* или нажмите кнопку Сохранить на *панели инструментов*. GnuCash покажет диалог для сохранения файлов.
2. Выберите в раскрывающемся списке Формат файла, в котором вы хотите сохранить данные. По умолчанию выбран XML, но если вы хотите использовать базу данных, то вы можете поменять выбор на этот формат.

В зависимости от выбранного формата данных диалоговое окно может измениться, как описано ниже.

3.
 - Если вы выбрали XML или sqlite3, то вы увидите следующий диалог:

Рисунок 2.2. Диалог сохранения данных при выборе XML или sqlite3.

На этом изображении отображается экран сохранения данных, при выборе формата данных - XML или sqlite3.

Введите выбранное имя файла в поле Имя. Нет необходимости указывать расширение, когда вы пишете имя файла. GnuCash автоматически добавит расширение `.gnucash` к имени файла.

Примечание

Расширение `.gnucash` было введено в версии 2.3 GnuCash. Для уже существующих файлов расширение никогда не изменяется. Поэтому, если вы откроете существующий файл с именем Старый-Файл и просто сохраните его, то это имя не будет изменено. Вы можете использовать команду Сохранить как ... и дать файлу новое имя, чтобы сохранить его с расширением `.gnucash`.

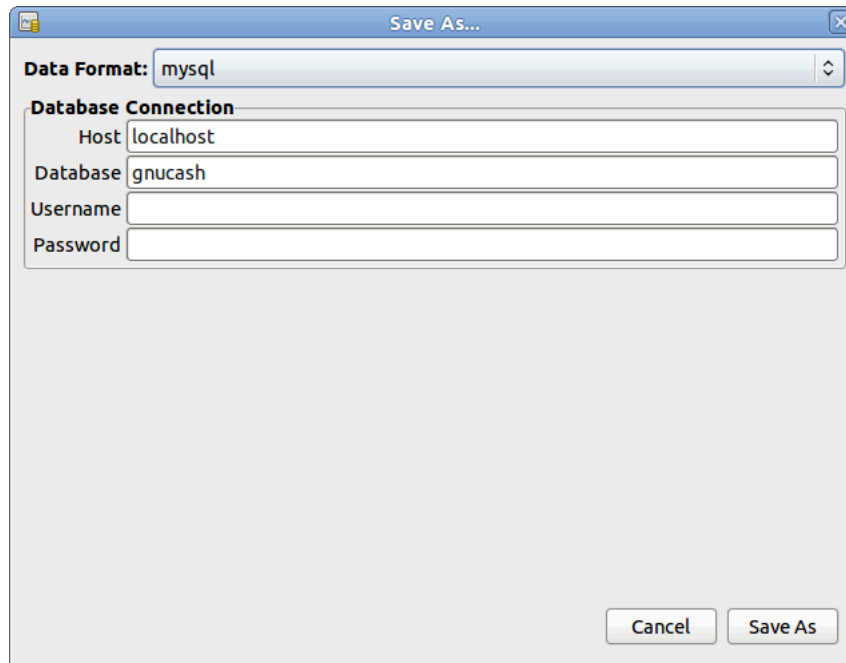
Выберите место для сохранения файла, пролистав дерево файлов в нижней панели диалога.

Подсказка

Нажмите кнопку Создать папку, чтобы создать новую папку с настраиваемым именем в выбранном месте.

- Если вы выбрали формат данных mysql или postgres, вы увидите следующий экран:

Рисунок 2.3. Диалог сохранения данных при выборе mysql или postgres.



На этом изображении отображается экран сохранения данных, при выборе формата данных - mysql или postgres.

Введите в этом окне информацию о подключении к базе данных: хост, имя базы данных, имя пользователя и пароль.

Предупреждение

Для сохранения в mysql или postgres требуются соответствующие разрешения в этой базе данных, то есть вам нужно иметь разрешения на создание новой базы данных или вам нужен доступ на запись к существующей базе данных с выбранным именем.

4. Нажмите кнопку Сохранить как, чтобы сохранить файл.

Если вы отслеживаете финансы для одного домашнего хозяйства, вам нужен только один файл. Но если вы также отслеживаете бизнес-финансы или хотите по какой-то причине сохранить данные отдельно, тогда вам понадобится больше одного файла.

Перед завершением каждого сеанса GnuCash обязательно сохраните изменения данных с помощью меню Файл → Сохранить или кнопки Сохранить на панели инструментов.

Примечание

Поскольку очень важно часто сохранять ваши данные, чтобы не потерять их по какой-либо причине, GnuCash может автоматически сохранять открытый файл через определенные промежутки времени. Этот интервал можно установить на вкладке Основные в разделе меню Правка → Настройки (GnuCash → Настройки в macOS). Имейте в виду, что этот параметр имеет значение только в том случае, если вы сохраняете данные в формате XML. Если вы

работаете с базой данных, кнопка Сохранить и пункт меню Сохранить будут недоступны, так как изменения сохраняются сразу.

Открытие данных

Чтобы открыть существующий файл или базу данных, в меню выберите Файл → Открыть... . В открывшемся окне выберите Формат данных. Если вы выбрали Файл, выберите файл, который вы хотите открыть, просмотрев папки в нижних панелях. В противном случае введите необходимую информацию о подключении к базе данных.

Подсказка

GnuCash хранит список недавно открытых файлов. Откройте меню Файл, и вы увидите список недавно открытых файлов. Нажмите на тот файл, который вы хотите загрузить, чтобы открыть его.

Дублирование иерархии счетов

В некоторых случаях было бы полезно продублировать структуру существующего файла данных в новом файле. Например, вы можете попробовать новые методы бухгалтерского учета, не нарушая учетные данные, или вам может потребоваться следовать принципам бухгалтерского учета, которые требуют, чтобы вы закрывали свои книги в конце года и начинали каждый год с новой книги.

GnuCash позволяет создать пустую копию вашей иерархии счетов просто выбрав Файл → Экспорт → Экспорт счетов . При выборе этой команды вам нужно указать имя для нового пустого файла, а GnuCash создаст новый файл данных, который содержит только вашу иерархию счетов (то есть без транзакции). После сохранения новый файл можно открыть, как и любой другой файл данных GnuCash, как описано выше.

Резервные копии и восстановление данных

GnuCash создает несколько типов файлов, чтобы гарантировать, что ваши данные не будут потеряны. Если вы посмотрите в папку, в которой находится сохраненный файл, вы можете увидеть другие файлы, созданные GnuCash со следующими расширениями: .gnucash, .log, .LCK, .LNK в том же каталоге, что и ваш основной файл данных. Каждый из этих файлов описан ниже.

Примечание

Следующие разделы имеют значение только в том случае, если вы сохраняете свои финансовые данные в формате XML.

```
$ ls
myfile.gnucash
myfile.gnucash.20100414185747.gnucash
myfile.gnucash.20100414223248.log
myfile.gnucash.20100415114340.gnucash
myfile.gnucash.20100415154508.log
myfile.gnucash.20100415173322.gnucash
myfile.gnucash.20100415194251.log
myfile.gnucash.7f0982.12093.LNK
myfile.gnucash.LCK
```

Резервная копия (.gnucash)

Каждый раз, когда вы сохраняете файл данных, резервная копия также сохраняется вместе с расширением `.YYYYMMDDHHMMSS.gnucash`. Этот файл резервной копии является полной копией вашего предыдущего файла данных, а имя файла содержит информацию о дате (год, месяц, день и время) резервного копирования. Например, имя файла `myfile.gnucash.20100414185747.gnucash` указывает, что это резервная копия файла `myfile`, сохраненного в 2010 году, 14 апреля, в 18:57:47.

Чтобы восстановить старый файл резервной копии, просто откройте файл `.YYYYMMDDHHMMSS.gnucash` с датой, к которой вы хотите вернуться. Не забудьте сохранить этот файл под другим именем.

Примечание

До версии 2.2 GnuCash для сохранения резервной копии использовалось другое разрешение файла: `.YYYYMMDDHHMMSS.xac`. Если вы обновились с версии 2.2 до версии 2.4, то вы можете увидеть оба типа резервных файлов `.YYYYMMDDHHMMSS.xac` и `.YYYYMMDDHHMMSS.gnucash` в своем каталоге.

Журнал изменений (.log)

Каждый раз, когда вы открываете и редактируете файл в GnuCash, GnuCash создает файл журнала изменений, внесенных вами в файл данных. Файл журнала использует аналогичный формат именования как и файлы резервных копий: `.YYYYMMDDHHMMSS.log`. Файлы журнала не являются полной резервной копией вашего файла данных - они просто записывают изменения, внесенные вами в файл данных в текущем сеансе GnuCash.

В случае непреднамеренного выхода из GnuCash, возможно, из-за сбоя питания или сбоя системы, вы можете восстановить большую часть своей работы с момента последнего сохранения файла GnuCash с помощью этого журнала изменений. Для этого необходимо сделать следующее:

1. Откройте последний сохраненный файл GnuCash.
2. Перейдите в Файл → Импорт → Проиграть лог-файл GnuCash... и выберите файл `.log` с той же датой, что и сохраненный файл, который вы только что открыли. Убедитесь, что вы выбрали правильный файл `.log`, иначе вы можете нанести ущерб вашим данным.

Воспроизведение журнала изменений восстанавливает любую транзакцию, влияющую на баланс, введенную со времени последнего сохранения, в том числе созданные из запланированных транзакций и бизнес-функций (счета-фактуры, счета и т.д.).

Предупреждение

Изменения в запланированных транзакциях, счетах или счет-фактурах не восстанавливаются, и их восстановленные транзакции могут быть неправильно связаны с ними и поэтому должны быть дважды проверены. Для деловых операций вам, возможно, придется удалить и повторно создать некоторые из них. Если вы этого не сделаете, хотя баланс будет правильным, некоторые отчеты могут не совпадать.

Файлы блокировки (.LNK and .LCK)

Вы можете видеть периодически появляющиеся файлы `.LNK` и `.LCK`. Они не хранят никаких данных, но создаются для предотвращения доступа более чем одного пользователя к одному и тому же файлу. Эти файлы автоматически создаются при открытии файла данных, чтобы заблокировать доступ

остальных пользователей к нему. Когда вы заканчиваете сеанс работы с GnuCash или открываете другой файл, программа разблокирует первый файл данных путем удаления файлов `.LCK` и `.LNK`.

Если работа GnuCash нарушается, пока файл данных открыт, файлы `.LCK` и `.LNK` не удаляются. При следующем открытии программы вы получите предупреждение о том, что файл заблокирован. Это предупреждение появляется потому, что файлы `.LCK` и `.LNK` все еще находятся в вашей директории. Будет безопасно выбрать Да, чтобы открыть файл, но вам следует удалить файлы `.LCK` и `.LNK` (используя окно терминала или ваш файловый менеджер). После удаления файлов вы больше не будете получать предупреждения до тех пор, пока с GnuCash не произойдет следующий сбой.

Управление файлами

Итак, какие файлы вам следует сохранять? Конечно, сохраняйте ваш главный файл данных. Будет неплохо сохранить несколько последних резервных файлов `.YYYYMMDDHHMMSS.gnucash`, и вы можете спокойно удалить `.log` файлы, так как они не являются полной копией ваших данных.

Примечание

Если вы обновили версию GnuCash до версии 2.4, у вас также могут быть файлы резервных копий в старом формате `.xas`. Для этих файлов вы можете применить тот же принцип, описанный выше для файлов резервных копий `.YYYYMMDDHHMMSS.gnucash`.

Также вам необходимо удалять любые файлы `.LCK` и `.LNK`, которые вы видите после закрытия GnuCash. Если вы решите вручную сохранить резервную копию на другой диск, вам следует зарезервировать главный файл данных, `.YYYYMMDDHHMMSS.gnucash` файлы резервировать не нужно.

Примечание

По умолчанию GnuCash автоматически удаляет журналы изменений `.log` и резервные копии `.YYYYMMDDHHMMSS.gnucash` старше 30 дней. Вы можете изменить это в настройках GnuCash на вкладке Основные в разделе меню Правка → Настройки (GnuCash → Настройки в macOS).

Перенос GnuCash данных

Иногда вам может потребоваться переместить ваши финансовые данные и настройки GnuCash на другой компьютер. Типичные варианты использования - это когда вы покупаете новый компьютер или хотите использовать одни и те же настройки в двух разных операционных системах в конфигурации с двойной загрузкой.

Перенос финансовых данных

Перенос финансовых данных GnuCash так же прост, как копирование файлов `.gnucash` в файловом менеджере, если вы знаете, где они сохранены. Если вы не можете вспомнить, где хранится файл, но вы можете открыть его непосредственно в GnuCash, то сохраните его по желаемому пути из GnuCash.

Все остальные файлы в папке - это либо резервные копии, либо файлы журналов изменений. От копирования этих файлов не будет никакого вреда, но и польза это тоже вряд ли принесет.

Перенос настроек

Настройки хранятся в трех разных местах: один для настроек GnuCash, один для отчетов и один для настроек онлайн-банкинга. Настройки GnuCash управляются `gsettings`, отчеты управляются самим

GnuCash , а онлайн-банкинг управляется aqbanking. Если вы не используете онлайн-банкинг, у вас не будет этой папки на вашем компьютере.

Где хранятся настройки GnuCash, зависит от вашей операционной системы (см. Таблица 2.1, «Настройки GnuCash», Таблица 2.2, «Настройки отчетов» и Таблица 2.3, «Настройки онлайн-банкинга»). Чтобы выполнить резервное копирование и перенести все ваши настройки, вы также должны скопировать все эти файлы.

Таблица 2.1. Настройки GnuCash

Операционная система	Папка
Unix	Настройки GnuCash хранятся в dconf. Для переноса ваших настроек вы можете использовать команды dconf dump /org/gnucash/ на старой машине и dconf load /org/gnucash/ на новой машине.
macOS	~/Library/Preferences/gnucash.plist
Windows	Настройки сохраняются в реестре Windows: HKEY_CURRENT_USER/software/GSettings

Таблица 2.2. Настройки отчетов

Операционная система	Папка
Unix	~/ .gnucash
macOS	~/Library/Application Support/gnucash
Windows	Documents and Settings/Username/ .gnucash or Users/Username/ .gnucash

Таблица 2.3. Настройки онлайн-банкинга

Операционная система	Папка
Unix	~/ .aqbanking
macOS	~/ .aqbanking
Windows	Documents and Settings/Username/ .aqbanking

Примечание

В Unix и macOS эти папки обычно не отображаются в файловом менеджере. Вы необходимо настроить файловый менеджер для отображения скрытых файлов и папок, чтобы вы могли их увидеть.

Подсказка

В Unix и macOS символ ~ означает домашнюю папку.

Объединяя все вместе

Примечание

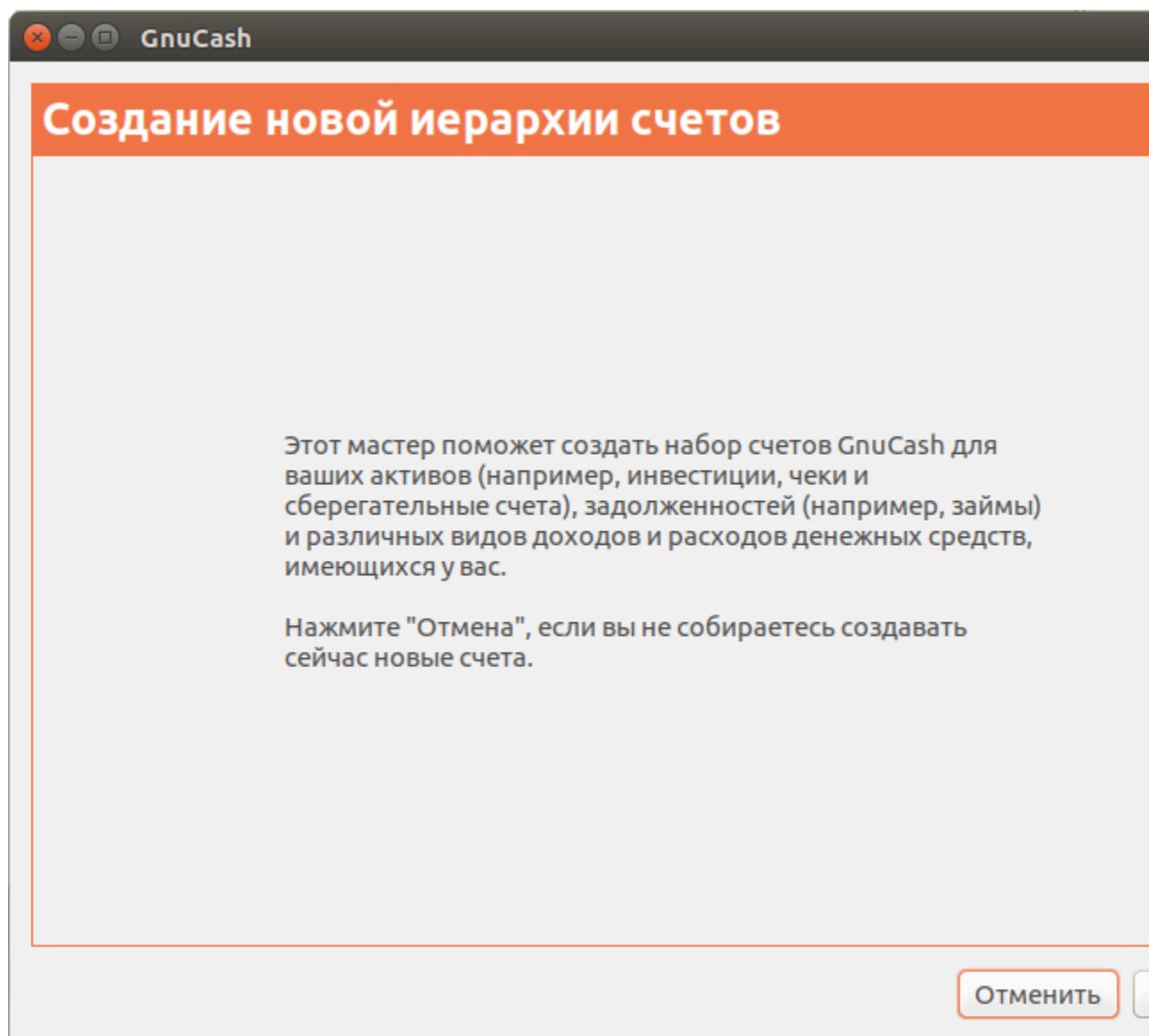
Этот раздел начинает практическое руководство, которое будет продолжаться на протяжении всей книги. В конце каждой главы вы увидите раздел Объединяя все вместе, который проведет вас через примеры для иллюстрации понятий, обсуждаемых в этой главе. Каждый раздел Объединяя все вместе основывается на предыдущем разделе, так что убедитесь, что вы сохранили ваш файл для легкого доступа.

Давайте начнём!

1. Во-первых, давайте создадим файл для хранения ваших действительных данных. Откройте GnuCash и выберите Файл → Новый файл в *главном меню*. Этим вы запустите мастер Создание новой иерархии счетов, который позволит вам создать несколько счетов за раз.

Примечание

Если вы впервые запускаете GnuCash, то вы увидите сообщение Cannot find default values, которое подробно описано в справочном руководстве GnuCash.



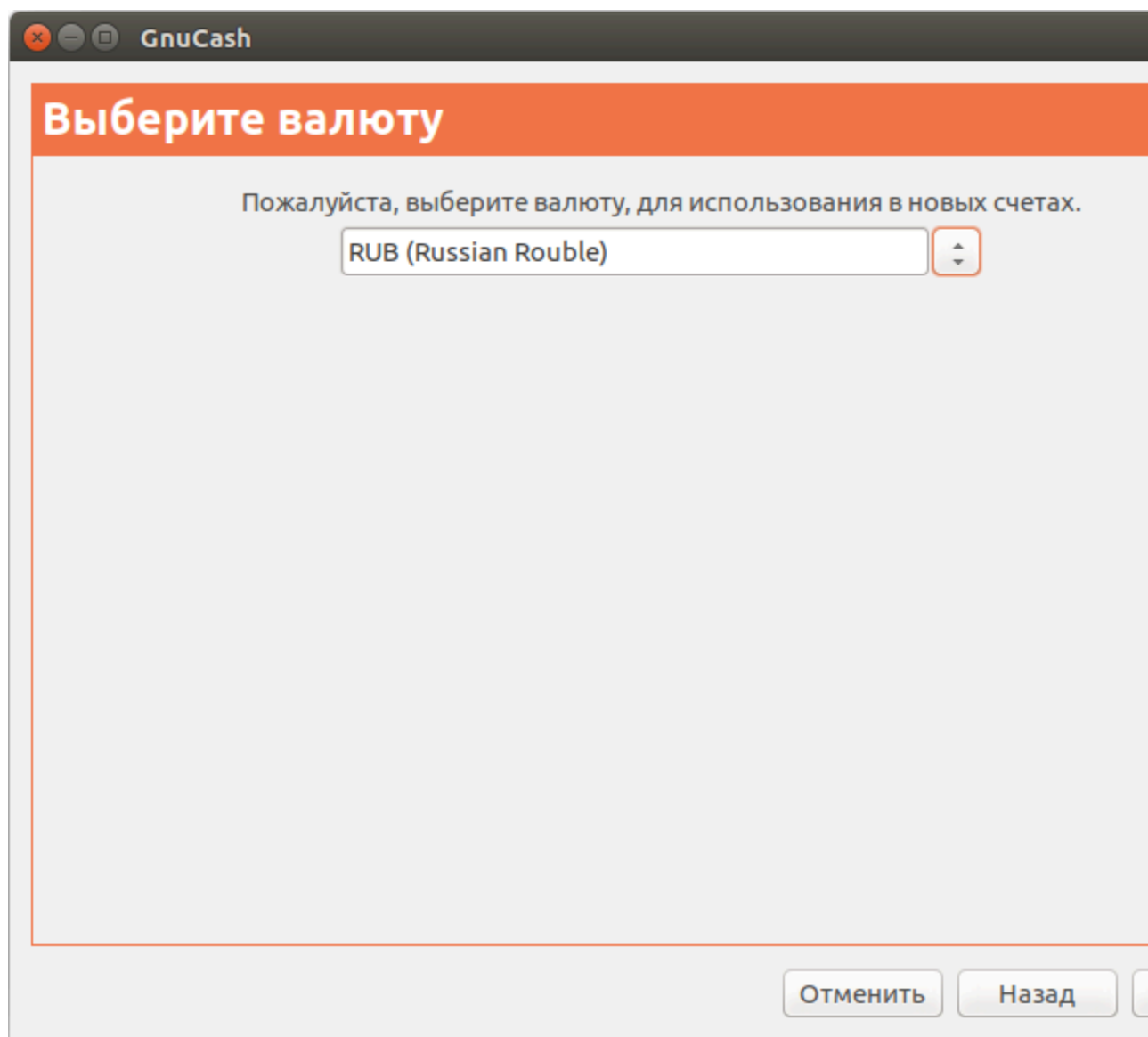
Это изображение показывает первый экран мастера Создание новой иерархии счетов.

Первый экран мастера содержит описание того, что делает этот мастер. Нажмите кнопку Вперёд, чтобы перейти к следующему экрану.

2. На втором экране выберите валюту для новых счетов в раскрывающемся списке. Затем нажмите кнопку Вперёд.

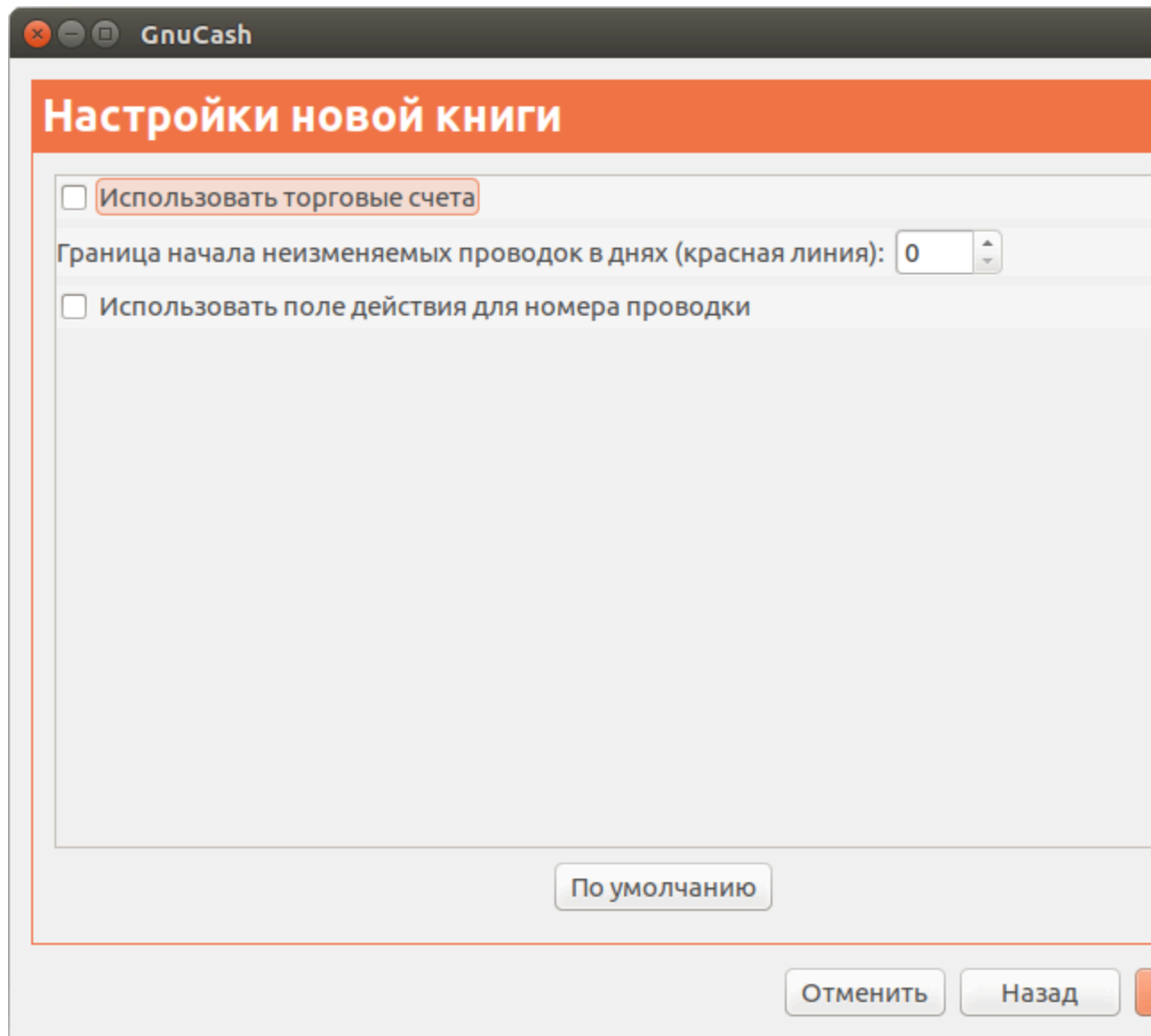
Примечание

Валюта, которую вы выбрали здесь, будет присвоена всем счетам, созданным в этом мастере.



Это изображение показывает второй экран мастера Создание новой иерархии счетов, где вы можете выбрать валюту.

3. На третьем экране установите параметр Настройки новой книги, затем нажмите кнопку Вперёд. Вы можете изменить эти параметры позже, используя Файл → Свойства в *главном меню*. Подробнее эти параметры описаны в справочном руководстве GnuCash, в главе Настройки GnuCash, Параметры книги.

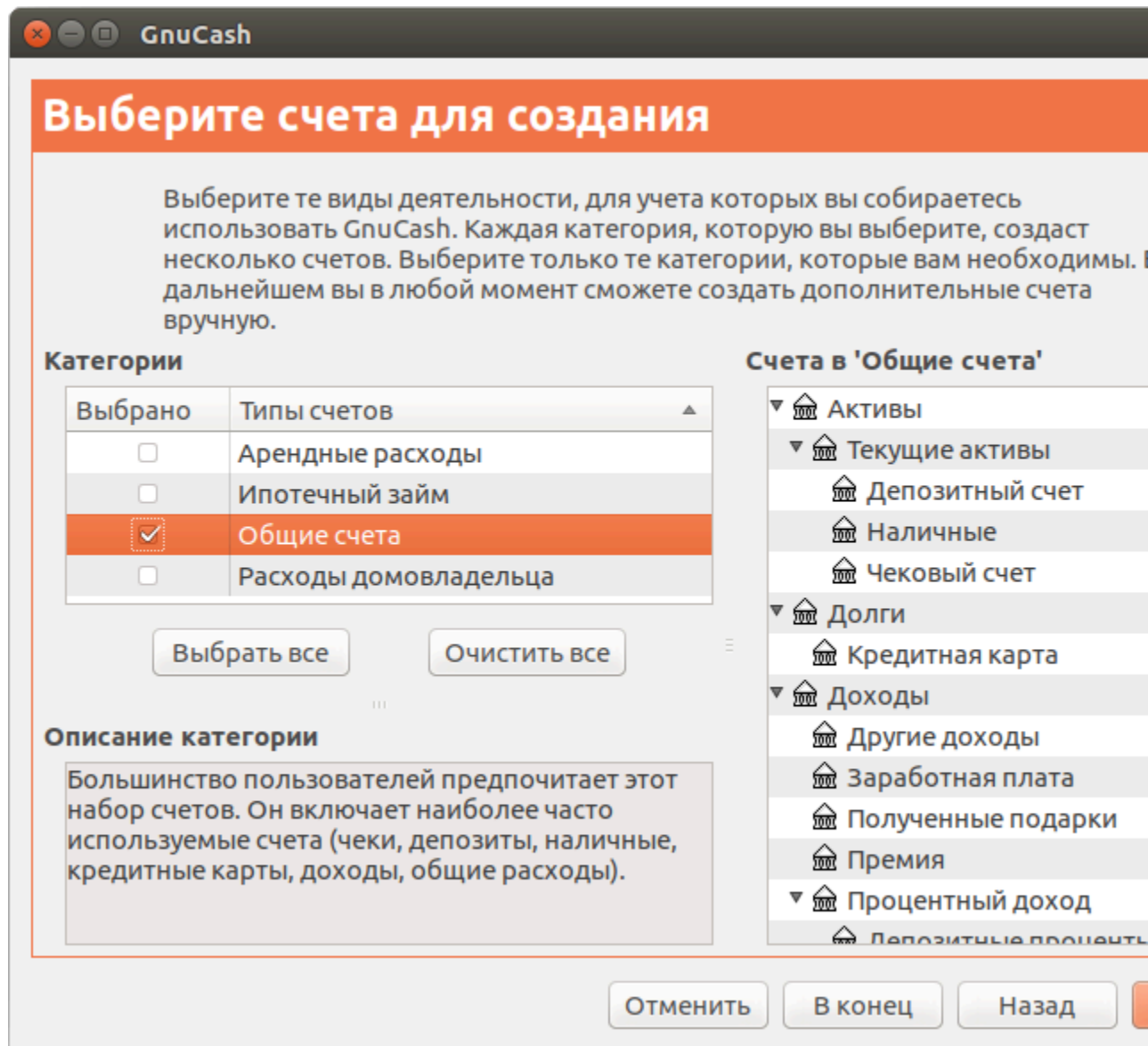


На этом изображении показан третий экран Создание новой иерархии счетов, где вы можете установить параметры новой книги.

4. На четвертом экране выберите группу Общие счета на разделе Категории. Затем нажмите кнопку Вперёд, чтобы продолжить.

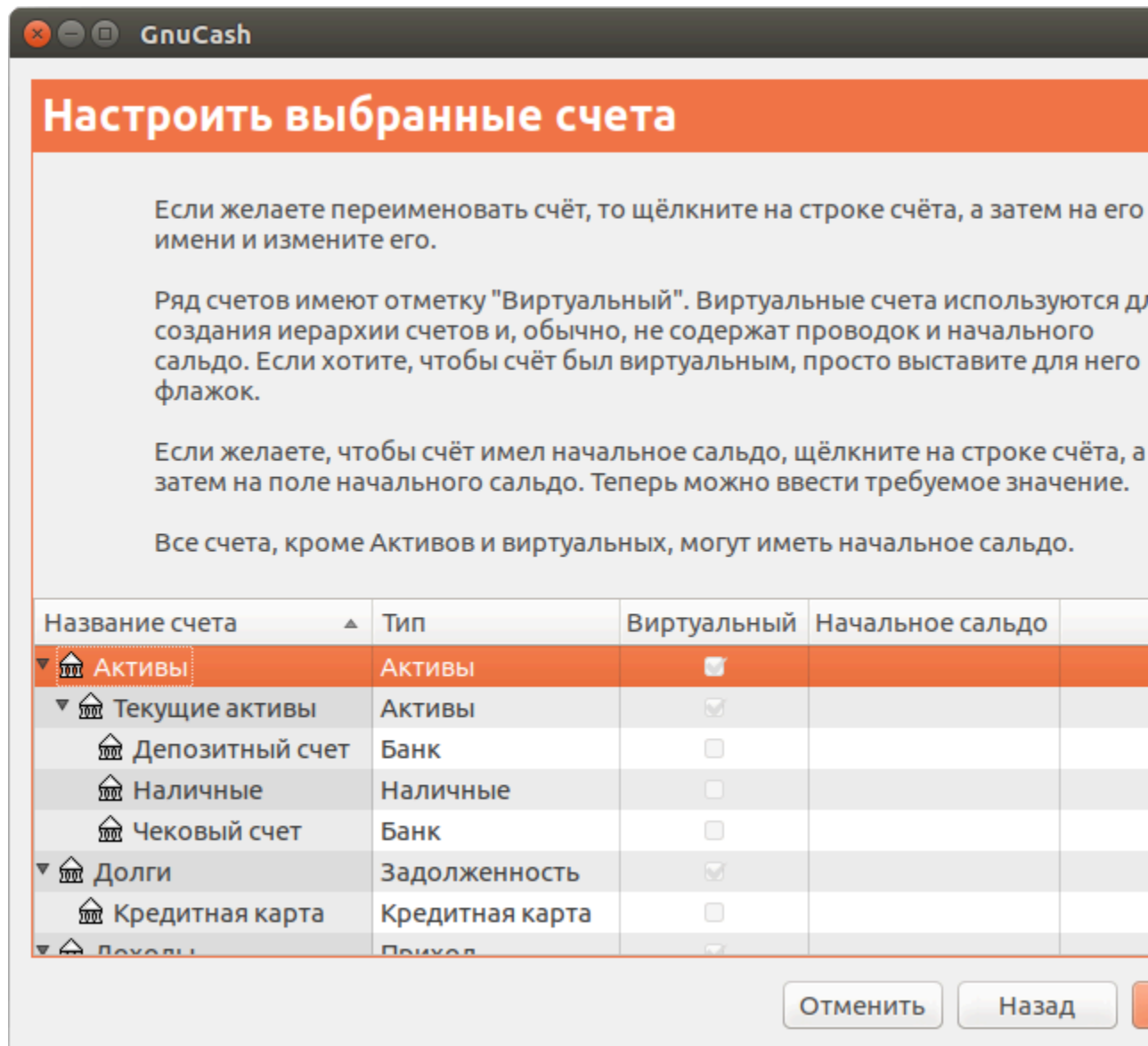
Примечание

Если вы хотите, то вы можете выбрать здесь одну или несколько predefined групп счетов. Дополнительную информацию о типах счетов вы найдете в разделе «Счета GnuCash».



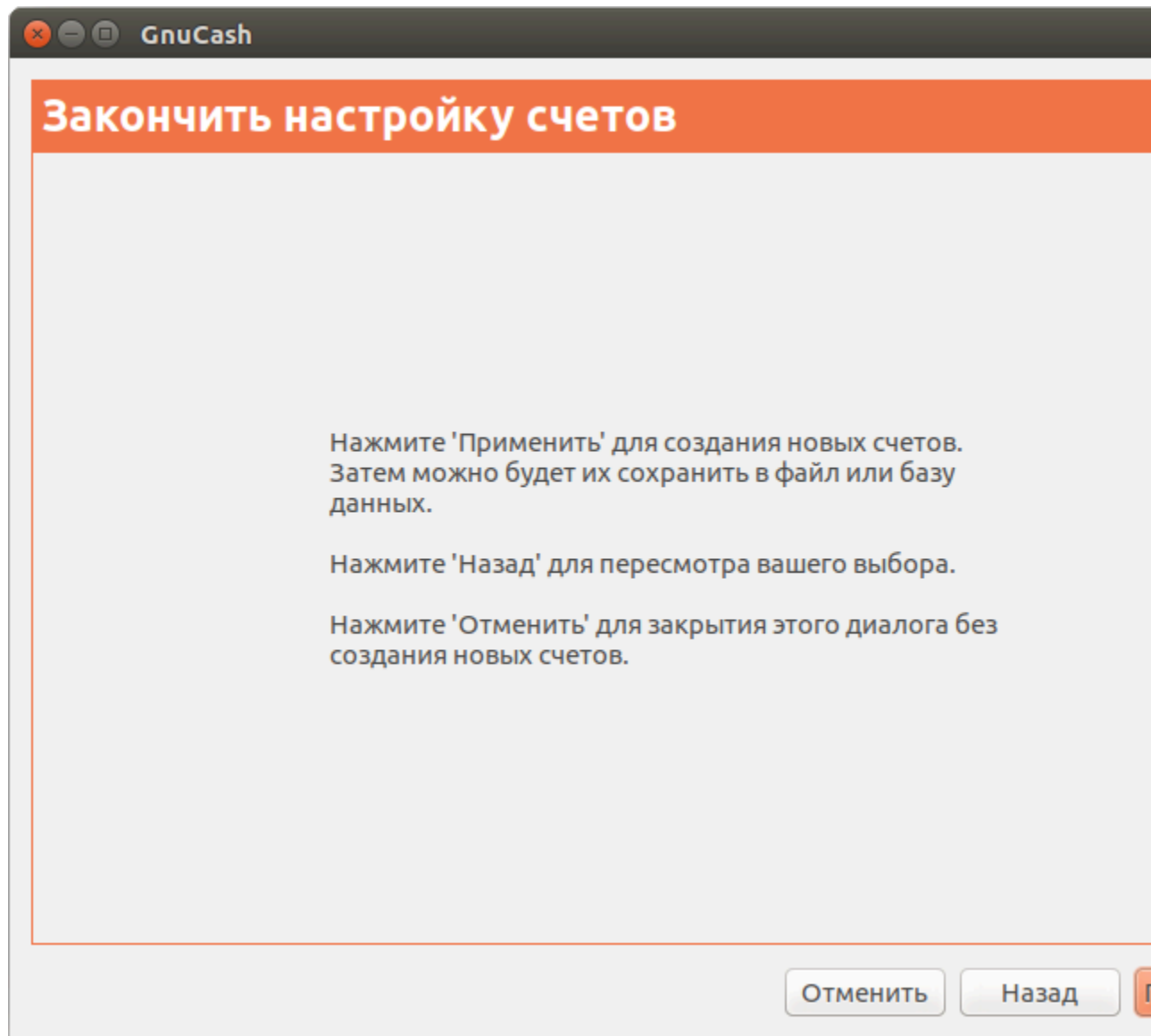
На этом изображении показан четвертый экран мастера Создание новой иерархии счетов, в котором вы можете выбрать различные счета.

5. На пятом экране вы сможете указать начальное сальдо для каждого счета, а также указать, должен ли счет быть виртуальным. Поскольку эти функции будут описаны в следующих главах, оставьте все как настроено GnuCash и нажмите кнопку Вперёд, чтобы открыть последний экран мастера.



На этом изображении показан пятый экран мастера Создание новой иерархии счетов, в котором вы можете указать начальное сальдо для каждого счета.

6. На последнем экране мастера нажмите Применить, чтобы создать счета с выбранными настройками и закрыть окно мастера.



На этом изображении показан последний экран мастера Создание новой иерархии счетов.

7. После нажатия кнопки Применить в предыдущем окне вам будет представлен диалог Сохранить как.... Выберите формат данных XML, назовите файл `gcashdata_1`, выберите папку для сохранения файла (запомните это, потому что этот файл будет использоваться также в других главах этого руководства) и, наконец, нажмите кнопку Сохранить как.

Теперь ваше главное окно должно выглядеть примерно так:

gcashdata_1.gnucash - Счета - GnuCash

Сохранить ✕ Закрывать

Счета

Название счета ▲	Описание	Предмет	Всего
▶ Активы	Активы	Russian Rouble	0.00 ₺
▶ Долги	Долги	Russian Rouble	0.00 ₺
▶ Доходы	Доходы	Russian Rouble	0.00 ₺
▶ Расходы	Расходы	Russian Rouble	0.00 ₺
▶ Собственные средства	Собственные средства	Russian Rouble	0.00 ₺

₺, вообще всего: Чистые активы: 0.00 ₺ Прибыль: 0.00 ₺

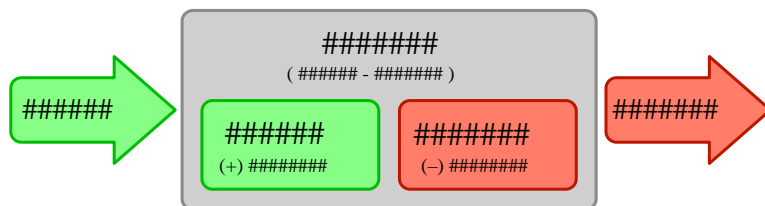
Глава 3. Счета

В этой главе будут обсуждаться наиболее полезные концепции организации ваших счетов. Так как GnuCash не предлагает определенной структуры счетов, вы свободны в создании вашей собственной структуры в любой удобной для вас манере. Однако, имеется несколько основных концепций отчетности, которым вы, вероятно, захотите последовать создавая свои счета, чтобы увеличить их пользу.

Основные понятия отчетности

Как мы видели в предыдущей главе, отчетность основывается на пяти основных типах счетов: Актив, Пассив, Капитал, Доходы и Расходы. Сейчас мы расширим наше понимание этих типов счетов и покажем, как они представлены в GnuCash. Но сначала, давайте разделим их на две группы: балансовые счета и счета доходов/расходов. Как видно из названия, балансовые счета описывают баланс того, чем вы владеете и что вы должны *в определенный момент времени*, в то время как счета доходов и расходов можно просуммировать в отчете о прибылях и убытках, который вам покажет *изменения значений за период времени*, например экономический год.

Давайте посмотрим на финансовую формулу (*Активы - Пассивы = Капитал + (Доходы - Расходы)*) для напоминания перед тем, как мы более подробно рассмотрим каждый тип счета.



Графическое представление взаимосвязи между пятью основными счетами. Капитал увеличивается через доходы и уменьшается через расходы. Стрелками показано движение средств.

Балансовые счета

Три, так называемых *балансовых счета*: Активы, Пассивы, Капитал. Балансовые счета используются для отслеживания изменений стоимости вещей, которыми вы владеете, или за которые вы должны деньги.

Активы - группа вещей, которыми вы владеете. Ваши активы могут включать автомобиль, наличные деньги, дом, акции или что-нибудь еще, что может иметь конвертируемое значение. Конвертируемое значение означает, что вы можете продать эту вещь за наличные деньги.

Пассивы - группа вещей, за которые вы должны деньги. Ваши пассивы могут включать кредит на покупку автомобиля или обучение, залог имущества, инвестиционный счет или что-либо еще, что вы должны вернуть через некоторое время.

Капитал - это то же самое, что и чистая стоимость. Он показывает остаток после вычета ваших пассивов из активов. Он может рассматриваться как часть ваших активов, которыми вы владеете напрямую, без каких-либо долгов.

Счета Доходов и Расходов

Оба счета Доходы и Расходы используются для того, чтобы увеличить или уменьшить стоимость ваших счетов. Таким образом, если балансовые счета просто *отслеживают* стоимость вещей, которыми вы владеете или должны, то счета доходов и расходов позволяют вам *изменить* стоимость ваших счетов.

Доходы - это оплата, которую вы получаете за работу, услуги, которые вы оказываете или за пользование вашими деньгами. Например, когда вы получаете чек, он является оплатой за работу, которую вы выполнили для работодателя. Другими примерами доходов являются комиссионные платежи, дивиденды за акции или прибыль с банковского депозита. Прибыль всегда будет увеличивать стоимость ваших Активов и посредством этого - ваш Капитал.

Расходы - относятся к деньгам, которые вы платите за товары или услуги, предоставленные кем-нибудь другим. Примерами расходов есть еда в ресторане, арендная плата, бензин для машины, билеты на футбол. Расходы всегда будут уменьшать ваш Капитал. Если вы оплачиваете свои расходы сразу, тем самым вы уменьшаете свои Активы, если же вы оплачиваете расходы в долг, то вы увеличиваете свои Пассивы.

Счета GnuCash

В этом разделе будет показано, как понятие счет в программе GnuCash соотносится с пятью базовыми типами счетов.

Но вначале давайте начнем с самого понятия счет в программе GnuCash. Счет в GnuCash является объектом, который содержит другие субсчета или транзакции. Если счет содержит другие субсчета, то вы увидите дерево счетов в GnuCash, где в пределах родительского счета находятся логически связанные с ним субсчета.

Счет в GnuCash должен иметь уникальное имя (указанное вами) и один из предварительно выбранных типов счетов. В целом в GnuCash существует 12 типов счетов. Эти 12 типов счетов основаны на пяти базовых счетах. Причина наличия такого количества счетов в GnuCash состоит в том, что это позволяет выполнять в GnuCash специализированные операции (отслеживание и управление) для определенных типов счетов. Существует 6 счетов актива (*Наличные, Банк, Акции, Взаимный фонд, Поступления платежей и Актив*), 3 счета Пассива (*Кредитная карта, Выплаты и Пассив*), 1 капитальный счет (*Капитал*), 1 входящий счет (*Доходы*) и исходящий счет (*Расходы*).

Эти GnuCash типы счетов будут более подробно рассмотрены ниже.

Балансовые счета

Первый балансовый счет, который мы изучим - *Активы*. Как вы помните из предыдущего раздела, он относится к вещам, которыми вы владеете.

Для того, чтобы помочь вам организовать счета активов и упростить ввод транзакций, GnuCash поддерживает несколько типов счетов актива:

1. **Наличные (Cash)** Используйте этот счет для учета денег, имеющихся на руках, в кошельке, вашей копилке, под матрасом, или где вы считаете удобным их хранить. Это *наиболее ликвидный* тип счета.
2. **Банк (Bank)** Используйте этот счет для учета вашего наличного баланса, который хранится в таких учреждениях как банки, кредитные союзы, брокерские фирмы и в любом ином месте, где кто-либо другой обеспечивает их сохранность. Это *второй по ликвидности* тип счета, потому что вы легко можете превратить его в наличные деньги.

3. **Акции (Stock)** Учитывайте ваши личные акции и обязательства, используя этот тип счета. Реестр этого счета в программе содержит дополнительные колонки для ввода числа имеющихся акций и стоимости ваших инвестиций. Этот тип активов не может быть легко конвертирован в наличные деньги, пока вы не найдете покупателя. Также нет гарантии, что вы получите за них ту же сумму денег, что и при покупке.
4. **Фонды (Mutual Fund)** Этот счет подобен счету Акции за исключением того, что используется для учета фондов. Реестр этого счета также содержит дополнительные колонки для ввода информации о количестве и цене. Фонды представляют собой права собственности на различные виды инвестиций и подобно акциям не предполагают гарантированного денежного значения.

GnuCash работает с типами счетов Акции и Фонды одинаково.

5. **Дебиторская задолженность (Accounts Receivable)** Этот счет применяется в бизнесе для указания там денег, которые должны вам. Это считается активом, потому что вы можете рассчитывать на получение этих средств назад.

Транзакции в счетах дебиторской задолженности не следует добавлять, изменять или удалять каким-либо иным образом, кроме как используя

- post/unpost bill/invoice/voucher or
- process payment

6. **Актив (Asset)** Независимо от того, насколько они разнообразны, GnuCash легко справляется со многими другими ситуациями. Тип счета «Активы» охватывает все активы, не перечисленные выше.

GnuCash рассматривает типы счетов Наличные, Банк и Актив одинаково.

Счета - это хранилища информации, используемые для отслеживания или записи видов действий, связанных с целью, для которой был создан определённый счет.

Для предпринимательской деятельности обычно необходимо более детальное отслеживание и разделение транзакций, чем то, что было рассмотрено до сих пор. Для более полного изучения возможностей ознакомьтесь с описанием Глава 15, *Other Assets* этого руководства.

Для личных финансов вы также можете ориентироваться на правила для предпринимательской деятельности, настолько это будет полезными для деятельности, которую вы отслеживаете, и для вида отчетности, которую вы хотите составить для управления своими финансовыми активами. Для дополнительной информации см. Глава 15, *Other Assets* этого руководства.

Второй балансовый счет - это *Пассивы*, который как вы помните, относится к деньгам, которые вы заняли и обязались вернуть к определенному времени. Пассивы представляют право ваших кредиторов получить от вас сумму погашения долга. Учет баланса пассивов позволит вам знать, сколько долгов вы имеете на данный момент времени.

В GnuCash есть три типа счетов пассива:

1. **Кредитка (Credit Card)** Используйте этот счет для учета состояния вашей кредитной карты. Кредитные карты предоставляют краткосрочный кредит, который вы обязаны вернуть владельцу карты. Этот вид счета также можно использовать для других краткосрочных ссуд, таких как кредитная линия, предоставленная вашим банком.
2. **Кредиторская задолженность (Accounts Payable)** Применяется в бизнесе для учета счетов, которые еще только предстоит оплатить (Подлежащие оплате счета).

Транзакции в счетах кредиторской задолженности не следует добавлять, изменять или удалять каким-либо иным образом, кроме как используя:

- post/unpost bill/invoice/voucher or
- process payment

3. Обязательства (Liability) Используйте этот вид счета для всех других ссуд, в основном долгосрочных, таких как ипотека или кредит на машину. Этот счет поможет вам контролировать суммы, которые вы должны и сколько денег вы уже заплатили.

GnuCash рассматривает типы счетов Кредитка и Обязательства одинаково.

Подсказка

Обязательства прямо противоположны активам: *кредит* (правая колонка ввода) увеличивает баланс счета обязательств, а *дебет* (левая колонка ввода) - уменьшает его. Смотрите примечание дальше в этой главе.

Последний балансовый счет - это *Капитал*, который является синонимом «чистой стоимости». Он представляет собой остаток после вычитания ваших обязательств из ваших активов. Это часть ваших активов, которыми вы владеете напрямую, без каких-либо долгов. В GnuCash используйте этот счет как источник вашего банковского баланса, так как этот баланс представляет собой вашу начальную чистую стоимость.

В GnuCash существует единственный счет для капиталов, названный естественно, Капитал. Для компаний, кооперативов и т.д. вы можете создать субсчета для каждого партнера.

Подсказка

В счетах капиталов кредит увеличивает баланс счета, а дебет уменьшает его. Смотрите примечание дальше в этой главе.

Примечание

Счетная формула, которая связывает балансовые счета следующая: Активы = Пассивы + Капитал или Активы - Пассивы = Капитал. В общих терминах: Вещи, которыми *вы владеете*, минус вещи, которые *вы должны* равняются *чистой стоимости*.

Счета Доход и Расход

Доход это плата, которую вы получаете за работу, услуги, которые вы оказываете или за пользование вашими деньгами. В GnuCash для отслеживания этих операций используется тип счета Приход.

Подсказка

Кредит увеличивает баланс доходного счета, а дебет уменьшает его. Как описано в «Основные понятия отчетности», кредит показывает деньги, перемещенные *со* счета. Таким образом, когда вы перемещаете деньги *из* (кредит) счета Приход на другой счет, то баланс счета *Доход* увеличивается. Например, если вы оприходуете чек и записываете транзакцию как перемещение из Доходного счета на счет Банк, то баланс обоих счетов возрастает.

Расходы относятся к деньгам, которые вы платите за товары или услуги, предоставленные кем-нибудь другим. В GnuCash тип счета Расходы используется для контроля ваших денежных трат.

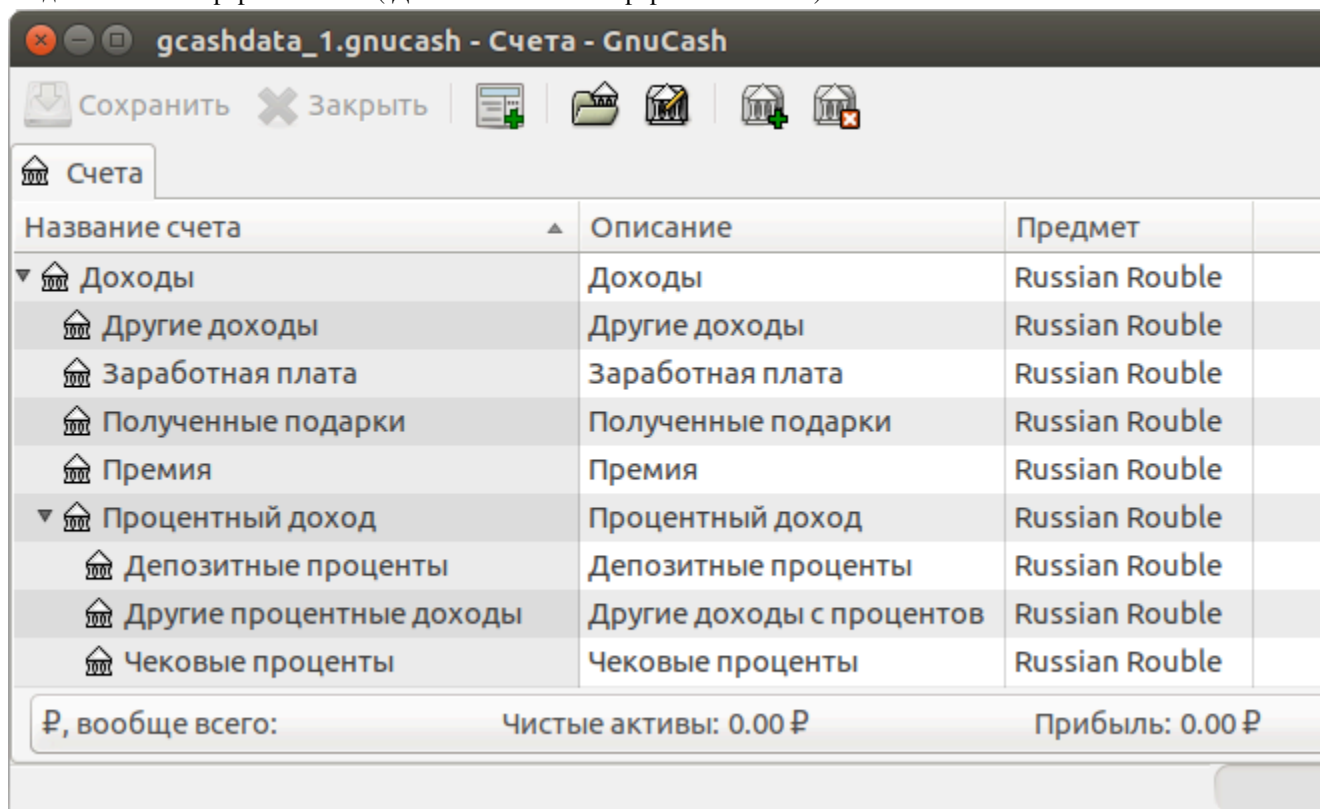
Подсказка

Дебет увеличивает баланс счета Расходы, а кредит уменьшает его (Смотри примечание ниже).

Примечание

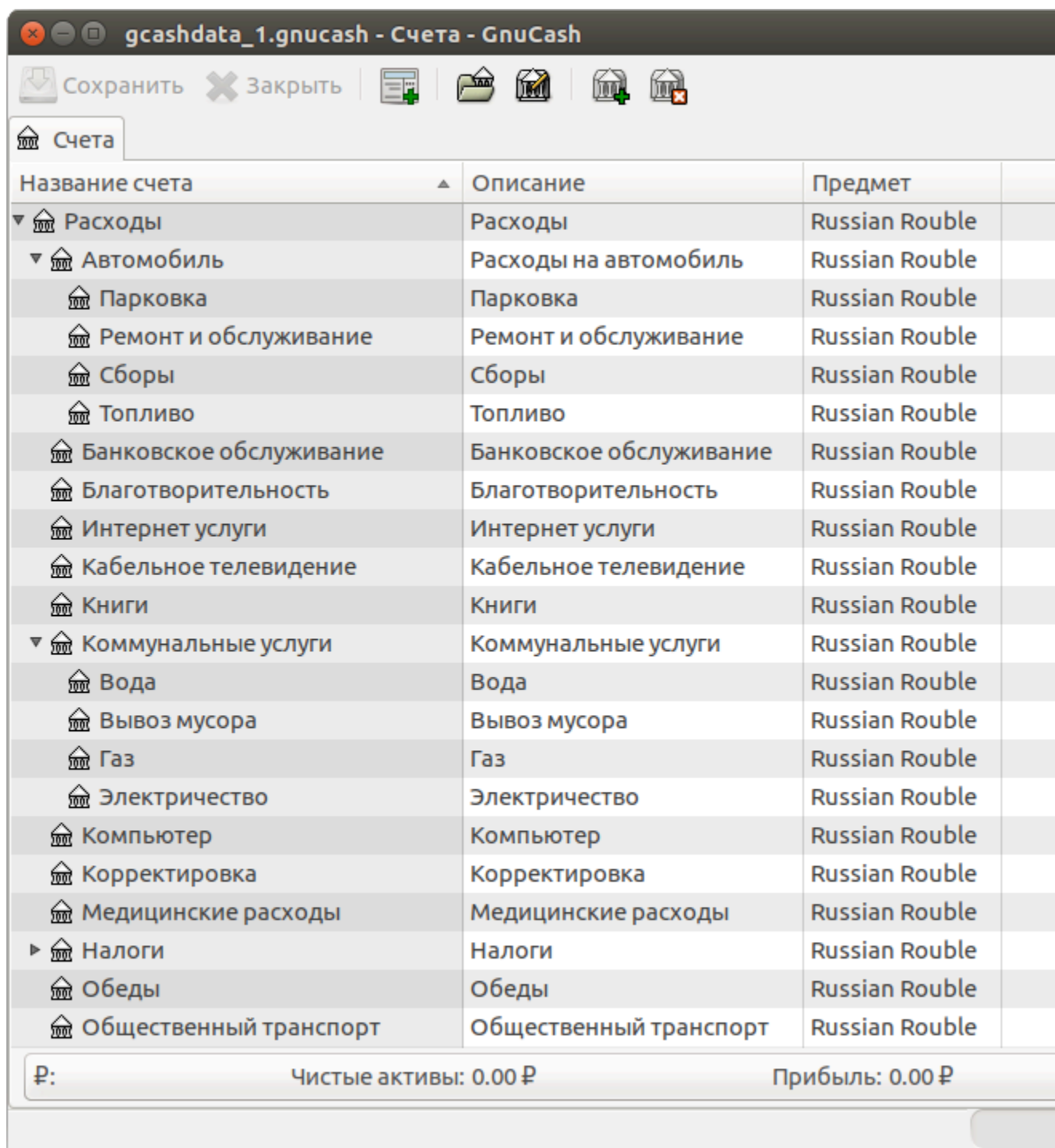
Когда вы вычитаете общие затраты из общей прибыли за определенный период времени, вы получаете чистую прибыль. Эта прибыль затем добавляется в балансный отчет как нераспределенная прибыль, которая является видом Капитального счета.

На рисунках ниже показаны стандартные счета Доходы и Расходы после выбора Общих Счетов при создании новой иерархии счетов (Действия → Новая иерархия Счетов...).



Название счета	Описание	Предмет
Доходы	Доходы	Russian Rouble
Другие доходы	Другие доходы	Russian Rouble
Заработная плата	Заработная плата	Russian Rouble
Полученные подарки	Полученные подарки	Russian Rouble
Премия	Премия	Russian Rouble
Процентный доход	Процентный доход	Russian Rouble
Депозитные проценты	Депозитные проценты	Russian Rouble
Другие процентные доходы	Другие доходы с процентов	Russian Rouble
Чековые проценты	Чековые проценты	Russian Rouble
₽, вообще всего:	Чистые активы: 0.00 ₽	Прибыль: 0.00 ₽

Этот рисунок показывает стандартные счета *Доходы*.



Название счета	Описание	Предмет
Расходы	Расходы	Russian Rouble
Автомобиль	Расходы на автомобиль	Russian Rouble
Парковка	Парковка	Russian Rouble
Ремонт и обслуживание	Ремонт и обслуживание	Russian Rouble
Сборы	Сборы	Russian Rouble
Топливо	Топливо	Russian Rouble
Банковское обслуживание	Банковское обслуживание	Russian Rouble
Благотворительность	Благотворительность	Russian Rouble
Интернет услуги	Интернет услуги	Russian Rouble
Кабельное телевидение	Кабельное телевидение	Russian Rouble
Книги	Книги	Russian Rouble
Коммунальные услуги	Коммунальные услуги	Russian Rouble
Вода	Вода	Russian Rouble
Вывоз мусора	Вывоз мусора	Russian Rouble
Газ	Газ	Russian Rouble
Электричество	Электричество	Russian Rouble
Компьютер	Компьютер	Russian Rouble
Корректировка	Корректировка	Russian Rouble
Медицинские расходы	Медицинские расходы	Russian Rouble
Налоги	Налоги	Russian Rouble
Обеды	Обеды	Russian Rouble
Общественный транспорт	Общественный транспорт	Russian Rouble

₺: Чистые активы: 0.00 ₺ Прибыль: 0.00 ₺

Этот рисунок показывает некоторые стандартные счета *Расходы*.

Примечание

Помните, понятие терминов дебет и кредит рассматривалось в «Основные понятия отчетности»? Вопреки популярному убеждению и даже некоторым словарям, счета дебетов и кредитов не растут и не уменьшаются. Они всего лишь соответствуют записям левой (дебет) и правой (кредит) колонок отчета. Фактически, дебет и кредиты, каждый отдельно,

увеличивают один тип счетов и уменьшают другой. В типах счетов Актив и Расходы дебет увеличивает баланс, а кредит уменьшает. В счетах Пассив, Капитал и Расходы кредит увеличивает баланс, а дебет уменьшает.

Например, дебет увеличивает баланс вашего банковского счета, а кредит уменьшает его. Вы можете сказать, что дебетовая карта уменьшает баланс на вашем счету, потому что вы берете из нее деньги. И когда банк дает мне деньги на мои цели, он тем самым кредитует мой счет. Зачем все перевернуто наоборот в бухгалтерском учете?

Дело в том, что банк смотрит на транзакции со своей стороны, никак не с вашей. И это виденье в точности противоположно вашему. Для вас ваш банковский счет является активом, потому что вы владеете им, а для банка он пассив, так как он должен вам эти деньги. Как разъяснено в этом разделе активы и пассивы в точности противоположны в зависимости от того, кому они принадлежат. И поэтому, на счету Пассива дебет увеличивает баланс, а кредит уменьшает.

Когда вы берете деньги с вашего банковского счета, его баланс уменьшается. Для вас это является уменьшением ваших активов, так как вы кредитуете свой банковский счет. Для банка - это увеличение пассивов, так как они ваш счет дебетуют.

Прочие типы счетов

Существуют некоторые специальные другие типы счетов.

Торговля (Trading) Разделенные валютные транзакции имеют запись на счетах «Торговля», чтобы сбалансировать сделки в каждой валюте, а также в общей стоимости. Для дополнительной информации смотри Глава 12, *Мультивалютные операции*.

Денежный рынок (Money Market) и *Кредитная линия (Credit Line)* используются только при импорте OFX, по-видимому для полного соответствия со спецификацией этого формата.

Объединяя все это вместе

Давайте подойдем к процессу построения *номенклатуры счетов* своих личных финансов, используя информацию, которую вы изучили в этой главе. Номенклатура счетов - это просто новый файл GnuCash, в котором вы группируете ваши счета для контроля личных финансов. В ее построении первоочередным заданием является выделение вещей, которые вы хотите отслеживать при помощи основных типов счетов бухгалтерского учета. Это очень просто, давайте взглянем на пример.

Простой пример

Допустим, вы имеете текущий и депозитный счета в банке, трудоустроены и таким образом, получаете чеки. У вас есть кредитная карта Visa и ежемесячно вы платите коммунальные платежи в форме оплаты за аренду, телефон и электричество. Естественно, вам необходимо покупать продукты. Пока мы не будем вникать в то, сколько денег у вас в банке, сколько вы должны по кредитной карточке и т.п. Мы просто хотим создать структуру для этой номенклатуры счетов.

Вашими Активами будут банковский депозит и текущий счет. Вашими Долгами - кредитная карта. Вашими Собственными средствами будет стартовое значение банковских счетов и кредитной карты (мы еще не знаем точной суммы, но знаем, что она есть). Вы имеете Доходы в виде заработной платы и Расходы в виде продуктов, арендной платы, телефона, электричества и налогов на вашу заработную плату. Просто, не так ли?

Основные счета верхнего уровня

Теперь вы должны решить, как вы хотите сгруппировать эти счета. Наиболее вероятно, что вы захотите сгруппировать ваши *Активы* вместе, *Долги* вместе, *Собственные средства* вместе, *Доходы* вместе и *Расходы* вместе. Это самый приемлемый путь построения номенклатуры счетов в GnuCash и настоятельно рекомендуется всегда начинать именно таким образом.

Начните с пустого файла GnuCash выбрав Файл → Новый файл в главном меню. Появится мастер Создание новой иерархии счетов. Нажмите кнопку Отменить для закрытия мастера, т.к. мы не хотим использовать уже predetermined структуру счетов; вместо этого мы создадим простую начальную структуру счетов с нуля. В пустом окне GnuCash выберите Вид → Новая страница счетов : откроется вкладка Счета. Наконец, выберите Действия → Новый счет... .

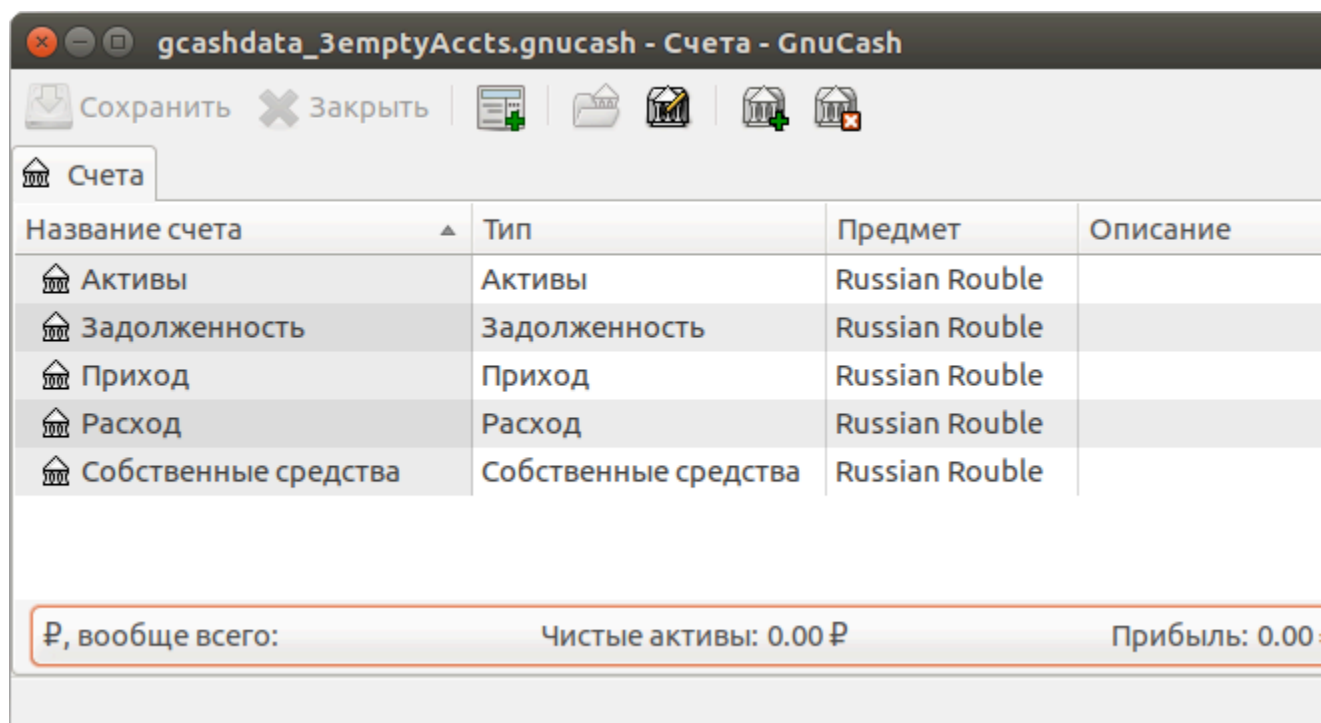
Теперь вы готовы создать эту простую начальную структуру счетов:

1. Название счета Активы (тип счета Активы, родительский счет Новый счет верхнего уровня).

На рисунке показано диалоговое окно при создании счета Активы.

2. Название счета Долги (тип счета Задолженность, родительский счет Новый счет верхнего уровня)
3. Название счета Собственные средства (тип счета Собственные средства, родительский счет Новый счет верхнего уровня)
4. Название счета Доходы (тип счета Приход, родительский счет Новый счет верхнего уровня)
5. Название счета Расходы (тип счета Расход, родительский счет Новый счет верхнего уровня)

Когда вы создадите все счета верхнего уровня, то главное окно *Счета* в GnuCash должно выглядеть как на рисунке ниже.



Название счета	Тип	Предмет	Описание
Активы	Активы	Russian Rouble	
Задолженность	Задолженность	Russian Rouble	
Приход	Приход	Russian Rouble	
Расход	Расход	Russian Rouble	
Собственные средства	Собственные средства	Russian Rouble	

₽, вообще всего: Чистые активы: 0.00 ₽ Прибыль: 0.00

На рисунке показаны базовые счета верхнего уровня.

Сохраните эту структуру счетов под именем `gcashdata_3emptyAccts` для того, чтобы мы могли использовать их в последующих главах.

Создание суб-счетов

Теперь вы можете добавить к этой начальной структуре верхнего уровня несколько субсчетов для учета реальных транзакции. Обратите внимание на то, что налоговые счета размещены в пределах субсчета имени *Налоги*. Вы можете создать субсчета внутри субсчетов. Обычно это делается для группировки похожих счетов (например как: налоговые счета в данном примере).

Подсказка

Вместо выбора Действия → Новый счет... в главном меню, вы можете создать также новый субсчет нажав правой кнопкой мышки на названии соответствующего счета и выбрав в контекстном меню Новый счет.... При этом откроется диалоговое окно, аналогичное изображенному в «Основные счета верхнего уровня», где новый субсчет уже будет установлен в качестве потомка выбранного счета.

1. Название счета Наличные (тип счета Наличные, родительский счет *Активы*)
2. Название счета Текущий счет (тип счета Банк, родительский счет *Активы*)
3. Название счета Депозиты (тип счета Банк, родительский счет *Активы*)
4. Название счета Visa (тип счета Кредитная карта, родительский счет Долги)
5. Название счета Заработная плата (тип счета Приход, родительский счет Доходы)
6. Название счета Телефон (тип счета Расход, родительский счет Расходы)

7. Название счета Электричество (тип счета Расход, родительский счет Расходы)
8. Название счета Арендная плата (тип счета Расход, родительский счет Расходы)
9. Название счета Продукты (тип счета Расход, родительский счет Расходы)
10. Название счета Налоги (тип счета Расход, родительский счет Расходы)
11. Название счета Подоходный (тип счета Расход, родительский счет Расходы:Налоги)
12. Название счета Социальный (тип счета Расход, родительский счет Расходы:Налоги)
13. Название счета Земельный (тип счета Расход, родительский счет Расходы:Налоги)
14. Название счета Начальное сальдо (тип счета Собственные средства, родительский счет Собственные средства)

После создания этих дополнительных субсчетов, конечный результат должен выглядеть как показано ниже

Название счета	Тип	Предмет	Описание
Активы	Активы	Russian Rouble	
Депозиты	Банк	Russian Rouble	
Наличные	Наличные	Russian Rouble	
Текущий счет	Банк	Russian Rouble	
Долги	Задолженность	Russian Rouble	
Visa	Кредитная карта	Russian Rouble	
Доходы	Приход	Russian Rouble	
Заработная плата	Приход	Russian Rouble	
Расходы	Расход	Russian Rouble	
Арендная плата	Расход	Russian Rouble	
Налоги	Расход	Russian Rouble	
Земельный	Расход	Russian Rouble	
Подоходный	Расход	Russian Rouble	
Социальный	Расход	Russian Rouble	
Продукты	Расход	Russian Rouble	
Телефон	Расход	Russian Rouble	
Электричество	Расход	Russian Rouble	
Собственные средства	Собственные средства	Russian Rouble	
Начальное сальдо	Собственные средства	Russian Rouble	
₽, вообще всего:		Чистые активы: 0.00 ₽	Прибыль: 0.00

На рисунке показана простая номенклатура счетов.

Сохраните эту структуру счетов под именем `gcashdata_3` для того, чтобы мы могли использовать их в последующих главах.

Сейчас вы создали номенклатуру счетов для ведения простого семейного бюджета. На основе этой базовой структуры мы сможем начать заполнять счета транзакциями. Более подробно эта тема будет рассмотрена в следующей главе.

Глава 4. Транзакции

This chapter will give you the basic information you need to understand and use transactions in GnuCash. Whereas accounts are the framework and structure of a chart of accounts, transactions are the data which fills each account.

Basic Concepts

A *transaction* in a double entry accounting system such as GnuCash is an exchange between at least 2 accounts. Thus, a single transaction must always consist of at least two parts, a *from* and a *to* account. The *from* account is transferring value to the *to* account. Accountants call these parts of a transaction *Ledger Entries*. In GnuCash, they are called *Splits*.

A split identifies the account to which it refers, the amount of money specifically moved to or from that account, and can contain a few other specific pieces of information if needed. GnuCash supports multiple splits in a single transaction, and the splits can move money into or out of the involved accounts arbitrarily.

For example, you receive a paycheck and deposit it into your savings account at the bank. The *transaction* that occurs is that your bank savings account (an asset) received money from your income account. Two accounts are affected, and in this case there is a net increase in your equity.

Working with transactions in GnuCash is performed using what is known as the *account register*. Every account you create has an account register. It will appear familiar to you as it looks very similar to the log used to track checkbooks.

The account register is explained in the upcoming section, «The Account Register».

The Account Register

The *account register* is the GnuCash window, which allows you to view or edit preexisting transactions, or add new transactions for a particular account. To open an account register from the Account Tree, double-click the account name, right click the account name and select Open Account from the menu, or use the Open button on the toolbar. GnuCash will display the account register window.

Features of the Account Register

The *Titlebar* of the account register displays the account name. Below the *Titlebar*, the *Menubar* displays the menu items available within the account register, and the *Toolbar* contains handy buttons that help you work with the account register.

At the bottom left of the register window, GnuCash displays helpful messages as you move about the register. To the right, you can see the current account balance and the total of cleared splits.

Choosing a Register Style

GnuCash offers several options for viewing your registers. The default style is Basic Ledger mode, which displays only the summary of splits affecting the current account. This is the style that most closely resembles other popular personal financial packages. You can choose a different register style from the View menu. There are two other view modes:

- View → Auto-Split Ledger style expands the current transaction automatically. As you highlight a new transaction in the register, the transaction automatically expands to show all splits.
- View → Transaction Journal style shows all splits for all transactions in the register, which is more like an accounting journal.

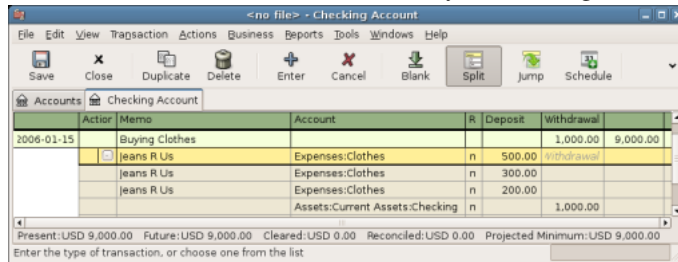
All styles permit you to view your data in either single-line or double-line format. Select View → Double Line , and you will see your transaction line expand to two register lines. Double-line mode will also display the transaction-level Notes field.

Below are screenshots that demonstrate how the Basic Ledger and Transaction Journal views differ.

For this example, let's assume that you have purchased 3 pair of Jeans for \$1,000, and have recorded the purchase as a split transaction with each pair entered on a separate split.

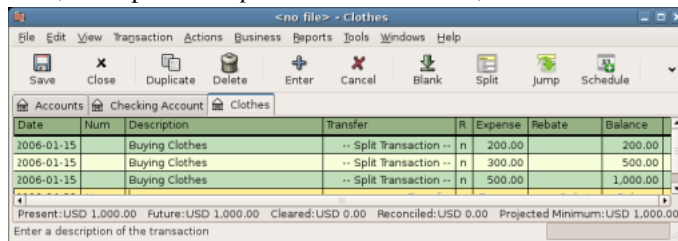
The below screenshots illustrate the different view modes.

First let's view the Jeans transaction from your checking account:



This image shows one split transaction with 3 Jeans purchases

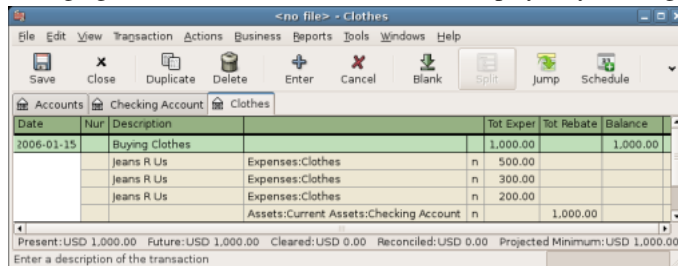
Now, let's open the *Expenses:Clothes* account, and look at it in Basic view.



This image shows *Expenses:Clothes* account in Basic Ledger mode.

Three entries appear here, but there was only the single split entry in the checking account. Further examination shows that each row has a different amount, \$200, \$300, and \$500. This demonstrates that each row in this view reflects a single split from the original transaction.

Changing to Transaction Journal mode will display only the original split transaction.



This image shows *Expenses:Clothes* account in Transaction Journal mode.

Using Entry Shortcuts

GnuCash provides several time-saving shortcuts for entering your data. When you type the first few characters of a description that you have used before, the QuickFill feature automatically fills in the rest of the transaction as you last entered it. When you type in the first characters of an account name in either the Transfer field of the transaction line or the Account field of the split line, QuickFill will automatically complete the name from your account list. It also helps you with entering sub-accounts in these fields: simply type the first characters of the parent account name followed by a **:** (colon) and the first characters of the sub-account name. For example, to enter *Assets:Checking*, you might type **A:C** and let GnuCash fill in the rest.

Предупреждение

Because **:** is the account separator symbol, you can not use it in your account names.

Подсказка

If you really need the colon in your account names, you can select another symbol by Edit → Preferences → Accounts+Character .

Register keyboard shortcuts also save you time, and GnuCash provides several of them. In the date field, you can type:

- **+** or **=** to increment the date and **-** or **_** to decrement the date
- **]** or **}** to increment the month and **[** or **{** to decrement the month
- **M** or **m** to enter the first date of the month
- **H** or **h** to enter the last date of the month
- **Y** or **y** to enter the first date of the year
- **R** or **r** to enter the last date of the year
- **T** or **t** to enter today's date

Подсказка

These date shortcuts not only work in the account register but everywhere you can enter a date.

Подсказка

Specifically for dates there's another way you can save time: you can enter partial dates. For example if you only enter one number, GnuCash will interpret it as the day in the current month of the current year. If you only enter a day and month, GnuCash will automatically append the year. By default this is the current year. You can however also configure GnuCash to take such a date in a sliding window starting a number of months before the current month. This can be done via Edit → Preferences → Date/Time+Date Completion .

In the Num field of the transaction line, you can type **+** to increment the transaction number from the last one you typed in. Typing **-** will decrement the number. This will also work in the Action field of the split line, if you choose to enter split numbers there. The Action field also supports QuickFill - if you type the first characters of a common action (such as Deposit), GnuCash will fill in the rest.

The Transfer field supports QuickFill of account names. You can start typing an account name and GnuCash will fill in the remaining part of the name. Typing the separator character at any time will complete the current level of the account name, leaving the cursor positioned to start the next level of account name. For

example, typing **A:C** the standard set of account names will complete to the *Assets:Checking* account. You can also type the **Menu** or **Ctrl+Down** keys in this field to pop up a list of all account names.

In any of the amount fields, you can use a built-in calculator. Simply type in the first value, followed by **+**, **-**, *****, or **/**, then type in the second value. GnuCash will perform the calculation and return the resulting value to the amount field when you press the **Tab** key.

All of the menu items have access keys defined, and these are marked by underlined characters in the menu names. Press **Alt** + [underlined character] to bring up the menu, then select an item by typing its underlined character. For example, typing **Alt+A** brings up the Actions menu, then typing **P** will split the transaction. A few of the menu items also have shortcut keys that immediately invoke the command (typically using the **Ctrl** key). These shortcuts are listed next to the item.

To move around the register, use these keys to save time:

- **Tab** to move to the next field, **Shift+Tab** to move to the previous field
- **Home** to move to the beginning of the field, **End** to move to the end of the field
- **Enter** or **↓** to move to the next transaction, **↑** to move to the previous transaction
- **Page Up** to move up one screen, **Page Down** to move down one screen
- **Shift+Page Up** to go to the first transaction, **Shift+Page Down** to go to the last transaction

In the Reconcile window you can use these keyboard shortcuts:

- **Tab** moves to the next box and **Shift+Tab** moves to the previous box
- Space bar toggles the status between reconciled and not reconciled
- **↑** and **↓** navigate through the entries within the current box

Simple vs. Split Transactions

Every transaction in GnuCash has at least two splits, but a transaction can have more than two splits. A transaction with only two splits is called a *simple transaction*, since it only involves the current account and a single remote account. A transaction with three or more accounts is called a *split transaction*.

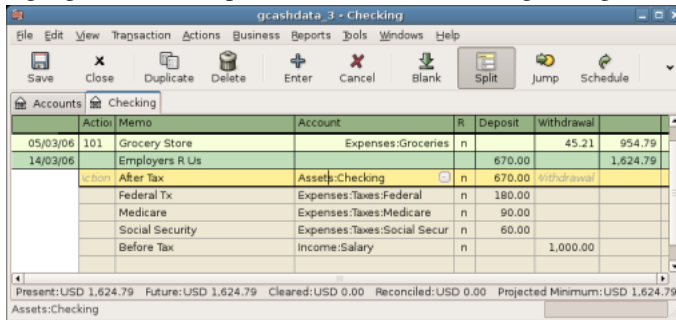
When the register is in Basic view, you will see a summary of the splits affecting the current account. For a simple transaction, the Transfer column will display the other account from which money is *transferred*. For a split transaction, the Transfer column will display -- Split Transaction --. You can see the individual splits of each transaction by clicking the Split button in the *Toolbar* while selecting the appropriate transaction.

For split transactions, the first line of the transaction is the *transaction line*. It contains a Date, optional Num (such as a check number), transaction Description, total amount affecting the current account (Tot Deposit here), and updated account Balance after the current transaction. Note that in the expanded view, the Transfer column heading disappears, and there is no account name listed in that field. This line shows you only a summary of the transaction's effect on the current account. For more detailed information, you need to look at the individual splits that make up the transaction.

Примечание

An account register displays a transaction when that transaction has a split assigned to the account. If a given transaction has more than one split assigned to the account, then in Basic and Auto-Split views, that transaction will appear in the register one time for each split assigned to that account. In Transaction Journal view, such a transaction will only appear once in the register.

The partial lines below the transaction line are the *split lines*, and they are separated by gray lines. As you highlight one of the split lines, the column headings change to show the split-related fields:



Accounts	Checking	Account	R	Deposit	Withdrawal	
05/03/06	101	Grocery Store	Expenses:Groceries	n	45.21	954.79
14/03/06		Employers R Us		670.00		1,624.79
		After Tax	Assets:Checking	n	670.00	
		Federal Tx	Expenses:Taxes:Federal	n	180.00	
		Medicare	Expenses:Taxes:Medicare	n	90.00	
		Social Security	Expenses:Taxes:Social Secur	n	60.00	
		Before Tax	Income:Salary	n		1,000.00

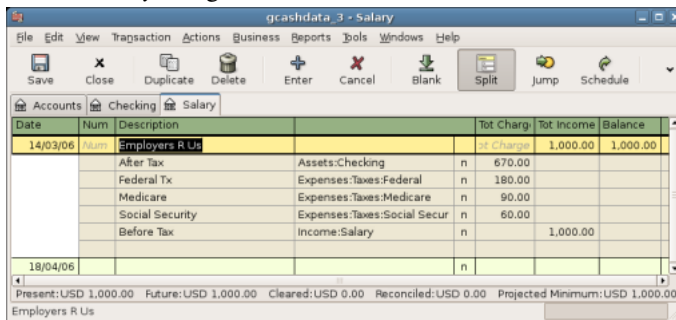
Present: USD 1,624.79 Future: USD 1,624.79 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,624.79
Assets:Checking

This image shows how split headings change.

Each split contains an optional Action, or type of split, which you can either type in or choose from a pull-down list. The split also contains an optional Memo which describes the split. Each split affects an Account, which can be selected from a pull-down list of your accounts. The R field indicates whether the split has been reconciled. The last two columns show the amount of the split and whether money is coming into or going out of the account.

As we discussed in «ОСНОВНЫЕ ПОНЯТИЯ ОТЧЕТНОСТИ», total debits (left-column entries) must equal total credits (right-column entries) for each transaction. In the example shown above, the total debits equal the total credits, so this transaction is balanced. If you notice, the transaction line contains the same debit amount as the Checking split line. Why is this shown twice? Because the transaction line is merely a *summary* of the transaction's effect on the current account. The same transaction in a different account will have a different transaction line, one that shows the effect on that particular account. You can see this by highlighting another split line and clicking the Jump button on the *Toolbar*.

In this example, if you jump to the *Income:Salary* account, GnuCash brings up the same transaction in the *Income:Salary* - Register:



Accounts	Checking	Salary				
14/03/06	Num	Employers R Us		Tot. Charge	Tot. Income	Balance
		After Tax	Assets:Checking	n	670.00	
		Federal Tx	Expenses:Taxes:Federal	n	180.00	
		Medicare	Expenses:Taxes:Medicare	n	90.00	
		Social Security	Expenses:Taxes:Social Secur	n	60.00	
		Before Tax	Income:Salary	n		1,000.00
18/04/06				n		

Present: USD 1,000.00 Future: USD 1,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,000.00
Employers R Us

This image shows a jump to the *Income:Salary* account.

Note that the transaction line total now summarizes the effect on the *Income:Salary* account instead of the *Checking Account*, because you are looking at the *Income:Salary* account register. The splits are exactly the same, but the transaction line now reflects the credit to the *Income:Salary* account.

Simple Transaction Example

Starting with the chart of accounts we created in the previous chapter `gcashdata_3`, double click on the Checking asset account. Let's add a simple transaction to the checking account. When you first create your accounts in GnuCash, it is common to start them off with an initial balance.

In the first transaction row, enter a date (eg: March, 1, 2006), a description (eg: «Opening Balance»), click on the Transfer pop-up menu and select *Equity:Opening Balances*, add a deposit value of \$1000, and press the **Enter** key. The account register should now appear similar to this figure:

The screenshot shows the GnuCash interface for the 'Checking' account. The table below represents the data visible in the register:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n	1,000.00		1,000.00
05/03/06			Transfer	n			

Summary statistics at the bottom of the window: Present: USD 1,000.00 Future: USD 1,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,000.00

This image shows *Assets:Checking* - Register after inserting a starting value transaction.

Setting the starting balances of an account is an example of a simple two account transaction. In this case, affecting the *Assets:Checking* and the *Equity:Opening Balances* accounts.

As another example of a simple 2 account transaction, add another transaction to describe the purchase of \$45.21 worth of groceries. From within the *Assets:Checking* account, you would set Transfer to *Expenses:Groceries*. The account register should now appear:

The screenshot shows the GnuCash interface for the 'Checking' account after a grocery purchase. The table below represents the data visible in the register:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	n		45.21	954.79
05/03/06			Transfer	n			

Summary statistics at the bottom of the window: Present: USD 954.79 Future: USD 954.79 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 954.79
Sunday 05 March 2006

This image shows *Assets:Checking* - Register after adding a transaction for groceries.

Split Transaction Example

The need for 3 or more splits in a transaction occurs when you need to split either the «from» or the «to» account in a transaction into multiple accounts. The classic example of this is when you receive a paycheck. Your take home pay from a paycheck will typically be less than your net pay, with the difference being due to taxes, retirement account payments, and/or other items. Thus, the single transaction of you receiving a paycheck involves other accounts besides simply *Assets:Checking* and *Income:Salary*.

To add the paycheck split transaction from the *Assets:Checking* account register window, click on a new transaction line and click Split. Note that if you have set your register view to Auto-Split or Transaction Journal, the splits will be opened for you. Enter the description of this transaction on the first line (e.g. “Employers R Us”). In the split lines below this, enter the various splits that make up this transaction, one by one. To enter the splits, first choose the account, then enter the amount by which to change the account. Keep in mind that when in an asset account register, amounts entered in the left column increase the account balance, while amounts entered in the right column decrease the balance (for more about this, see «Транзакции»). Tab or click the next split line and repeat the process. Note that if you are using the keyboard to navigate the transaction, use **Tab** to move from field to field, as using **Enter** will commit the transaction and create splits to an Imbalance account.

Примечание

When creating a transaction in GnuCash, splits can be entered in any order. However, when the transaction is closed (either when leaving the transaction, or when pressing the **Enter** key), all debit splits will jump ahead of all credit splits.

In this example, choose the deposit account (*Assets:Checking*) and then enter the amount that is being deposited into it (e.g. \$670). Follow this by entering the amounts for the various taxes: *Expenses:Taxes:Federal* account, \$180; *Expenses:Taxes:Medicare* account, \$90; and *Expenses:Taxes:Social Security* account, \$60. Finally, enter the gross total of your paycheck (\$1,000 in this example) as a withdrawal transfer from *Income:Salary*.

The final split should look like Рисунок 4.1, «Entering a split transaction». Remember to press **Enter** after finishing the entry. But you should also know that when you press **Enter**, the split view will be «folded» back into a simplified transaction view. The splits are still there; you just have to click Split to view them. See «Features of the Account Register» for details.

Рисунок 4.1. Entering a split transaction

Date	Num	Description	Tot Depos	Tot Withdra	Balance
05/03/06	101	Grocery Store		45.21	954.79
14/03/06		Employers R Us	670.00	1,624.79	
		After Tax	670.00		
		Federal Tx		180.00	
		Medicare		90.00	
		Social Security		60.00	
		Before Tax		1,000.00	

Reconciliation

Once transactions have been entered into GnuCash, it is important to verify that they agree with the records of your financial institution. This verification process is known as **reconciliation**, and it is key to determine whether your records are accurate. Most commonly, you will check transactions against bank statements, although you can use this process to verify any transaction.

GnuCash keeps track of the reconciliation status of each transaction. The reconciliation status of a transaction is shown by the reconciliation R field in a register: *y* indicates that a transaction has been reconciled, *n* indicates that it has not, and *c* indicates that it has been cleared, but not reconciled. A split marked cleared signifies that you got some kind of confirmation that the institution accepted the order (e.g. you have the restaurant's receipt for your credit card purchase). You can toggle the reconciliation status between *n* and *c* by clicking in the R field; you can set it to *y* by using «Reconcile windows».

At the bottom of the account window, there are (among others) two running balances (the cleared and reconciled balance), and the total balance. The former balances should correspond to how much money the bank thinks you have in your account, while the latter includes outstanding transactions.

For example, when you write a check for something, you should enter the transaction into GnuCash. The reconciliation R field of the transaction will initially contain *n* (new). Your new entry will contribute to the total balance, but not to the cleared and reconciled balance. Later, if you got some confirmation that the check has been cashed, you might click on the transaction's R field to change it to *c* (cleared). When you do this, the cleared balance will change to include this amount. When the bank statement arrives, you can then compare it to what you've recorded in GnuCash by opening the reconciliation window. There, you will be able to change the R field to *y* (reconciled).

Примечание

You cannot reconcile directly in a register window by clicking in the R field. You must use the reconciliation window. Once a transaction has been marked *reconciled*, it can no longer be easily changed without breaking the Starting Balance of the next reconciliation.

Предупреждение

It is important to understand that reconciliation is done for a given date, and when you reconcile an account based on a statement from a given date, you are reconciling **all transactions prior to that date**. Therefore, if you add or modify transactions that predate your last reconciliation, your **reconciled** balances will be thrown off.

Reconcile windows

The reconciliation windows are used to reconcile a GnuCash account with a statement that a bank or other institution has sent you. Reconciliation is useful not only to double-check your records against those of your bank, but also to get a better idea of outstanding transactions, e.g. uncashed checks.

To use the reconciliation windows, select an account from the account tree and click on Actions → Reconcile . A window like the one below will appear in which you can enter the reconcile information.

The initial reconcile window.

In the initial reconcile window, some Reconcile Information need to be entered.

Statement Date

The date of the statement you will be reconciling against.

Подсказка

Click on the down arrow in the right of this field to open a calendar

Starting Balance

This is a non-editable item which displays the balance from the previous reconciliation. It should match the starting balance in your statement.

Предупреждение

Sometimes, the opening balance in GnuCash does not match that found on

your statement. This can happen the first time you reconcile your account or when a previously-reconciled transaction is de-reconciled or deleted.

Примечание

The first time you reconcile your account, the starting balance will be 0.00, thus probably not the *opening balance* of your account. When you reconcile the account, the *opening balance* for the account will be included in the reconciliation, and the result should balance.

Подсказка

In the case when a previously-reconciled transaction is accidentally de-reconciled, you can simply re-reconcile the transaction along with the transactions on the current statement, and the result should balance.

The case of accidentally deleting a previously-reconciled transaction presents more of a challenge; if you cannot determine what was deleted and restore it to the register, you will have to create a dummy transaction to get the reconciliation to finish.

Внимание

While the latter case does not matter for your private accounting, you should have a really good explanation for your auditors, if you are the accountant of a club or a company.

Ending Balance

This field should be filled with the ending balance as it appears in the statement.

Примечание

GnuCash automatically fills this field with the Present balance as shown in the lower part of the account's register.

Include Sub-accounts

Check this option if you want to include in the reconciliation the transactions that belongs to the sub-accounts of the currently selected account. Note that all sub-accounts must be in the same commodity as the parent for the option to be enabled.

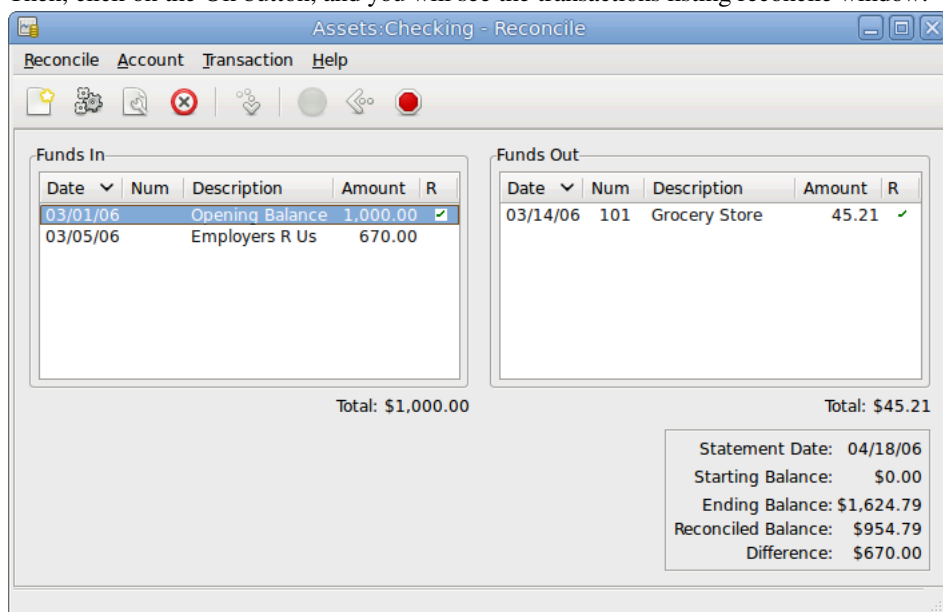
Enter Interest Payment

Clicking this button opens a new window that allow you to enter an interest transaction to the account to be reconciled.

Подсказка

The Interest Payment window might be opened automatically when you start a reconciliation for an account of the type *Bank*, *Credit*, *Mutual*, *Asset*, *Receivable*, *Payable*, and *Liability*. If you want to disable this behavior for any of the previous accounts, go to the Register tab of the GnuCash Preferences and uncheck the Automatic interest transfer option. Alternatively, to disable this behavior only for the selected account, press the No Auto Interest Payments for this Account button in the Interest Payment window.

Then, click on the Ok button, and you will see the transactions listing reconcile window:



The transactions listing in the reconcile window.

The two panes called Funds In and Funds Out, lists all the unreconciled transactions that belongs to the account that is going to be reconciled. The R columns show whether the transactions have been reconciled.

Now, examine each item on the bank statement, and look for the matching item in the Reconcile window.

If you cannot find a transaction, then perhaps you forgot to enter it, or did not know that the transaction had happened. You can use the New button on the *Toolbar*, or the Transaction → New menu item in the menu, to open a register window and enter the missing transaction. The new item will appear in the Reconcile window when you press the Enter button in the register after entering the transaction.

When you find the item in the Reconcile window, compare the amount in the item to the amount on the statement. If they disagree, you may have made an error when you entered the transaction in GnuCash. You

can use the Edit button on the *Toolbar*, or the Transaction → Edit item, to open a register window and correct the transaction.

If the amounts agree, click on the item in the Reconcile window. A check mark will appear in the R column beside the selected transaction. GnuCash will automatically update the amounts in the lower right summary pane.

Подсказка

You can use the **up/down** arrow keys to scroll to the item, the **space** key to mark the item as reconciled and the **Tab** key to switch panes.

You then repeat this for each item that appears on the bank statement, verifying that the amounts match with the amounts in GnuCash, and marking off transactions in GnuCash as they are reconciled.

Подсказка

You can check or uncheck the reconcile status of all transactions in either pane by clicking on a transaction in the required pane then clicking **Ctrl-A** followed by **space**. This will toggle the reconcile status of all transactions in the pane to either checked or unchecked state. This procedure can be repeated to achieve the desired status for the transactions in the pane.

At the bottom of the Reconcile window there is a Difference field, which should show 0.00 when you are done reconciling. If it shows some other value, then either you have missed transactions, or some amounts may be incorrect in GnuCash. (Or, less likely, the bank may have made an error.)

Примечание

Under some circumstances, it may be difficult or impossible to determine why an account will not reconcile. If you are unable to correct the discrepancy between your books and a statement, GnuCash includes a Balance button on the *Toolbar* that will automatically create a balancing entry for you in the amount that cannot be reconciled.

To use this, carry out the full reconciliation (marking all transactions that you can identify) and then click this button. GnuCash will create a balancing entry for the remaining discrepancy that uses the *Special Accounts:Orphan-XXX* account (where "XXX" represents your currency). The Reconcile window will close; re-opening it will allow you to check the newly-created balancing entry and finish the process.

When you have marked off all the items on the bank statement and the difference is 0.00, press the Finish button on the *Toolbar* or select Reconcile → Finish from the menu. The Reconcile window will close. In the register window, the R field of the reconciled transactions will change to *y*.

In this case, we have not received all the information yet, so we simply press the Postpone button, so we can continue at a later stage. Observe that the R column indicates we cleared (*c*) two transactions. They have not been reconciled yet, but we have verified these two transactions so they have been marked as cleared. If you look at the *Statusbar* at the bottom of the account register, you will see a summary of what has been reconciled and what has been cleared (Cleared:USD 954.79 Reconciled:USD 0.00)

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	c	1,000.00		1,000.00
05/03/06		Grocery Shop	Expenses:Groceries	c		45.21	954.79
14/03/06		Employers R Us	Income:Salary	n	670.00		1,624.79
05/03/06				n			

Present:USD 1,624.79 Future:USD 1,624.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,624.79
Expenses:Groceries

The Checking account after postponing the reconciliation.

Scheduled Transactions

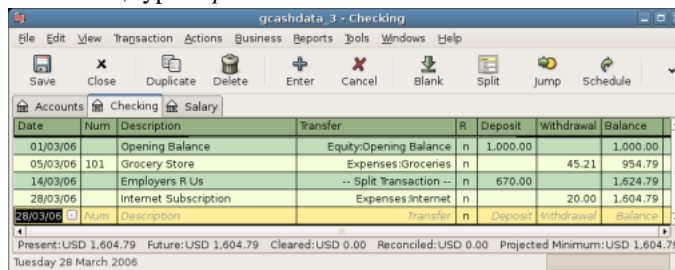
Scheduled transactions are made to help entering repetitive money operations, like subscriptions, insurances or taxes. By using scheduled transactions, you only have to enter the concerned transaction once, set a few parameters like start date, frequency and a little description, and then GnuCash will tell you whenever a scheduled transaction is ready to be created, and create it for you.

In this howto, we'll take a monthly Internet subscription of 20 USD as example, which is taken on the 28th of each month.

In GnuCash, there are two ways of creating scheduled transactions, from the ledger or from the Scheduled Transactions Editor.

Creating from the Ledger

Enter the first occurrence of your to-schedule transaction in the ledger. In the Transfer field for this transaction, type *Expenses:Internet* as shown in the next screenshot.



The screenshot shows the GnuCash interface for a 'Checking' account. The ledger table contains the following data:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	n		45.21	954.79
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,624.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	1,604.79
28/03/06			Transfer	n			

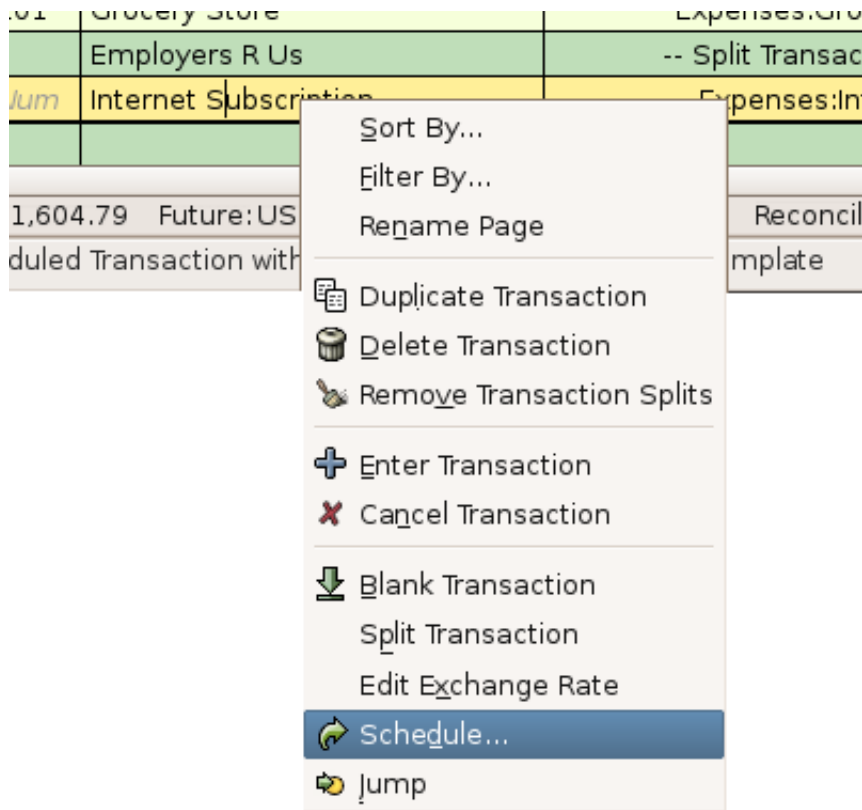
Summary statistics at the bottom of the window:
 Present: USD 1,604.79 Future: USD 1,604.79 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,604.79
 Tuesday 28 March 2006

Step one creating scheduled transaction from the ledger

Примечание

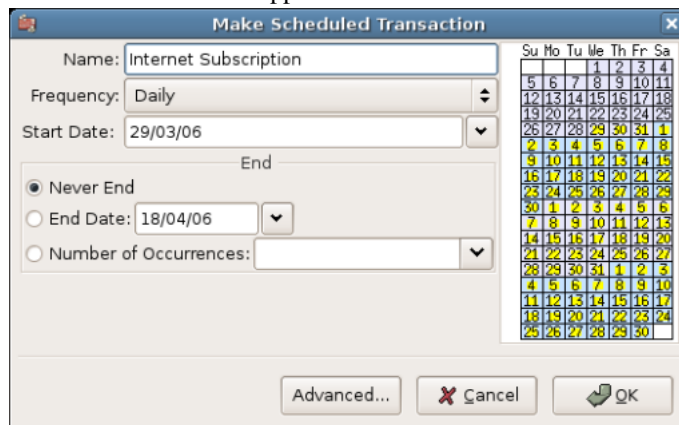
Since we did not create the *Expenses:Internet* account, GnuCash will prompt us to create it.

Then you right click on your transaction and select Schedule...



Step two creating scheduled transaction from the ledger

A window like this will appear:



Step three creating scheduled transaction from the ledger

Let's fill the values, we know that the subscription is taken on the 28th each month, and the next one is for next month (since we entered the one for this month manually) :

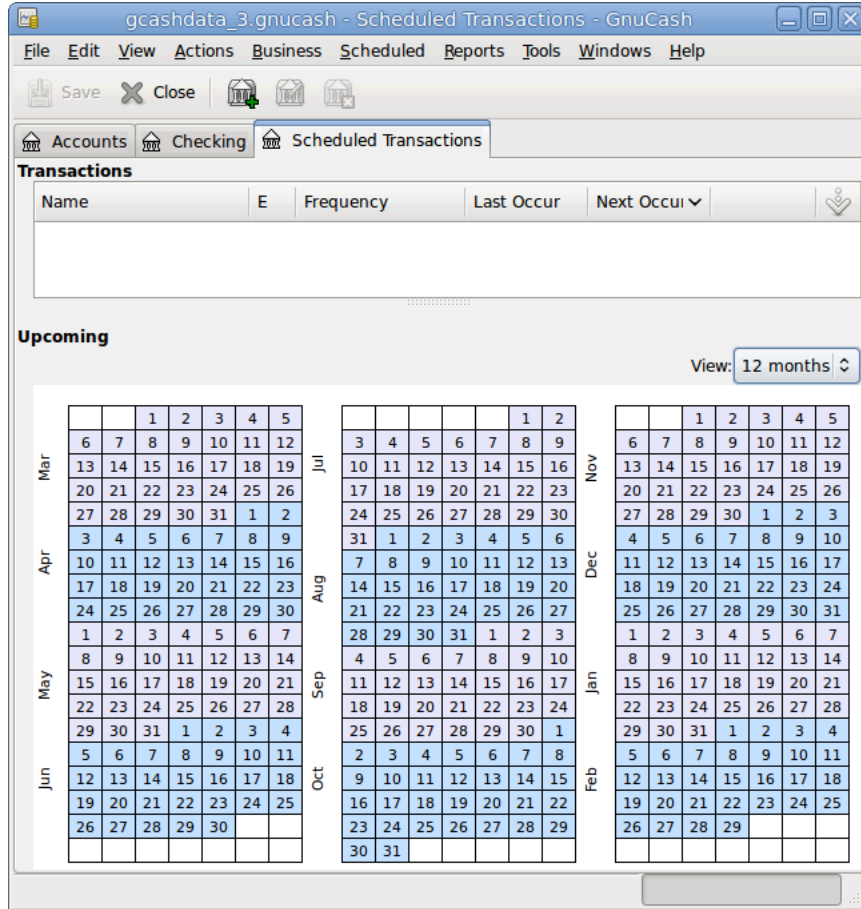
Filling in data to a scheduled transaction

Click the OK button, and the transaction will be scheduled. GnuCash now has memorized this scheduled transaction and on the 28th of next month, it will pop up a window asking if it should create it (see far below for a screenshot of this window).

Creating from the Editor

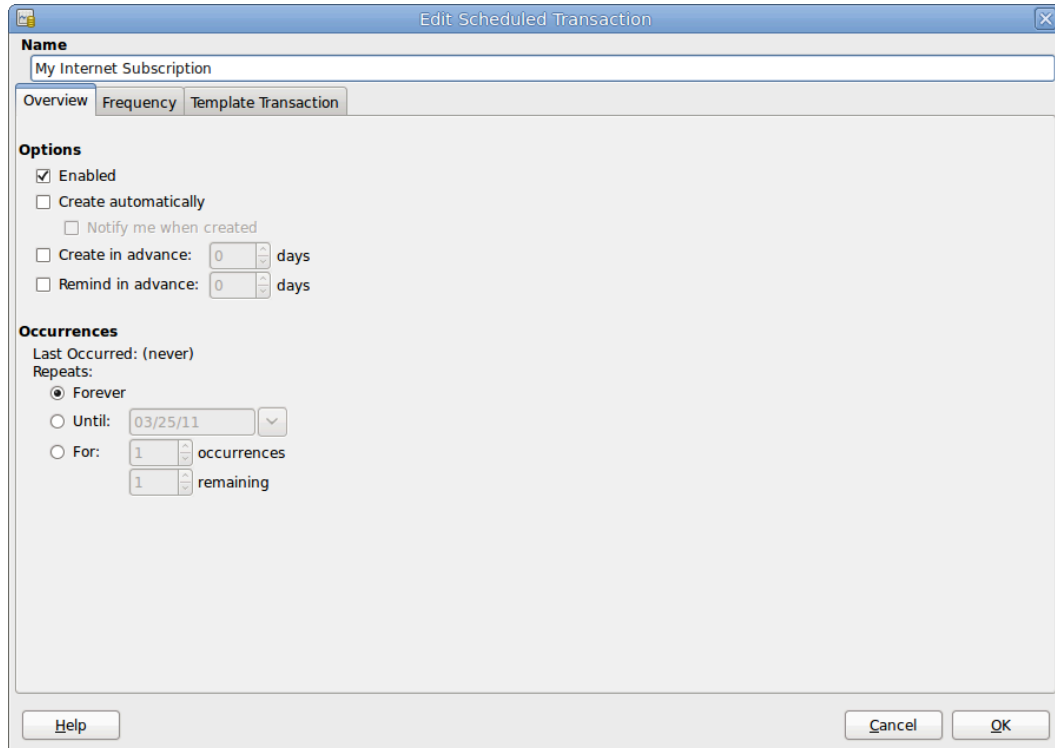
Another way of entering a scheduled transaction is from the Scheduled Transaction Editor, it may be faster if we have several scheduled transactions to create at once.

From the main accounts windows, select Actions → Scheduled Transactions → Scheduled Transaction Editor from the *Menubar*. A new Scheduled Transactions tab will be opened in the current GnuCash window as shown above:



Empty Scheduled Transactions tab

This tab contains a list, now empty, of all the scheduled transactions. Let's create a new one by clicking on the New button in the *Toolbar*. A window like the one below will pop up:



Edit Scheduled Transaction window, Overview tab

First, let's enter a name for this new scheduled transaction in the top of the window.

Примечание

This name will only identify the transaction in the Edit Scheduled Transaction window, it will never appear in the ledger.

In the Options pane of the Overview tab you have four options:

Enable	Sets the status of the scheduled transaction.
Create automatically	If enabled, will insert this transaction in the ledger without asking you before (see below). If needed, you can be advised when the transaction is entered by checking the Notify me when created option.
Create in advance	Sets how many days in advance the transaction will be created.
Remind in advance	Sets how many days in advance a reminder is presented. This can be used, for example, when you have to pay something by check, and a reminder one week before allows you to send your check before the deadline.

The Occurrences pane allows you to tell GnuCash that this scheduled transaction won't last for ever. For example if you are repaying a loan, you can enter the loan end date or the number of occurrences left.

Select now the Frequency tab in the Edit Scheduled Transaction window. Here you can set the time-related options of the transaction.

Edit Scheduled Transaction

Name: My Internet Subscription

Overview | **Frequency** | Template Transaction

Frequency: Monthly

Start Date: 04/28/06

Every 1 months.

On the 28th except on weekends: No change

View: 12 months

Calendar view showing months from April to March. The 28th of each month is highlighted in yellow.

Buttons: Help, Cancel, OK

Edit Scheduled Transaction window, Frequency tab

Frequency

Sets the basic frequency of the transaction, with options for once, daily, weekly, semi-monthly and monthly. In this example, this is set to monthly.

Примечание

It is possible to set a transaction to occur at intervals *other* than those listed in the Frequency list, by changing the setting in the Every control (see below).

Start Date

Sets when the transaction will begin. In the example, this would be set to the start of the next month.

Every

This option allows you to schedule transactions by multiples of the value in Frequency. For example, to create a transaction that runs every 3 weeks, set Frequency to Weeks and Every to 3.

On the and Except on weekends

Sets the day of the month that the transaction is scheduled, and controls what GnuCash will do when the day occurs on a weekend day.

Примечание

We know that the subscription is taken on the 28th each month, so the Start date will be November 1, 2003 (assuming November is the next month), the Frequency will be Monthly, it will be taken every month on the 28th. Since in our example the internet subscription is automatically taken from the account, we have no need to create it in advance, nor give an end date.

When the elements on this tab are filled in, GnuCash will highlight the calendar below to indicate when future transactions will be run.

Finally select the Template Transaction tab and enter your transaction in the lower part as you would do in the ledger, with the only difference of having no date.

Now, you should have a window like this:

Date	Num	Description	Tot Funds In	Tot Funds Out
Notes				
Scheduled		Internet Subscription		
		Assets:Checking	n	20
		Expenses:Internet	n	20
Scheduled		Description	Tot Funds In	Tot Funds
		Notes		
			n	

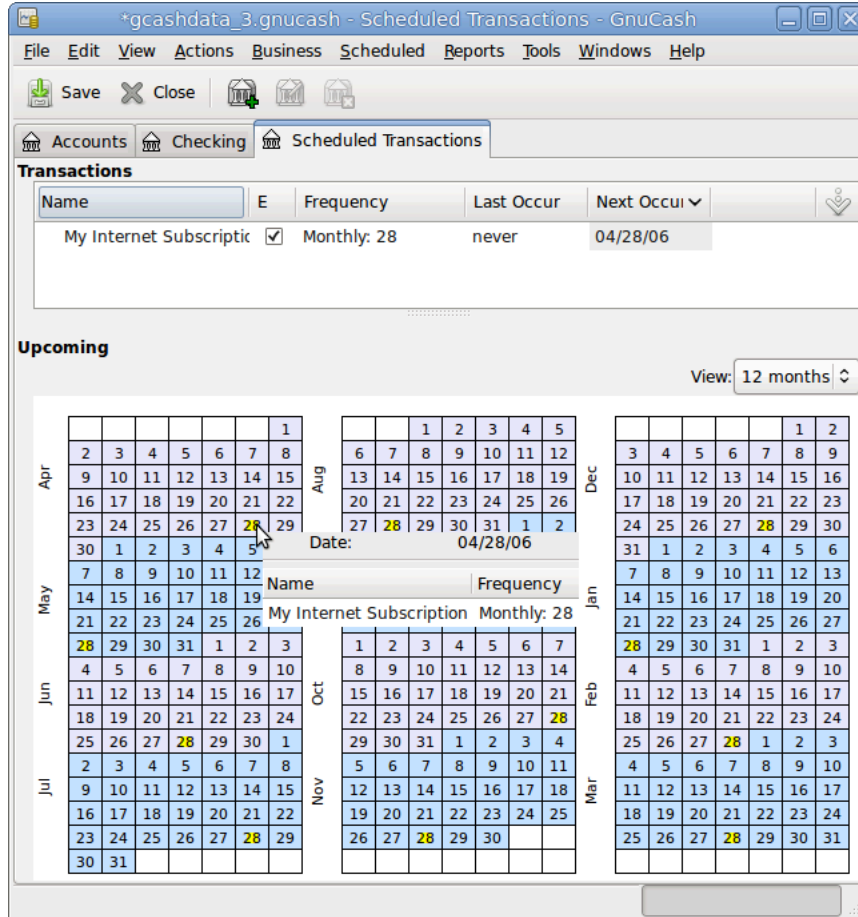
Enter the transaction number, such as the check number

Help Cancel OK

Edit Scheduled Transaction window, Template Transaction tab

Remember to click on the Enter icon, to validate and enter the transaction.

Now click OK, it takes you to the Scheduled Transactions tab, now showing one item in the Transactions list:



Entered scheduled transaction

Подсказка

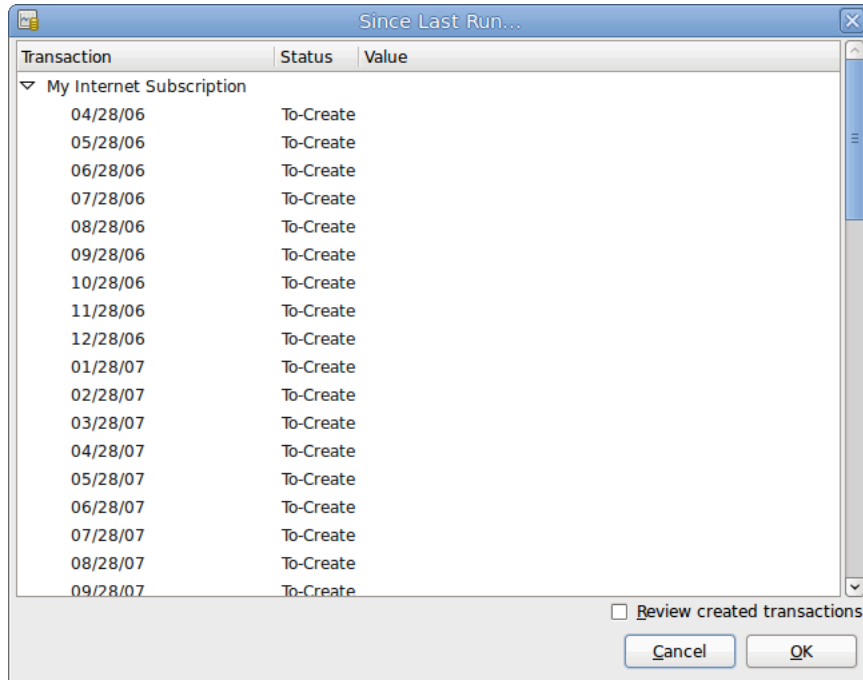
If you click in the calendar part on the first day of one month, a small window, following your mouse, will show you what is planned for this day. To make the small window disappear again, just click in it one more time.

You can now close the Scheduled Transaction tab, and save your work.

Примечание

What comes below is just an illustration, and is not meant to be entered into the GnuCash database at this stage. As per this example, the below dialogs will appear when the scheduled transaction is supposed to run.

From now on, when GnuCash is launched and a scheduled transaction is scheduled or need to be entered, you may see a Since Last Run... window summarizing the scheduled transactions operations (Reminder, To-Create etc... a better description of each option can be found in the GnuCash manual):



Scheduled transaction popup reminder

You can click on the Status column to change the scheduled transaction status if needed. Then just click on Ok to close the Since Last Run... window and to apply the pending operations. Select Cancel to skip entering in the ledger the pending operations.

If the Status field was set to To-Create, then if you take a look in your bank account register, you'll see the transaction has been created:

Подсказка

If you enable the Review created transactions option in the lower right of the Since Last Run... window, GnuCash will open, after pressing Ok, the register tab of each account where the scheduled transactions were entered automatically.

Примечание

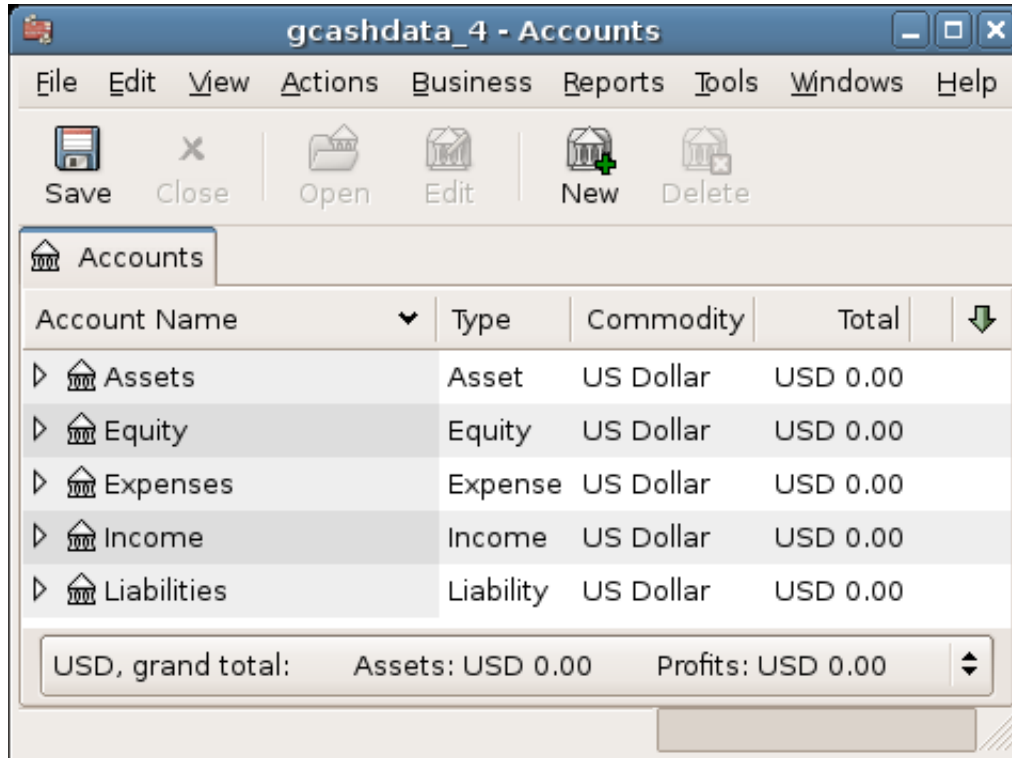
If you entered the transaction for 28 of April at this stage, then please *revert back* to the last saved GnuCash file by selecting File → Open and choosing the previously saved `gcashdata_3` GnuCash file.

Putting It All Together

In the previous sections of this chapter the concepts and mechanics of working with transactions in GnuCash have been discussed. This section will expand upon the chart of accounts initially built in the previous chapter, by setting some opening balances, adding transactions and a scheduled transaction.

Open GnuCash file

Start with opening the previous datafile we stored, `gcashdata_3emptyAccts`, and store it as `gcashdata_4` directly. The main window should look something like this:



This image shows the starting point for this section.

Opening Balances

As shown earlier with the *Assets:Checking* account, the starting balances in an account are typically assigned to a special account called *Equity:Opening Balance*. To start filling in this chart of account, begin by setting the starting balances for the accounts. Assume that there is \$1000 in the savings account and \$500 charged on the credit card.

1. Open the *Assets:Savings* account register. Select View from the menu and check to make sure you are in Basic Ledger style. You will view your transactions in the other modes later, but for now let's enter a basic transaction using the basic default style.
2. From the *Assets:Savings* account register window, enter a basic 2 account transaction to set your starting balance to \$1000, transferred from *Equity:Opening Balance*. Remember, basic transactions transfer money from a source account to a destination account. Record the transaction (press the **Enter** key, or click on the Enter icon).
3. From the *Assets:Checking* account register window, enter a basic 2 account transaction to set your starting balance to \$1000, transferred from *Equity:Opening Balance*.
4. From the *Liabilities:Visa* account register window, enter a basic 2 account transaction to set your starting balance to \$500, transferred from *Equity:Opening Balance*. This is done by entering the \$500 as a charge in the *Visa* account (or decrease in the *Opening Balance* account), since it is money you borrowed. Record the transaction (press the **Enter** key, or click on the Enter icon).

You should now have 3 accounts with opening balances set. *Assets:Checking*, *Assets:Savings*, and *Liabilities:Visa*.

The screenshot shows a window titled "gcashdata_4 - Accounts" with a menu bar (File, Edit, View, Actions, Business, Reports, Tools, Windows, Help) and a toolbar (Save, Close, Open, Edit, New, Delete). Below the toolbar is a tab labeled "Accounts". The main area contains a table with the following data:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 2,000.00
Checking	Bank	US Dollar	USD 1,000.00
Savings	Bank	US Dollar	USD 1,000.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 0.00
Income	Income	US Dollar	USD 0.00
Liabilities	Liability	US Dollar	USD 500.00
Visa	Credit Card	US Dollar	USD 500.00

At the bottom of the window, a summary bar displays: "USD, grand total: Assets: USD 1,500.00 Profits: USD 0.00".

This image shows the opening balances.

Additional Transaction Examples

Now add some more transactions to simulate a month's expenses. During the month, \$78 is spent on electricity, \$45 on phone, and \$350 on rent. All paid by check. We also spent \$45.21 on groceries, received \$670 as salary, and paid our Internet bill this month. Finally, let's move \$100 from the savings account to the checking account.

1. Open the *Expenses:Electricity* account register and enter a simple 2 account transaction to pay the \$78 electrical bill at the end of the current month (eg: March 28, 2006). Enter a description (eg: Light Company) and the check number (eg: 102). The Transfer account should be *Assets:Checking*.
2. Open the *Assets:Checking* account register and enter a simple 2 account transaction to pay the \$45 phone bill at the end of the current month (eg: March 28, 2006). Enter a description (eg: Phone Company Name) and the check number (eg: 103). The Transfer account should be *Expenses:Phone*. Notice that you can enter expense transactions from either the credit side (the expense accounts) or the debit side (the asset account).
3. Open the *Expenses:Rent* account register and enter a simple 2 account transaction to pay the \$350 in rent at the end of the current month (eg: March 28, 2006). Enter a description (eg: April Rent) and the check number (eg: 104). The Transfer account should be *Assets:Checking*.
4. Duplicate this transaction using the Duplicate button in the *Toolbar*. Start by clicking on the current rent transaction, and click on the Duplicate icon. Enter the transaction date a month out in the future (eg:

April 28, 2006), and notice the blue line separator that GnuCash uses to separate future transactions from current ones. In this way, you can enter transactions before they occur.

You could also set up a scheduled transaction to pay your rent, since the value of the rent is likely to be constant for the foreseeable future.

- Start by clicking on the current (April 28) rent transaction, and click on the Schedule icon
 - Change to Monthly, change description if needed and press OK
5. To transfer money from your savings account to your checking account, open the *Assets:Savings* account register, add a new transaction setting the Transfer to *Assets:Checking* in the amount of \$100 (date 6 March, 2006).
 6. As another example of a simple 2 account transaction, add another transaction to describe the purchase of \$45.21 worth of groceries on 5 of March. From within the *Assets:Checking* account, you would set Transfer to *Expenses:Groceries*. The account register should now appear:
 7. To add a paycheck transaction from the *Assets:Checking* account register window, click on a new transaction line, and click on Split. First enter the description of this transaction on the first line (eg: «Employers R Us»), as well as the date (14 March). In the «split» line below this, enter the deposit into *Assets:Checking* (eg:\$670). Follow this with the various tax deposits (*Assets:Checking* (eg: \$670), *Expenses:Taxes:Federal* account (eg: \$180), *Expenses:Taxes:Medicare* account (eg: \$90), and *Expenses:Taxes:Social Security* account (eg: \$60)) and lastly the gross total of your paycheck (eg: \$1000) as a withdrawal transfer from *Income:Salary*.
 8. You also need to pay for your Internet subscription of 20 USD on the 28th.

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,781.79
Checking	Bank	US Dollar	USD 881.79
Savings	Bank	US Dollar	USD 900.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,218.21
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 45.21
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Taxes	Expense	US Dollar	USD 330.00
Federal	Expense	US Dollar	USD 180.00
Medicare	Expense	US Dollar	USD 90.00
Social Se	Expense	US Dollar	USD 60.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00

USD, grand total: Assets: USD 1,281.79 Profits: -USD 218.21

This image shows the ending balances after Глава 4, *Транзакции*.

Save file

Before we go to the report section, let's save the GnuCash data file (`gcashdata_4`).

Reports

But only having data available on the computer screen will not make your accountant happy, therefore GnuCash comes with a large number of highly customizable reports.

Let's have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow .

**Cash Flow - 01/03/06 to 31/03/06 for
Selected Accounts**

- [Assets](#)
- [Assets:Checking](#)
- [Assets:Savings](#)

Money into selected accounts comes from	
Income:Salary	USD 1,000.00
Money In	USD 1,000.00
Money out of selected accounts goes to	
Expenses:Electricity	USD 78.00
Expenses:Groceries	USD 45.21
Expenses:Internet	USD 20.00
Expenses:Phone	USD 45.00
Expenses:Rent	USD 350.00
Expenses:Taxes:Federal	USD 180.00
Expenses:Taxes:Medicare	USD 90.00
Expenses:Taxes:Social Security	USD 60.00
Money Out	USD 868.21
Difference	USD 131.79

This image shows the Cash Flow report after Глава 4, *Транзакции*.

To get this customized report, right click in the report and choose Report Options. Then set the time period, and specify which accounts you want in the report.

2. Now let's have a look at corresponding transaction report for the Checking account.

Select the transaction report from Reports → Transaction Report .

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
<u>Checking</u>				
05/03/06		Groceries	Groceries	<u>-USD 45.21</u>
06/03/06		Transfer	Savings	<u>USD 100.00</u>
14/03/06		Employers R Us	Split	<u>USD 670.00</u>
28/03/06		Internet subscription	Internet	<u>-USD 20.00</u>
28/03/06	102	Light Company	Electricity	<u>-USD 78.00</u>
28/03/06	103	Phone Company	Phone	<u>-USD 45.00</u>
28/03/06	104	April Rent	Rent	<u>-USD 350.00</u>
Total For Checking				USD 231.79
Grand Total				USD 231.79

This image shows the Transaction Report for the Checking account during March.

3. Now let's change the transaction report to only show the various Expenses accounts.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
March 2006				
05/03/06		Groceries	Checking	<u>USD 45.21</u>
14/03/06		Employers R Us	Split	<u>USD 180.00</u>
14/03/06		Employers R Us	Split	<u>USD 90.00</u>
14/03/06		Employers R Us	Split	<u>USD 60.00</u>
28/03/06		Internet subscription	Checking	<u>USD 20.00</u>
28/03/06	102	Light Company	Checking	<u>USD 78.00</u>
28/03/06	103	Phone Company	Checking	<u>USD 45.00</u>
28/03/06	104	April Rent	Checking	<u>USD 350.00</u>
Total For March 2006				USD 868.21
Grand Total				USD 868.21

This image shows the Transaction Report for the various Expense accounts during March.

Часть II. Организация личных финансов

Содержание

5. Чековая книжка	75
Setting up Accounts	75
Entering Deposits	75
Entering Withdrawals	76
ATM/Cash Withdrawals	76
Reconciling Your Accounts	76
Putting It All Together	77
Opening Balances	77
Add some transactions	77
Opening Balances	78
Save file	80
Reports	81
6. Кредиты	85
Concepts	85
Setting Up Accounts	85
Simple Expense Account Setup	85
Complex Expense Account Setup	85
Entering Expense Transactions	85
Other Considerations for Expense Accounts	86
7. КРЕДИТНЫЕ КАРТЫ	87
Concepts	87
Setting Up Accounts	87
Simple Setup	87
Complete Setup	88
Entering Charges	88
Entering Payments	89
Putting It All Together	90
Open GnuCash file	90
Purchases	91
Refund	92
Interest Charge	92
Reconciliation	93
Payment	94
Save file	96
Reports	96
8. Кредиты	99
Basic Concepts	99
Terminology	99
Setting Up Accounts	99
Calculations	100
Example: Monthly Payments	101
Example: Length of Loan	101
Advanced: Calculation Details	101
House Mortgage (How-To)	103
A Personal Loan to a friend (How-To)	106
Loan Specifications	106
Accounts for the loan	107
Lending the money	107
Receiving first payment	108
Receiving second payment	109
Automobile Loan (How-To)	110

Reconciling with the Loan Statements (How-To)	111
Selling a house or a car (How-To)	111
Simple Transaction	111
A More Complex Transaction	112
9. Инвестиции	114
Basic Concepts	114
Terminology	114
Types of Investments	116
Setting Up Accounts	116
Using Predefined Investment Accounts	117
Creating Investment Accounts Manually	117
Custom Accounts Example	118
Interest Bearing Accounts	119
Account Setup	119
Example	120
Setup Investment Portfolio	122
Setup Accounts for Stocks and Mutual Funds	122
Example Stock Account	123
Buying Shares	127
Entering Preexisting Shares	127
Buying New Shares	128
Setting Share Price	130
Initial Price Editor Setup	130
Setting Stock Price Manually	131
Configuring for Automatic Retrieval of Quotes	132
Displaying Share Value	133
The «Price Source» in Reports	134
Selling Shares	136
Selling Shares with Manual Calculation of Capital Gain or Loss	137
Examples of Selling Shares with Manually Entry of Capital Gain or Loss	139
Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots	143
Dividends	155
Dividends in Cash	155
Dividends Re-Invested	156
Return of Capital	156
Splits and Mergers	157
Simple Stock Split	157
Moderately Complex Stock Merger	160
10. Отчеты	163
Overview	163
Saved Reports Configurations Concepts	163
Standard Reports Overview	164
Assets & Liabilities Group	164
Budget Group	166
Business Group	167
Income & Expense Group	168
Sample & Custom Group	170
Other Reports	171
11. Доходы от прироста капитала	173
Basic Concepts	173
Estimating Valuation	173
Account Setup	174
Example	175
Unrealized Gains	175

Selling	176
Taxation	178
12. Мультивалютные операции	180
Basic Concepts	180
Manually Recording Currency Transaction	180
Account Setup	180
Recording and Updating Currency Exchange Rates	182
Recording Purchases in a Foreign Currency	186
Tracking Currency Investments	191
Reconciling Statements in a Foreign Currency	192
Automatically Recording Currency Transactions using Trading Accounts	192
Trading Account Concepts	192
Recording Foreign Currency Transactions with Trading Accounts	193

Глава 5. Чековая книжка

This chapter will give you all the specific information you need to manage your checkbook with GnuCash. Managing your checkbook register is the first step of tracking your finances, and GnuCash makes it much easier to manage than the traditional paper register does.

For one thing, as discussed in Глава 4, *Транзакции*, data entry of common transactions is practically done for you in GnuCash, because of its auto-completion feature. GnuCash keeps a running balance of each account, and it makes reconciling these accounts easy. And the double-entry method helps you account for your spending by requiring a transfer account for withdrawals, so you can easily find out how much money you spend in different areas.

Once you are comfortable with using GnuCash for your checking and other bank accounts, you may wish to continue on with tracking other financial accounts. Chapters 6 through 9 examine methods to manage your other accounts.

Setting up Accounts

The first step in managing your checkbook is to set up the necessary accounts. You can either use the default GnuCash accounts or set up your own. For more detail on how to set up a new account, refer to «Основные счета верхнего уровня». For instructions on importing your accounts from another program, refer to the GnuCash manual.

Let's start with the bank accounts you'll need. You need one GnuCash bank type account for each physical bank account you wish to track. If you are setting up your own accounts or using the default GnuCash accounts, make sure that you have an opening balance transaction for each bank account you own. The easiest way to get this number is to use the balance from your last bank statement as your opening balance. You can enter this in the account information window automatically as part of the New Account Hierarchy Setup assistant, or you can enter a manual transaction directly in the account. To enter the transaction manually, enter a transfer from an Opening Balances account (type equity) to the bank account.

The typical bank accounts you might track include:

- Checking - any institutional account that provides check-writing privileges.
- Savings - an interest-bearing institutional account usually used to hold money for a longer term than checking accounts.

Common transactions that affect these bank accounts are payments and deposits. *Payments* are transfers of money out of the bank account, usually to an expense account. *Deposits* are transfers of money into the bank account, usually from an income account. You will need to set up income and expense accounts to track where that money comes from and where it goes. Remember that a balanced transaction requires a transfer of an equal sum of money from at least one account to at least one other account. So if you deposit money in your checking account, you must also enter the account that money comes from. If you pay a bill from your checking account, you must also enter the account where that money goes.

Entering Deposits

Most deposit transactions are entered as a transfer from an income account to a bank account. Income may come from many sources, and it's a good idea to set up a separate income type account for each different source. For example, your income may come mainly from your paychecks, but you may also receive interest on your savings. In this case, you should have one income account for salary and another income account for interest income.

Подсказка

Be sure to check the Tax-Related box and assign an appropriate tax category in the Income Tax Information Dialog (Edit → Tax Report Options) when you set up taxable income accounts. Some types of income, such as gift income, may not be considered taxable, so check the appropriate tax rules to determine what is taxable. For ways to track capital gains income, refer to Глава 11, *Доходы от прироста капитала*.

Before you start entering paycheck deposits, decide how much detail you want to track. The basic level of detail is to enter your net pay, just like you would in your paper register. This is easiest, but you can get even more information out of GnuCash if you enter your gross pay with deductions. It takes a bit more effort to enter the deductions, but entering your tax withholding information throughout the year allows you to run useful tax status reports in GnuCash at any time. These reports can help you determine whether you are withholding enough tax, and they can help you estimate your tax bill ahead of time. If you are unsure about the level of detail, start by entering net pay. You can always go back and edit your transactions later if you decide you want more detail.

Entering Withdrawals

When you withdraw money from your bank account, for whatever reason, you are transferring money from your bank account to some other location. In GnuCash, this other location is tracked as an account. The more detailed accounts you create and use for your spending, the more information you will get about where your money goes.

Withdrawals take many forms. ATM withdrawals are one of the most common transactions. Writing checks is one way to withdraw money to pay bills, to buy purchases, or to give to charity. Depending on your bank, you might also have service charges, where the bank withdraws the money from your account. Transfers of money out to another account are also withdrawals. We will take a look at each of these types of withdrawals and how to record them in GnuCash.

ATM/Cash Withdrawals

Cash withdrawals are handled as a transfer from a bank account to a cash account. GnuCash provides special *Cash* type accounts for tracking your cash purchases, so you should set up a cash account to record your ATM and other cash withdrawals.

Cash accounts can be used for different levels of detail. On a basic level of detail, you simply transfer money to it from your checking account. That tells you how much money you took out of checking on a given day, but it doesn't tell you where that cash was spent. With a little more effort, you can use the cash account to record your cash purchases as well, so that you can see where that cash went. You record these purchases as a transfer from the cash account to expense accounts.

Some people record every cash purchase, but this takes a lot of work. An easier way is to record the purchases for which you have receipts, but then adjust the balance of the account to match what is in your wallet.

It's a good idea to at least set up a cash account for your withdrawals. Then if you decide to track where your cash goes, you can enter transactions for the money you spend. You determine what level of detail you want to use.

Reconciling Your Accounts

GnuCash makes reconciliation of your bank account with your monthly bank statement much easier. «Reconciliation» gives instructions on how to reconcile your transactions with the monthly bank statement. This is the main reconciliation task that should be done every month.

But what about all those other accounts you created? Should those be reconciled too? If you receive a statement for the account, then you should consider reconciling that account. Examples include the checking account statement, the savings account statement, and the credit card statement. Credit card statements and credit card transactions are covered in the Глава 7, *Кредитные карты*, so if you are interested in tracking your credit cards in GnuCash, take a look at the instructions provided there.

Income and expense accounts are usually not reconciled, because there is no statement to check them against. You also don't need to reconcile cash accounts, for the same reason. With a cash account, though, you might want to adjust the balance every once in a while, so that your actual cash on hand matches the balance in your cash account. Adjusting balances is covered in the next section.

Putting It All Together

In Глава 4, *Транзакции*, you entered some transactions in your checking account. In this chapter, we will add more transactions and then reconcile them.

Opening Balances

So, let's get started by opening the gcashdata file you saved in the last chapter (gcashdata_4). Your chart of accounts should look like this:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,781.79
Checking	Bank	US Dollar	USD 881.79
Savings	Bank	US Dollar	USD 900.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,218.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 45.21
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Taxes	Expense	US Dollar	USD 330.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
\$, grand total:			Assets: \$0.00 Profits: \$0.00

This image shows the Chart of Accounts.

Add some transactions

1. Now open the *Checking* account from the main window. In the last chapter, you entered some paycheck transactions as deposits into Checking. Now we will enter another kind of deposit - a transfer of money from Savings into Checking. On a blank line, enter a transaction to transfer \$500 from *Savings* to *Checking* (In this case, the last transaction date was March 28, but this transfer transaction took place on the March

24). Your Transfer account will be *Savings*, since you are in the *Checking* account. Your *Checking* account should now look like this:

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,724.79
24/03/06		Transfer Money	Assets:Savings	n	500.00	Withdrawal	2,224.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	2,204.79
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	2,126.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	2,081.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,731.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,381.79
17/04/06				n			

Present:USD 1,731.79 Future:USD 1,381.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,381.79

This image shows the Checking Account Register.

- Now let's write some checks on this account. First, write a check to HomeTown Grocery for \$75 (5th of March). Your transfer account is *Groceries*, since all of this money is going to buy groceries. Next, write a check to ABC Hardware for \$100 (6 of March), and split this amount between two expenses: *Household* \$50 and *Tools* \$50. You will need to create an *Expense* type account for each of these, then enter splits for them. Your checking account should now look like this;

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	c	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	c		45.21	954.79
05/03/06	105	HomeTown Grocery	Expenses:Groceries	n		75.00	879.79
06/03/06		Transfer Money	Assets:Savings	n	100.00		979.79
06/03/06	106	ABC Hardware	-- Split Transaction --	n	Deposit	100.00	879.79
14/03/06		Employers R Us	-- Split Transaction --	n	670.00		1,549.79
24/03/06		Transfer Money	Assets:Savings	n	500.00		2,049.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	2,029.79
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	1,951.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	1,906.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,556.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,206.79

Present:USD 1,556.79 Future:USD 1,206.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,206.79

This image shows the Checking Account Register after registering some more checks.

- Suppose you now need to withdraw some money. You don't have a cash account set up in your chart of accounts, so you will need to create one. Create the account as *Cash* as a top-level account of type *Asset*. From your *Checking* account register, enter an *ATM* type withdrawal to transfer \$100 from *Checking* to *Cash* on the 25 of March.

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
24/03/06		Transfer Money	Assets:Savings	n	500.00		2,049.79
25/03/06		ATM Withdrawal	Assets:Cash	n	Deposit	100.00	1,949.79
28/03/06		Internet Subscription	Expenses:Internet	n		20.00	1,929.79
28/03/06	102	Light Company	Expenses:Electricity	n		78.00	1,851.79
28/03/06	103	Phone Company	Expenses:Phone	n		45.00	1,806.79
28/03/06	104	April Rent	Expenses:Rent	n		350.00	1,456.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,106.79
25/03/06				n			

Present:USD 1,456.79 Future:USD 1,106.79 Cleared:USD 954.79 Reconciled:USD 0.00 Projected Minimum:USD 1,106.79

This image shows the Checking Account Register with an ATM withdrawal.

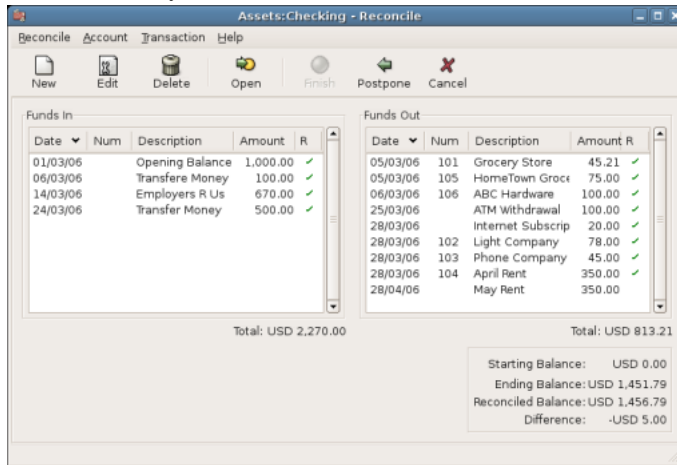
Opening Balances

Now we are ready to reconcile this *Checking* account, using this sample bank statement:

Date	Description	Decreasing	Increasing	Balance
1/03/2006	Starting Balance			1,000.00
5/03/2006	Check:101:Grocery Store	45.21		954.79
6/03/2006	Transfer		100.00	1,054.79
8/03/2006	Check:106:ABC Hardware	100.00		954.79
14/03/2006	Salary		670.00	1,624.79
15/03/2006	Check:105:HomeTown Grocery	75.00		1,549.79
24/03/2006	Transfer		500.00	2,049.79
25/03/2006	ATM	100.00		1,949.79
28/03/2006	Check:102:Light Company	78.00		1,871.79
28/03/2006	Check:103:Phone Company	45.00		1,826.79
28/03/2006	Check:104:Apartment 4 Rent	350.00		1,476.79
28/03/2006	Best Internet	20.00		1,456.79
31/03/2006	Service Charge	5.00		1,451.79
31/03/2006	Ending Balance			1,451.79

This image shows a sample Bank Statement.

1. Select Actions → Reconcile from the menu, and fill in the Closing balance as \$1451.79. Click OK to begin reconciling the account. Check off the entries as they appear on the sample statement. When you have checked off all your entries, the reconcile window should look like this:



This image shows the reconcile window with a \$5 difference.

Notice that your reconciled balance differs from your ending balance by \$5.00. If you look at the sample bank statement, you will see there is a \$5.00 service charge that has not been added to your *Checking* account.

2. So click on the *Checking* register and add the \$5.00 service charge to your *Checking* account. On a blank line of the *Checking* register, enter a transaction to transfer \$5.00 from *Checking* to a *Service Charges* account. (You will need to create the *Service Charges* account as type Expense.) Use the transaction date printed on the sample statement as the date you enter for this transaction. Your *Checking* account should now look like this:

This image shows the Checking Account Register with service charge added.

- Click back on the Reconcile window, and you should see the service charge now under Funds Out. Click on it to mark it as reconciled, and note that the difference amount below now becomes 0.00. Click the Finish button on the *Toolbar* to complete the reconciliation. The Reconcile R column in your *Checking* register should now show y for each transaction you just reconciled. Also observe the bottom status row that now indicates Reconciled: USD 1451.79

Date	Num	Description	Transfer	R	Deposit	Withdrawal	Balance
01/03/06		Opening Balance	Equity:Opening Balance	y	1,000.00		1,000.00
05/03/06	101	Grocery Store	Expenses:Groceries	y		45.21	954.79
05/03/06	105	HomeTown Grocery	Expenses:Groceries	y		75.00	879.79
06/03/06		Transfer Money	Assets:Savings	y	100.00		979.79
06/03/06	106	ABC Hardware	-- Split Transaction --	y		100.00	879.79
14/03/06		Employers R Us	-- Split Transaction --	y	670.00		1,549.79
24/03/06		Transfer Money	Assets:Savings	y	500.00		2,049.79
25/03/06		ATM Withdrawal	Assets:Cash	y		100.00	1,949.79
28/03/06		Internet Subscription	Expenses:Internet	y		20.00	1,929.79
28/03/06	102	Light Company	Expenses:Electricity	y		78.00	1,851.79
28/03/06	103	Phone Company	Expenses:Phone	y		45.00	1,806.79
28/03/06	104	April Rent	Expenses:Rent	y		350.00	1,456.79
31/03/06	Account	Service Charge	Expenses:Service Charge	y	Deposit	5.00	1,451.79
28/04/06		May Rent	Expenses:Rent	n		350.00	1,101.79

Present: USD 1,451.79 Future: USD 1,101.79 Cleared: USD 1,451.79 Reconciled: USD 1,451.79 Projected Minimum: USD 1,101.79
Monday 17 April 2006

This image shows the reconciled Checking Account Register.

Save file

Go back to the main window and save your file with the new `gcashdata_5` name. Your chart of accounts is steadily growing, and it should now look like this:

The screenshot shows a software window titled "gcashdata_5 - Accounts". It features a menu bar with "File", "Edit", "View", "Actions", "Business", "Reports", "Tools", "Windows", and "Help". Below the menu is a toolbar with icons for "Save", "Close", "Open", "Edit", "New", and "Delete". The main area displays a tree view of accounts with columns for "Account Name", "Type", "Commodity", and "Total".

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,601.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 1,101.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,398.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 120.21
Household	Expense	US Dollar	USD 50.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Imbalance-USD	Bank	US Dollar	USD 0.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
Orphan-USD	Bank	US Dollar	USD 0.00

At the bottom of the window, a summary bar shows: USD: Assets: USD 1,101.79 Profits: -USD 398.21

This image shows the Chart of Accounts.

Reports

As we did in the previous chapter, let's have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow .

Cash Flow - 01/03/06 to 31/03/06 for

Selected Accounts

- [Assets:Cash](#)
- [Assets:Checking](#)
- [Assets:Savings](#)

Money into selected accounts comes from	
Equity:Opening Balance	USD 2,000.00
Income:Salary	USD 1,000.00
Money In	USD 3,000.00
Money out of selected accounts goes to	
Expenses:Electricity	USD 78.00
Expenses:Groceries	USD 120.21
Expenses:Household	USD 50.00
Expenses:Internet	USD 20.00
Expenses:Phone	USD 45.00
Expenses:Rent	USD 350.00
Expenses:Service Charge	USD 5.00
Expenses:Taxes:Federal	USD 180.00
Expenses:Taxes:Medicare	USD 90.00
Expenses:Taxes:Social Security	USD 60.00
Expenses:Tools	USD 50.00
Money Out	USD 1,048.21
Difference	USD 1,951.79

This image shows the Cash Flow report after Глава 5, *Чековая книжка*.

2. Now let's have a look at corresponding transaction report for the various Asset accounts.

Select the transaction report from Reports → Transaction Report .

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Transfer from/to	Amount
Cash				
25/03/06		ATM Withdrawal	Checking	<u>USD 100.00</u>
Total For Cash				USD 100.00
Checking				
01/03/06		Opening Balance	Opening Balance	<u>USD 1,000.00</u>
05/03/06	101	Grocery Store	Groceries	<u>-USD 45.21</u>
05/03/06	105	HomeTown Grocery	Groceries	<u>-USD 75.00</u>
06/03/06		Transfere Money	Savings	<u>USD 100.00</u>
06/03/06	106	ABC Hardware	Split	<u>-USD 100.00</u>
14/03/06		Employers R Us	Split	<u>USD 670.00</u>
24/03/06		Transfer Money	Savings	<u>USD 500.00</u>
25/03/06		ATM Withdrawal	Cash	<u>-USD 100.00</u>
28/03/06	102	Light Company	Electricity	<u>-USD 78.00</u>
28/03/06	104	April Rent	Rent	<u>-USD 350.00</u>
28/03/06		Internet Subscription	Internet	<u>-USD 20.00</u>
28/03/06	103	Phone Company	Phone	<u>-USD 45.00</u>
31/03/06		Service Charge	Service Charge	<u>-USD 5.00</u>
Total For Checking				USD 1,451.79
Savings				
01/03/06		Opening Balance	Opening Balance	<u>USD 1,000.00</u>
06/03/06		Transfere Money	Checking	<u>-USD 100.00</u>
24/03/06		Transfer Money	Checking	<u>-USD 500.00</u>
Total For Savings				USD 400.00
Grand Total				USD 1,951.79

This image shows the Transaction Report for the Assets accounts during March.

- Now let's change the transaction report to only show the various *Expenses* account.

Transaction Report
From 01/03/06 To 31/03/06

Date	Num	Description	Account	Amount
05/03/06	101	Grocery Store	Groceries	<u>USD 45.21</u>
05/03/06	105	HomeTown Grocery	Groceries	<u>USD 75.00</u>
06/03/06	106	ABC Hardware	Household	<u>USD 50.00</u>
06/03/06	106	ABC Hardware	Tools	<u>USD 50.00</u>
14/03/06		Employers R Us	Federal	<u>USD 180.00</u>
14/03/06		Employers R Us	Social Security	<u>USD 60.00</u>
14/03/06		Employers R Us	Medicare	<u>USD 90.00</u>
28/03/06		Internet Subscription	Internet	<u>USD 20.00</u>
28/03/06	104	April Rent	Rent	<u>USD 350.00</u>
28/03/06	102	Light Company	Electricity	<u>USD 78.00</u>
28/03/06	103	Phone Company	Phone	<u>USD 45.00</u>
31/03/06		Service Charge	Service Charge	<u>USD 5.00</u>
Grand Total				USD 1,048.21

This image shows the Transaction Report for the various Expense accounts during March.

Notice that you have not yet used one of the accounts listed in your chart, the Credit Card account. Now that you know how to keep track of your bank and cash accounts in GnuCash, you may want to start tracking your credit cards as well. GnuCash provides a special type of account for credit cards, and this is discussed in the next chapter.

Глава 6. Кредиты

If managing your checkbook is the first step in tracking your finances, then using expense accounts to see where you are expending money is a close second step. This chapter will give you an understanding of how GnuCash uses expense accounts to help you keep track of many different categories of transactions.

Concepts

An expense type account is used to allow you to track how much you spend on specific expenses. Many people's first experience with tracking expenses comes from Quicken(tm), where transactions can be assigned to one or more categories. In GnuCash, these categories are set up as separate accounts, which are designated as Expense type accounts. This allows GnuCash to apply the rules of double-entry accounting consistently. Expense accounts can be as detailed or as general as you need. Some users need only a few accounts for personal expense tracking. Others use GnuCash expense accounts to manage their expenses in great detail. The level of detail you choose is up to you. Keep in mind that with GnuCash, you can change accounts for transactions, so if your needs change later on, it is possible to move transactions around.

Setting Up Accounts

Simple Expense Account Setup

For many users, the easiest way to set up expense accounts is to check the "Common Accounts" when you create a new Account Hierarchy. This will establish many of the most common expense accounts that users need. See "New Account Hierarchy Setup" in Chapter 3 of the Help guide for more information.

Complex Expense Account Setup

If you have different expense accounting needs, you can refer to Глава 4, *Транзакции*, or Chapter 5.4 in the Help manual for instructions on how to create accounts.

Typical reasons for adding new or different expense accounts include: to track expenses for particular business purposes (e.g., specific types of supply expenses), to track expenses for particular tax purposes (e.g., tax expenses that must be reported to others), or simply to track expenses that are meaningful to you (e.g., payments made to a particular charity).

Entering Expense Transactions

While it is possible to enter transactions directly into expense accounts, it is not normally how these are entered. For most people, transactions for an expense account are added when the user is entering data into the other account in the transaction. In other words, if you have an expense account for Charitable Donations (e.g., Expenses:Charity), you will typically add a transaction to the expense account by assigning a check in your checking account register to the Charity account.

If you open an expense account, you will see a register similar to most others you find in GnuCash. The informal column headings for the transaction amounts are slightly different, however. The left (debit) column will read *Tot Expense*, while the right (credit) column will read *Tot Rebate*.

Other Considerations for Expense Accounts

Because expense accounts are generated entirely by you, there are no statements against which you would reconcile your data. Therefore, there is technically nothing to reconcile. You can, of course use the reconcile process for expense accounts, which will lock the transactions for future editing.

One point to consider is that as your use of GnuCash continues, the balances in these accounts will grow, since there are usually very few credit transactions that reduce the balances. There is nothing wrong with this situation, but some users may wish to clear the balances in their expense accounts periodically. Zeroing transactions can be entered that transfer the balance of the account to an Equity account. GnuCash includes a Closing Books procedure that includes zeroing out expense accounts. Keep in mind that this is not necessary, and that if you need to gather information on a given expense account, you can use various reports to extract that data without zeroing the account out.

Глава 7. Кредитные карты

This chapter will show you how to manage your credit cards using GnuCash.

Concepts

Since you probably write a check or make an electronic payment to the credit card company each month, you may think of your credit card bill as an expense - but it really is not an expense. Why? A credit card account is a short-term loan - you buy things on that loan account, and then you eventually have to pay back the money, often with interest (your finance charge). The purchases you make with that credit card are your expenses.

You have a couple of options when entering credit card transactions, so choose the one that fits your desired level of detail. The simplest method is to simply track monthly payments to the credit card company. From your bank account, you enter a transfer of money each month to the credit card expense account. This will show you the amount of money you are paying each month to the credit card company, but it won't show you any information about your credit card balance or credit card purchases.

A more complete way to track your credit card in GnuCash is to enter each purchase and payment as a separate transaction. Using the credit card account register, you enter your receipts throughout the month. When your credit card statement arrives, you reconcile the credit card account to the statement, and you enter your payment as a transfer of money from your checking account to your credit card account. This method gives you more information about your balance during the month and points out any discrepancies during reconciliation, but you will have to do more data entry.

Setting Up Accounts

To begin managing your credit cards in GnuCash, you should set up a Liability top level account and under this parent account create credit card type accounts for each credit card you use. If you are tracking only the payments you make to the credit card company, then all you need is a bank account and a credit card account to enter your transactions.

The charges you make on your credit card are expenses, so you will have to set up these accounts under the top-level account called Expenses. If you decide to keep a more detailed records of your purchases, you will need to create expense accounts for each kind of purchase you make. Since you will also be reconciling the balance to your credit card statements, you should also enter an opening balance in each credit card account. The easiest way to do this is to use your last statement balance as the opening balance.

Simple Setup

If you do not want to track each expense made on the credit card, you can set up a simple account hierarchy like this:

```
-Assets
  -Bank
-Liabilities
  -Credit Card
-Expenses
  -Credit Card
```

In this example, if you enter your total amount charged per month as a transaction between *Liabilities:Credit Card* and *Expenses:Credit Card*. When you make a payment, you would enter a transaction between *Assets:Bank* and *Liabilities:Credit Card*.

The obvious limitation of this simple credit card setup is that you cannot see where your money is going. All your credit card expenses are being entered in the Credit Card expense account. This is, however, very simple to set up and maintain.

Complete Setup

If you want to track your expenses more completely, you should set up multiple expense accounts named for the various kinds of expenses you have. Each charge on your credit card is then entered as a separate transaction between your Credit Card liability account and a specific expense account. Below is an example of an account hierarchy for this:

```
-Assets
  -Bank
-Liabilities
  -Credit Card
-Expenses
  -Food
  -Car
  -Clothes
  -Entertainment
  -Interest
  -Service
```

Clearly, you should enter specific expense accounts which fit your spending habits. The only difference with this setup as compared to the simple setup is that the expenses have been subdivided by groups. Also notice that there is an «Interest» expense, this is used for when your credit card charges interest on your monthly unpaid balance. The «Service» expense account is used to track service expenses associated with the credit card, such as the yearly usage fee if it exists. With this setup, you will be able to see where your money goes every month, grouped according to the expense accounts.

The rest of this chapter will assume you are using the complete setup.

Entering Charges

Entering your charges provides you with a more complete picture of your spending habits. Charges on a credit card are tracked as a transaction between the credit card liability account and the appropriate expense account.

When you pay for goods or services with your credit card, you are telling the credit card company to pay the merchant for you. This transaction will increase the amount of money you owe the credit card company, and the credit card balance will increase. The other side of these transactions will in most cases be an expense account. For example, if you buy clothing from a store with your credit card for \$50, you would be transferring that money from the credit account into Expenses:Clothing.

Entering these transactions into GnuCash allows you to track how much you owe the credit card company, as well as provides you a better picture of your overall accounts. It also allows you to monitor your account and ensure that fraud is avoided.

Adding transactions to a credit card account is similar to entering transactions in other accounts. You can enter them manually, or import them from your credit card company using a compatible import format.

For assistance with entering transactions, see Chapter 6 of the Help manual and Глава 4, *Транзакции*.

Entering Payments

Most payments to your credit card bill are entered as transfers from a bank account (asset) to the credit card account (liability). When you pay the monthly bill, you are withdrawing money from a bank account to pay down the credit card balance. This transaction decreases both your bank account balance and the amount of credit card debt you owe.

When you return a purchase, you receive a refund on your credit card. This is another type of payment in that it decreases the amount of credit card debt you owe. If you recorded the original purchase transaction as a transfer from the credit card account to the expense, you now simply reverse that transaction: transfer the money back from the expense to the credit card account. This transaction decreases both the expense account balance and the credit card account balance. For example, if you originally recorded a credit card purchase of clothing, the transaction is a transfer from the credit card account to the clothing expense account. If you then return that clothing for a refund, you simply transfer the money back from the clothing expense account to the credit card account.

Примечание

A common mistake is to enter a refund as income. It is not income, but rather a «negative expense». That is why you must transfer money from the expense account to your credit card when you receive a refund.

To clarify this, let's run through an example. You bought some jeans for \$74.99 on your VISA card, but realized one day later that they are too big and want to return them. The shop gracefully agrees, and refunds your credit card.

1. Start with opening the previous datafile we stored (`gcashdata_5`), and store it as `gcashdata_6`.
2. Open the *Liabilities:Visa* account register and enter a simple 2 account transaction to pay the \$74.99 jeans purchase. The Transfer account should be *Expenses:Clothes* and you Charge your *Visa* account with the \$74.99.

Примечание

Since we had not created the *Expenses:Clothes* account previously, GnuCash will prompt us to create it. Just remember to create it as an Expense account

3. Enter the refund in one of the following way.
 - Enter the same transaction as the purchase transaction, but instead of a «Charge» amount, use a «Payment» amount in the Credit Card account register.
 - Select the purchase transaction you want to refund (that is the Jeans transaction in our case), and selecting Transaction → Add Reversing Transaction . Modify the date as needed.

After reversing the transaction, your credit card account should look something like this:

Date	Num	Description	Transfer	R	Payment	Charge	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n		500.00	500.00
03/04/06		Jeans R Us	Expenses:Clothes	n		74.99	574.99
05/04/06		Jeans R Us	Expenses:Clothes	n	74.99		500.00

Present:USD 500.00 Future:USD 500.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 500.00
Monday 17 April 2006

This image shows *Liability:Credit Card* - Register after reversing a purchase transaction.

And the *Expenses:Clothes* register should look something like this:

Date	Num	Description	Transfer	R	Expense	Rebate	Balance
03/04/06		jeans R Us		n	74.99		74.99
05/04/06		jeans R Us		n	74.99		0.00
17/04/06	Num		Transfer	n	Expense	Rebate	Balance

This image shows *Expenses:Clothes* register after reversing a purchase transaction.

4. Save the GnuCash data file.

Putting It All Together

Now that we have covered the basic ideas behind the various transactions you must make to successfully track your credit card in GnuCash, let's go through an example. In this example, we will make credit card purchases, refund two of the purchases, get charged interest on the unpaid balance, reconcile the credit card account, and finally make a partial payoff of the credit card.

Open GnuCash file

Start with opening the previous datafile we stored, `gcashdata_5`, and store it as `gcashdata_6` directly. The main window should look something like this:

The screenshot shows the 'gcashdata_6 - Accounts' window. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. The toolbar contains icons for Save, Close, Open, Edit, New, and Delete. The main area displays a table of accounts with columns for Account Name, Type, Commodity, and Total. The table is organized into categories: Assets, Equity, Expenses, Income, and Liabilities. A summary bar at the bottom shows the total for USD: Assets: USD 1,101.79 and Profits: -USD 398.21.

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,601.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 1,101.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,398.21
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Groceries	Expense	US Dollar	USD 120.21
Household	Expense	US Dollar	USD 50.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 500.00
Visa	Credit Card	US Dollar	USD 500.00

USD: Assets: USD 1,101.79 Profits: -USD 398.21

Starting account structure for tracking a credit card in the putting it all together example.

Purchases

Let's make some purchases on our visa card. Start by buying \$25 worth of food from the Greasy Spoon Cafe, \$100 worth of clothing from Faux Pas Fashions, \$25 worth of gasoline from Premium Gasoline, \$125 worth

of groceries and household items from Groceries R Us (split between \$85 in groceries and \$40 in household items) and finally, \$60 worth of household items from CheapMart.

We also redo the exercise in previous chapter, with purchasing a pair of Jeans for \$74.99 on April 3, and refund them two days later.

The register window for the credit card liability should look like this:

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
01/03/06		Opening Balance	Equity:Opening Balance	n		500.00	500.00
03/04/06		Jeans R Us	Expenses:Clothes	n		74.99	574.99
05/04/06		Jeans R Us	Expenses:Clothes	n	74.99		500.00
10/04/06		Greasy Spoon Cafe	Expenses:Food	n		25.00	525.00
11/04/06		Faux Pas Fashion	Expenses:Clothes	n		100.00	625.00
12/04/06		Premium Gasolin	Expenses:Car	n		25.00	650.00
13/04/06		Groceries R Us	-- Split Transaction --	n		125.00	775.00
13/04/06		CheapMart	Expenses:Household	n		60.00	835.00

Present:USD 835.00 Future:USD 835.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 835.00
Thursday 13 April 2006

Initial credit card purchases.

Refund

Now suppose that on April 15th you return the clothes you bought on April 11th from Faux Pas Fashions and they give you credit back on your credit card. Enter a transaction for the credit card refund for the full \$100 amount. Remember to use the same transfer account you used for the original purchase, and enter the amount under the Payment column. GnuCash will automatically complete the name and transfer account for you, but it will also automatically enter the \$100 in the Charge column. You will need to reenter the amount in the Payment column. The transaction looks like this:

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
11/04/06		Faux Pas Fashion	Expenses:Clothes	n		100.00	625.00
12/04/06		Premium Gasolin	Expenses:Car	n		25.00	650.00
13/04/06		Groceries R Us	-- Split Transaction --	n		125.00	775.00
13/04/06		CheapMart	Expenses:Household	n		60.00	835.00
15/04/06		Faux Pas Fashion - Refund	Expenses:Clothes	n	100.00		735.00

Present:USD 735.00 Future:USD 735.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 735.00
Enter a description of the transaction

Returning clothes to Faux Pas Fashions, refund to credit card.

Interest Charge

After the month of spending, unfortunately, the credit card bill arrives in the mail or you access it on-line through the internet. You have been charged \$20 in interest on the last day of April because of the balance you carried from the previous month. This gets entered into the credit card account as an expense.

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
13/04/06		CheapMart	Expenses:Household	n		60.00	835.00
15/04/06		Faux Pas Fashion - Refund	Expenses:Clothes	n	100.00		735.00
30/04/06		Interest	Expenses:Interest	n		20.00	755.00

Present:USD 735.00 Future:USD 755.00 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 755.00
Sunday 30 April 2006

Interest charge.

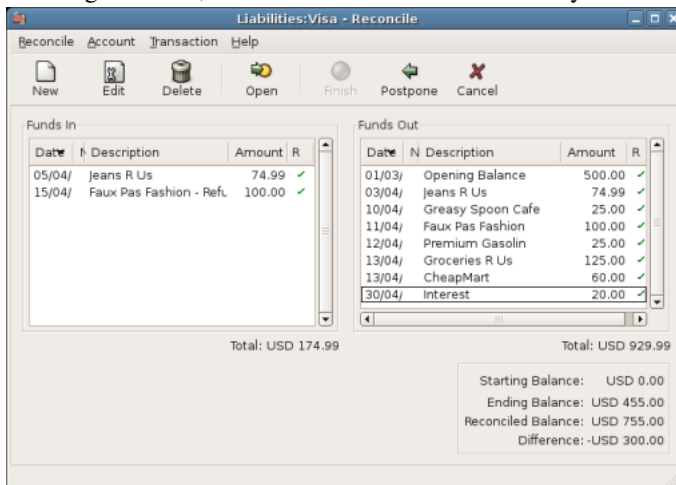
Reconciliation

When your credit card bill arrives you should reconcile your credit card account to this document. This is done using GnuCash's built-in reconciliation application. Highlight the credit card account and click on Actions → Reconcile... . This reconciliation procedure is described in detail in the «Reconciliation», but we will step through the process here as well. For this example, let's assume that the credit card statement is dated May 1st, with a final balance of \$455. Enter these values in to the initial Reconcile window as shown here.



Initial account reconciliation window.

During the reconciliation process, you check off each transaction in the account as you confirm that the transaction appears in both your GnuCash account and the credit card statement. For this example, as shown in the figure below, there is a \$300 difference between your GnuCash accounts and the credit card statement.



Main account reconciliation window, demonstrating a discrepancy of \$300.

Some investigation uncovers that you forgot to record a payment you made on March 5th to the credit card company for \$300, you must enter this payment transaction from your bank account to the credit card. Now the credit card statement and your GnuCash account can be reconciled, with a balance of \$455.

Payment

Assuming you have completed reconciliation of your credit card account, you need to make a payment to the credit card company. In this example, we owe \$455 but will make a partial payment of \$300 again this month. To do so, enter a transaction from your bank account to the credit card account for \$300, which should reduce your credit card balance to \$155. Your credit card account register should now appear like this:

Date	Nurr	Description	Transfer	R	Payment	Charge	Balance
01/03/06		Opening Balance	Equity:Opening Balance	y		500.00	500.00
05/03/06		Partial Payment	Assets:Checking	y	300.00		200.00
03/04/06		jeans R Us	Expenses:Clothes	y		74.99	274.99
05/04/06		jeans R Us	Expenses:Clothes	y		74.99	200.00
10/04/06		Greasy Spoon Cafe	Expenses:Food	y		25.00	225.00
11/04/06		Faux Pas Fashion	Expenses:Clothes	y		100.00	325.00
12/04/06		Premium Gasolin	Expenses:Car	y		25.00	350.00
13/04/06		Groceries R Us	-- Split Transaction --	y		125.00	475.00
13/04/06		CheapMart	Expenses:Household	y		60.00	535.00
15/04/06		Faux Pas Fashion - Refund	Expenses:Clothes	y	100.00		435.00
30/04/06		Interest	Expenses:Interest	y		20.00	455.00
05/05/06		Partial Payment of Visa Bill	Assets:Checking	n	300.00		155.00

Present: USD 435.00 Future: USD 155.00 Cleared: USD 455.00 Reconciled: USD 455.00 Projected Minimum: USD 455.00
Friday 05 May 2006

Account register after account reconciliation and payment.

Go back to the main window and save your file (`gcashdata_6`). Your chart of accounts is steadily growing, and it should now look like this:

Account Name	Type	Commodity	Total
Assets	Asset	US Dollar	USD 1,001.79
Cash	Cash	US Dollar	USD 100.00
Checking	Bank	US Dollar	USD 501.79
Savings	Bank	US Dollar	USD 400.00
Equity	Equity	US Dollar	USD 1,500.00
Expenses	Expense	US Dollar	USD 1,653.21
Car	Expense	US Dollar	USD 25.00
Clothes	Expense	US Dollar	USD 0.00
Electricity	Expense	US Dollar	USD 78.00
Food	Expense	US Dollar	USD 25.00
Groceries	Expense	US Dollar	USD 205.21
Household	Expense	US Dollar	USD 150.00
Interest	Expense	US Dollar	USD 20.00
Internet	Expense	US Dollar	USD 20.00
Phone	Expense	US Dollar	USD 45.00
Rent	Expense	US Dollar	USD 700.00
Service Charge	Expense	US Dollar	USD 5.00
Taxes	Expense	US Dollar	USD 330.00
Tools	Expense	US Dollar	USD 50.00
Income	Income	US Dollar	USD 1,000.00
Liabilities	Liability	US Dollar	USD 155.00
Visa	Credit Card	US Dollar	USD 155.00

USD: Assets: USD 846.79 Profits: -USD 653.21

GnuCash Chart of Accounts after account reconciliation and payment.

Save file

Last, save the GnuCash data file (gcashdata_6).

Reports

As we did in the previous chapters, let's have a look at a Cash Flow, and a Transaction Report.

1. First let's have a look at the Cash Flow report for the liability account Visa during the month of March.

Select the cash flow report from Reports → Income & Expense → Cash Flow .

Cash Flow - 01/03/06 to 30/04/06 for Selected Accounts

- [Liabilities:Visa](#)

Money into selected accounts comes from	
Assets:Checking	USD 300.00
Expenses:Clothes	USD 174.99
Money In	USD 474.99
Money out of selected accounts goes to	
Equity:Opening Balance	USD 500.00
Expenses:Car	USD 25.00
Expenses:Clothes	USD 174.99
Expenses:Food	USD 25.00
Expenses:Groceries	USD 85.00
Expenses:Household	USD 100.00
Expenses:Interest	USD 20.00
Money Out	USD 929.99
Difference	-USD 455.00

This image shows the Cash Flow report after Глава 7, *Кредитные карты*.

2. Now let's have a look at corresponding transaction report for the Visa account.

Select the transaction report from Reports → Transaction Report .

Transaction Report
From 01/03/06 To 30/04/06

Date	Num	Description	Transfer from/to	Amount
<u>Visa</u>				
March 2006				
01/03/06		Opening Balance	Opening Balance	<u>USD 500.00</u>
05/03/06		Partial Payment	Checking	<u>-USD 300.00</u>
Total For March 2006				USD 200.00
April 2006				
03/04/06		Jeans R Us	Clothes	<u>USD 74.99</u>
05/04/06		Jeans R Us	Clothes	<u>-USD 74.99</u>
10/04/06		Greasy Spoon Cafe	Food	<u>USD 25.00</u>
11/04/06		Faux Pas Fashion	Clothes	<u>USD 100.00</u>
12/04/06		Premium Gasolin	Car	<u>USD 25.00</u>
13/04/06		Groceries R Us	Split	<u>USD 125.00</u>
13/04/06		CheapMart	Household	<u>USD 60.00</u>
15/04/06		Faux Pas Fashion - Refund	Clothes	<u>-USD 100.00</u>
30/04/06		Interest	Interest	<u>USD 20.00</u>
Total For April 2006				USD 255.00
Total For Visa				USD 455.00
Grand Total				USD 455.00

This image shows the Transaction Report for the Visa account during March/April.

- Now let's change the transaction report to only show the various Expenses accounts.

Transaction Report
From 01/04/06 To 30/04/06

Date	Num	Description	Account	Amount
Car				
12/04/06		Premium Gasolin	Car	<u>USD 25.00</u>
Total For Car				USD 25.00
Clothes				
03/04/06		Jeans R Us	Clothes	<u>USD 74.99</u>
05/04/06		Jeans R Us	Clothes	<u>-USD 74.99</u>
11/04/06		Faux Pas Fashion	Clothes	<u>USD 100.00</u>
15/04/06		Faux Pas Fashion - Refund	Clothes	<u>-USD 100.00</u>
Total For Clothes				USD 0.00
Food				
10/04/06		Greasy Spoon Cafe	Food	<u>USD 25.00</u>
Total For Food				USD 25.00
Groceries				
13/04/06		Groceries R Us	Groceries	<u>USD 85.00</u>
Total For Groceries				USD 85.00
Household				
13/04/06		Groceries R Us	Household	<u>USD 40.00</u>
13/04/06		CheapMart	Household	<u>USD 60.00</u>
Total For Household				USD 100.00
Interest				
30/04/06		Interest	Interest	<u>USD 20.00</u>
Total For Interest				USD 20.00
Rent				
28/04/06		May Rent	Rent	<u>USD 350.00</u>
Total For Rent				USD 350.00
Grand Total				USD 605.00

This image shows the Transaction Report for the various Expense accounts during April.

Глава 8. Кредиты

This chapter explains how to manage your loans with GnuCash.

Basic Concepts

A loan is defined as a financial transaction in which someone pays for the use of someone else's money. There are many familiar examples of loans: credits cards, auto loans, house mortgages, or a business loan.

Terminology

Before discussing tracking loan in GnuCash specifically, it will be helpful to present a glossary of terminology. The terms presented below represent some of the basic concepts found concerning loans. It is a good idea to become familiar with these terms, or at least, refer back to this list if you encounter an unfamiliar word in the later sections.

- *Amortization* - the repayment plan which will insure that a loan is eventually paid off, typically utilizing equal valued monthly payments. These payments are usually split into principal and interest, where the amount of principal per payment increases (and interest decreases) as the amortization period elapses.
- *Borrower* - the person or company that receives the money from a loan.
- *Default* - when a borrower fails to repay a loan according to the terms agreed upon with the lender.
- *Deferment* - a temporary delay in the repayment of a loan.
- *Delinquency* - is the term that refers to late payments.
- *Disbursement* - amount of the loan paid to the borrower. Some loans have multiple disbursements, meaning the borrower does not receive the full amount of the loan at one time.
- *Interest* - the expense charged by the lender to the borrower for the use of the money loaned. This is typically expressed in terms of a yearly percentage charged on the principal borrowed, known as the *Annual Percentage Rate* or APR.
- *Lender* - the company or person who lends money to a borrower.
- *Loan Fee* - a processing fee removed from the principal at the time the borrower receives a loan.
- *Principal* - the original amount of the loan, or the amount of the original loan that is still owed. When you make a monthly payment on a loan, part of the money pays the interest, and part pays the principal.
- *Promissory Note* - the legal agreement between the borrower and lender concerning the loan.

Setting Up Accounts

When a borrower obtains a loan, it is usually with the intention to make a purchase of something of value. In fact, most loans require the borrower to buy some predetermined asset, such as a house. This asset is insurance against the borrower defaulting on the loan. There are, of course, examples of loans which do not necessarily have an associated high value asset, such as educational loans.

For the account structure presented here, we will assume the loan was used to purchase a compensating asset.

A loan is a liability, the interest you accrue on the loan is an on-going expense, and any administrative fees you may have to pay would be another expense. The thing purchased with the money from a loan is an asset. With these parameters, we can now present a basic loan account structure:

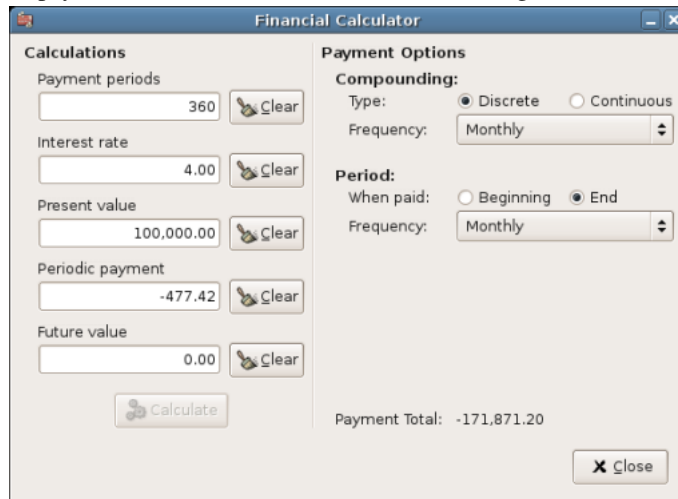
Basic Loan Account Structure

- Asset
 - Current Assets
 - Savings Account
 - Fixed Assets
 - Asset Purchased
- Liability
 - Loans
 - Mortgage Loan
- Expenses
 - Interest
 - Mortgage Interest
 - Mortgage Adm Fees

GnuCash has a number of predefined loan account hierarchies available, including Car Loans and Home Mortgage Loans. To access these predefined account structures, click on Actions → New Account Hierarchy... and select the loan types in which you are interested.

Calculations

Determining loan amortization schedules, periodic payment amounts, total payment value, or interest rates can be somewhat complex. To help facilitate these kinds of calculations, GnuCash has a built-in Loan Repayment Calculator. To access the calculator, go to Tools → Loan Repayment Calculator .



The GnuCash Loan Repayment Calculator.

The Loan Repayment Calculator can be used to calculate any one of the parameters: Payment Periods, Interest Rate, Present Value, Periodic Payment, or Future Value given that the other 4 have been defined. You will also need to specify the compounding and payment methods.

- *Payment Periods* - the number of payment periods.

- *Interest Rate* - the nominal interest rate of the loan, ie: the yearly interest rate.
- *Present Value* - the present value of the loan, ie: current amount owed on the loan.
- *Periodic Payment* - the amount to pay per period.
- *Future Value* - the future value of the loan, ie: the amount owed after all payment periods are over.
- *Compounding* - two interest compounding methods exist, discrete or continuous. For discrete compounding select the compounding frequency from the popup menu with a range from yearly to daily.
- *Payments* - the popup menu allows you to select the payment frequency with a range from yearly to daily. You can also select whether your payments occur at the beginning or end of the period. Payments made at the beginning of the payment period have interest applied to the payment as well as any previous money paid or money still owed.

Example: Monthly Payments

What is your monthly payment on a \$100000 30 year loan at a fixed rate of 4% compounded monthly?

This scenario is shown in the example image above. To perform this calculation, set Payment Periods to 360 (12 months x 30 years), Interest Rate to 4, Present Value to 100000, leave Periodic Payment empty and set Future Value to 0 (you do not want to owe anything at the end of the loan). Compounding is Monthly, Payments are Monthly, assume End of Period Payments, and Discrete Compounding. Now, click on the Calculate button next to the Periodic Payment area. You should see \$-477.42.

Answer: You must make monthly payments of 477.42.

Example: Length of Loan

How long will you be paying back a \$20000 loan at 10% fixed rate interest compounded monthly if you pay \$500 per month?

To perform this calculation, leave Payment Periods empty, set Interest Rate to 10, Present Value to 20000, Periodic Payment is -500, and Future Value is 0 (you do not want to owe anything at the end of the loan). Compounding is *Monthly*, Payments are *Monthly*, assume End of Period payments, and Discrete Compounding. Now, click on the Calculate. You should see 49 in the Payment Periods field.

Answer: You will pay off the loan in 4 years and 1 month (49 months).

Advanced: Calculation Details

In order to discuss the mathematical formulas used by the Loan Repayment Calculator, we first must define some variables.

```
n    == number of payment periods
%i   == nominal interest rate, NAR, charged
PV   == Present Value
PMT  == Periodic Payment
FV   == Future Value
CF   == Compounding Frequency per year
```

PF == Payment Frequency per year

Normal values for CF and PF are:

1 == annual
 2 == semi-annual
 3 == tri-annual
 4 == quaterly
 6 == bi-monthly
 12 == monthly
 24 == semi-monthly
 26 == bi-weekly
 52 == weekly
 360 == daily
 365 == daily

Converting between nominal and effective interest rate

When a solution for n, PV, PMT or FV is required, the nominal interest rate (i) must first be converted to the effective interest rate per payment period (ieff). This rate, ieff, is then used to compute the selected variable. When a solution for i is required, the computation produces the effective interest rate (ieff). Thus, we need functions which convert from i to ieff, and from ieff to i.

To convert from i to ieff, the following expressions are used:

Discrete Interest: $ieff = (1 + i/CF)^{(CF/PF)} - 1$

Continuous Interest: $ieff = e^{(i/PF)} - 1 = exp(i/PF) - 1$

To convert from ieff to i, the following expressions are used:

Discrete Interest: $i = CF * [(1+ieff)^{(PF/CF)} - 1]$

Continuous Interest: $i = ln[(1+ieff)^{PF}]$

Примечание

In the equations below for the financial transaction, all interest rates are the effective interest rate, «ieff». For the sake of brevity, the symbol will be shortened to just «i».

The basic financial equation

One equation fundamentally links all the 5 variables. This is known as the fundamental financial equation:

$$PV * (1 + i)^n + PMT * (1 + iX) * [(1+i)^n - 1] / i + FV = 0$$

Where: X = 0 for end of period payments, and
 X = 1 for beginning of period payments

From this equation, functions which solve for the individual variables can be derived. For a detailed explanation of the derivation of this equation, see the comments in the file src/calculation/fin.c from the GnuCash source code. The A, B, and C variables are defined first, to make the later equations simpler to read.

$$A = (1 + i)^n - 1$$

$$B = (1 + iX) / i$$

$$C = PMT * B$$

$$n = \ln[(C - FV)/(C + PV)] / \ln((1 + i))$$

$$PV = -[FV + A * C] / (A + 1)$$

$$PMT = -[FV + PV * (A + 1)] / [A * B]$$

$$FV = -[PV + A * (PV + C)]$$

The solution for interest is broken into two cases.
 The simple case for when $PMT == 0$ gives the solution:
 $i = [FV/PV]^{(1/n)} - 1$

The case where $PMT != 0$ is fairly complex and will not be presented here. Rather than involving an exactly solvable function, determining the interest rate when $PMT != 0$ involves an iterative process. Please see the `src/calculation/fin.c` source file for a detailed explanation.

Example: Monthly Payments

Let's recalculate «Example: Monthly Payments», this time using the mathematical formulas rather than the Loan Repayment Calculator. What is your monthly payment on a \$100000 30 year loan at a fixed rate of 4% compounded monthly?

First, let's define the variables: $n = (30 * 12) = 360$, $PV = 100000$, $PMT = \text{unknown}$, $FV = 0$, $i = 4\% = 4/100 = 0.04$, $CF = PF = 12$, $X = 0$ (end of payment periods).

The second step is to convert the nominal interest rate (i) to the effective interest rate ($ieff$). Since the interest rate is compounded monthly, it is discrete, and we use: $ieff = (1 + i/CF)^{(CF/PF)} - 1$, which gives $ieff = (1 + 0.04/12)^{(12/12)} - 1$, thus $ieff = 1/300 = 0.00333333$.

Now we can calculate A and B. $A = (1 + i)^n - 1 = (1 + 1/300)^{360} - 1 = 2.313498$. $B = (1 + iX)/i = (1 + (1/300)*0)/(1/300) = 300$.

With A and B, we can calculate PMT. $PMT = -[FV + PV * (A + 1)] / [A * B] = -[0 + 100000 * (2.313498 + 1)] / [2.313498 * 300] = -331349.8 / 694.0494 = -477.415296 = -477.42$.

Answer: You must make monthly payments of 477.42.

House Mortgage (How-To)

A house mortgage can be setup using the account structure present in «Setting Up Accounts».

As an example, assume you have \$60k in you bank account, and you buy a \$150k house. The mortgage is charging 6% APR, and has administrative fees (closing costs, etc) of 3%. You decide to put \$50k down, and thus will need to borrow \$103k, which will give you \$100 after the closing costs are paid (3% of \$100k).

Your accounts before borrowing the money:

Account Name	Total
Assets	USD 60,000.00
Current Assets	USD 60,000.00
Savings Account	USD 60,000.00
Fixed Assets	USD 0.00
House	USD 0.00
Equity	USD 60,000.00
Opening Balances	USD 60,000.00
Expenses	USD 0.00
Interest	USD 0.00
Mortgage Interest	USD 0.00
Mortgage Adm Fees	USD 0.00
Liabilities	USD 0.00
Loans	USD 0.00
Mortgage Loan	USD 0.00

USD, grand total: Assets: USD 60,000.00 Profits: USD 0.00

Accounts Before Receiving Loan

The purchase of the house is recorded with a split transaction in the *Assets:House* account, with \$50k coming from the bank (IE: your down payment), and \$100k coming from the Mortgage. You can place the \$3k closing costs in the same split, and we increase the house loan to \$103k to include the closing costs as well.

Таблица 8.1. Buying a House Split Transaction

Account	Increase	Decrease
Assets:Fixed Assets:House	\$150,000	
Assets:Current Assets:Bank		\$50,000
Liabilities:Loans:Mortgage Loan		\$103,000

Expenses:Mortgage Adm Fees	\$3000	
----------------------------	--------	--

The split will look like this in the *Assets:Fixed Assets:House* Account:

Date	Description		tot Increase	tot Decrease	Balance
01/01/06	Buy house		150,000.00	150,000.00	150,000.00
	Total value of house	Assets:Fixed Assets:House	n	150,000.00	
	Closing costs	Expenses:Mortgage Adm Fees	n	3,000.00	
	Down payment	Assets:Current Assets:Savings Account	n	50,000.00	
	Loan & Closing costs	Liabilities:Loans:Mortgage Loan	n	103,000.00	

Mortgage Split Transaction

Which will give a Chart of Accounts like this:

Account Name	Total
Assets	USD 160,000.00
Current Assets	USD 10,000.00
Savings Account	USD 10,000.00
Fixed Assets	USD 150,000.00
House	USD 150,000.00
Equity	USD 60,000.00
Opening Balances	USD 60,000.00
Expenses	USD 3,000.00
Interest	USD 0.00
Mortgage Interest	USD 0.00
Mortgage Adm Fees	USD 3,000.00
Liabilities	USD 103,000.00
Loans	USD 103,000.00
Mortgage Loan	USD 103,000.00

USD, grand total: Assets: USD 57,000.00 Profits: -USD 3,000.00

Mortgage Account

A Personal Loan to a friend (How-To)

It is not always you are borrowing money from the bank, sometimes you borrow money from your family, or perhaps even lend money to a friend. This How-To chapter will describe one way to handle lending money to a friend.

We are basing this How-To on the following generic account structure.

```
-Asset
  -Bank
    -Bank Account
  -Money owed to you
    -Person
-Income
  -Interest Income
    -Person
```

This example will show how to track a personal loan of 2,000 USD (default currency) to your friend Peter

Loan Specifications

Peter wants to borrow \$2,000 dollars from you and plans to pay you back monthly for the next 18 months. Since he is your friend, (but not that close) you both agree on a yearly interest rate of 5%.

In summary we have the below details. Peter's loan details:

- Pinciple Amount - \$2,000
- Term - 18 months with 12 payments per year
- Annual Percentage Rate: 5%
- Monthly Payment : ??

So how do you calculate the Monthly Payment?

You have a number of different options, like paper and pen, Linux Calculator, Open Office's Calc module, but the easiest is to use GnuCash Loan Repayment Calculator. This tells you that the Monthly Payment should be \$115.56.

But you need to know how much of this is Interest and how much is Principal to be able to do a proper bookkeeping. For this you need a more powerful tool, something like the Calc module in OpenOffice.org, and in particular the PMT function.

		<u>Start</u>		<u>End</u>	
		<u>Amount</u>	<u>Interest</u>	<u>Principal</u>	
				<u>Amount</u>	
Loan Amount	\$2,000.00	Jan 2,000.00	8.33	107.23	1,892.77
Number of months	18	Feb 1,892.77	7.89	107.67	1,785.10
Payments per year	12	Mar 1,785.10	7.44	108.12	1,676.97
Interest per year	5%	Apr 1,676.97	6.99	108.57	1,568.40
Monthly payment	\$115.56	May 1,568.40	6.54	109.03	1,459.37
		Jun 1,459.37	6.08	109.48	1,349.89
		Jul 1,349.89	5.62	109.94	1,239.96
		Aug 1,239.96	5.17	110.39	1,129.56
Monthly Payment=PMT(C8/C7,C6,-C5,D)		Sep 1,129.56	4.71	110.85	1,018.71
		Oct 1,018.71	4.24	111.32	907.39
Interest=(C8*\$9-\$7)*F4		Nov 907.39	3.78	111.78	795.61
		Dec 795.61	3.32	112.25	683.37
Principal=\$C\$9-G4		Jan 683.37	2.85	112.71	570.65
		Feb 570.65	2.38	113.18	457.47
End Amount=F4-H4		Mar 457.47	1.91	113.65	343.81
		Apr 343.81	1.43	114.13	229.69
		May 229.69	0.96	114.60	115.08
		Jun 115.08	0.48	115.08	-0.00
		Total	\$80.10	\$2,000.00	

Detailed view over the private loan to Peter

Accounts for the loan

Let's start with the following accounts (all accounts have the same currency, in this case USD)

Assets:Bank:USD
 Assets:Money owed to you:Peter
 Income:Interest Income:Peter
 Equity:Opening Balances:USD

Lending the money

When you have lent money to your friend, you have in fact moved money from an Asset account (like Bank, Checking or similar) to your Asset account *Money owed to you*. To record this you enter the following transaction into the *Assets:Money owed to you:Friend* account.

Таблица 8.2. Personal loan to a Friend

Account	Increase	Decrease
Assets:Money owed to you:Friend	\$2,000	
Assets:Bank:USD		\$2,000

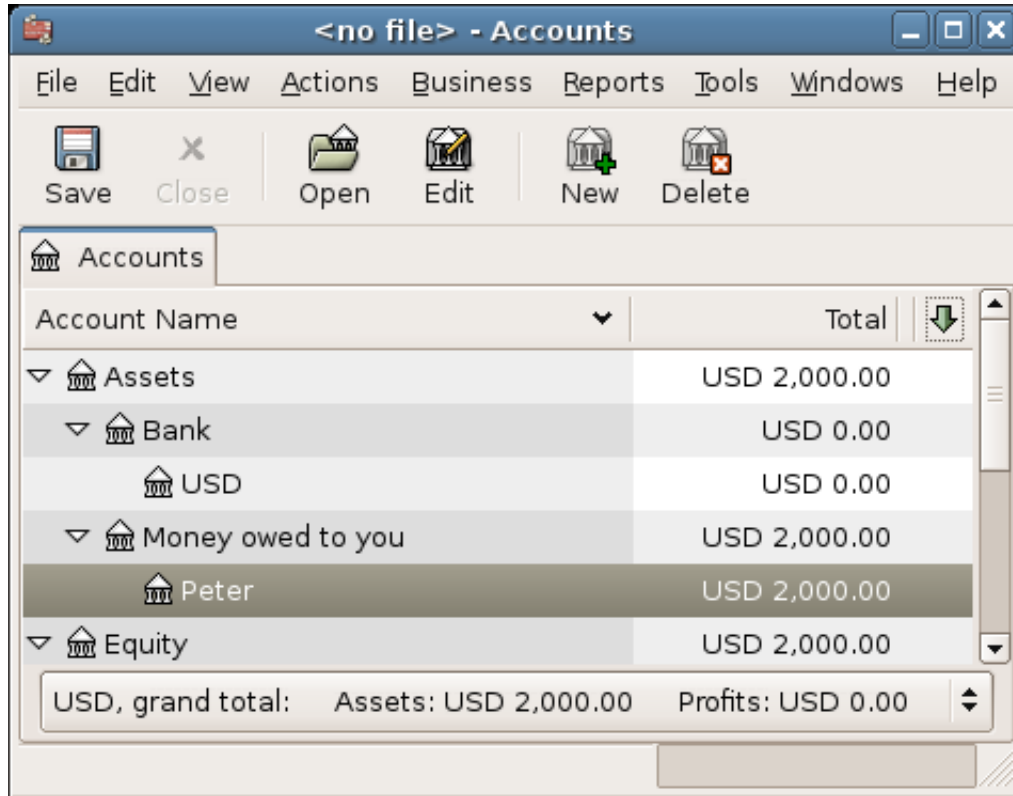


Chart of Accounts after lending money

Receiving first payment

When the first payment (\$115.56) is received, you will need to determine how much is for the principal loan, and how much is for the loan interest.

- Outstanding loan amount this period = \$2,000
- Payment per month = \$115.56
- Payment breakdown
- $5\%/12 * \$2,000 = \8.33 Interest
- $\$115.56 - \$8.33 = \$107.23$ Principal

This can be translated to the following GnuCash entry

Date	Memo	Account	R	Deposit	Withdraw
01/01/06	Loan to Peter			2,000.00	2,000.00
		Assets:Money owed to you:Peter	n	2,000.00	
		Assets:Bank:USD	n		2,000.00
01/02/06	First payment				107.23
		Assets:Bank:USD	n	115.56	
	Principal	Assets:Money owed to you:Peter	n		107.23
	Interest	Income:Interest Income:Peter	n		8.33

Present: USD 1,892.77 Future: USD 1,892.77 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 1,892.77

Detailed view over first payment

The balance on Peter's loan is now $\$2,000 - \$107.23 = \$1,892.77$

Receiving second payment

When the second payment (\$115.56) is received, you will again need to determine how much is for the principal loan, and how much is for the loan interest.

- Outstanding loan amount this period = \$1,892.77
- Payment per month = \$115.56
- Payment breakdown
- $5\%/12 * \$1,892.77 = \7.89 Interest
- $\$115.56 - \$7.89 = \$107.67$ Principal

This can be translated to the following GnuCash entry

Date	Description		Tot Debit	Tot Withd	Balance
01/01/06	Loan to Peter	Assets:Bank:USD	n 2,000.00		2,000.00
01/02/06	First payment	-- Split Transaction --	n 107.23	107.23	1,892.77
01/03/06	Second payment		n 115.56	115.56	1,785.10
	Principal	Assets:Money owed to you:Peter	n 107.67		
	Interest	Income:Interest Income:Peter	n 7.89		

Present:USD 1,785.10 Future:USD 1,785.10 Cleared:USD 0.00 Reconciled:USD 0.00 Projected Minimum:USD 1,785.10
Second payment

Detailed view over the second payment

The balance on Peter's loan is now $\$1,892.77 - \$107.67 = \$1,785.10$

The Chart of accounts looks now like this

The screenshot shows a software window titled "Loan_Peter - Accounts". It features a menu bar with options: File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. Below the menu is a toolbar with icons for Save, Close, Open, Edit, New, and Delete. The main area displays a tree view of accounts under the heading "Accounts".

Account Name	Total
Assets	USD 2,016.22
Bank	USD 231.12
USD	USD 231.12
Money owed to you	USD 1,785.10
Peter	USD 1,785.10
Equity	USD 2,000.00
Income	USD 16.22
Interest Income	USD 16.22
Peter	USD 16.22

At the bottom of the window, a summary bar shows: USD, grand total: Assets: USD 2,016.22 Profits: USD 16.22

Chart of Accounts after second payment

As you can see, the interest varies for every month, as well as the principal amount. So for every payment you receive you need to calculate the proper amounts for your various split entries.

The interest amount will be less and less for every payment (since it is calculated on a smaller loan amount all the time), until the last payment where it is more or less 0. Please review the Figure of Detailed view over private loan to Peter for more details

Automobile Loan (How-To)

The Automobile Loan, or in common terms, Car Loan, is treated more or less exactly as the House loan. The only difference is different accounts, and different interest rates.

Basic Car Loan Account Structure

- Asset
 - Current Assets
 - Savings Account
 - Fixed Assets
 - Car
- Liability

- Loans
 - Car Loan
- Expenses
 - Interest
 - Car Loan Interest
 - Car Loan Adm Fees

For more information, please check «House Mortgage (How-To)»

Reconciling with the Loan Statements (How-To)

Reconciling a loan statement is no different from reconciling a bank or credit card statement.

During the period you should have recorded all the various loan related transactions, and every one of them are touching the `Liability:Loans:Loan` account. For instance, paying off a bit of the loan decreases your *Bank Account*, and increases the *Loan account*, *Loan Interest* as well as perhaps *Loan administration fee*.

With the loan statement in your hands, open the Loan account, start the reconcile assistant, and tick of all the various transaction you have recorded. When you have finished, the reconciling difference should be 0, and if it is not, then you will have to go through the account and compare it with the loan statement to find the difference. When you have reached a 0 in difference, then your loan account is reconciled and you can finish the Reconcile assistant.

For more information on how to Reconcile, please check «Reconciliation»

Selling a house or a car (How-To)

When you will record the selling of your house in GnuCash you have some different options. Here we will go through two of them, one in which you only recorded the purchase amount, and now the selling amount. The other where you have followed the ups and downs on the property market and registered various Unrealized gains over the time.

Simple Transaction

In this way you only record the proper sale amount.

Let's work through two samples of selling a house, one with a profit, and one with a loss. If you want to sell a car instead, just substitute the house account with a car account.

- Assets
 - Fixed Assets
 - House
 - Current Assets
 - Saving
- Income
 - Capital Gains Long
 - House

- You bought a house for \$300,000 once upon a time, and now managed to sell it for \$600,000. How do you record this?

To record this you need to increase our bank account with the \$600k, and decrease some other accounts with \$600k. The house account only contains \$300k which is what you bought it for, so you move this amount to your bank account. That means you are lacking \$300k. This amount you fetch from the *Income:Capital Gains Long:House* account. The split transaction you enter into your *bank* account (*Assets:Current Assets:Saving*) should look like this.

Таблица 8.3. Selling an asset (house) with a profit

Account	Increase	Decrease
Assets:Current Assets:Saving	\$600,000	
Assets:Fixed Assets:House		\$300,000
Income:Capital Gains Long:House		\$300,000

- You bought a house for \$300,000 once upon a time, but due to a newly created airport, could only sell it for \$230,000. How do you record this?

To record this you need to increase your bank account with the \$230k, and decrease some other accounts with \$230k. The house account contains \$300k which is more than what you sold it for. So let's move \$230k of it to your bank account. After this you have \$70k remaining in your house account which needs to be removed. You move it to our *Income:Capital Gains Long:House* account, which will indicate a loss. The split transaction you enter into your *house* account (*Assets:Fixed Assets:House*) should look like this.

Таблица 8.4. Selling an asset (house) with a loss

Account	Increase	Decrease
Assets:Fixed Assets:House		\$300,000
Assets:Current Assets:Saving	\$230,000	
Income:Capital Gains Long:House	\$70,000	

A More Complex Transaction

In this example, we will touch a little on some more complicated accounting principles. For more details on this subject, please check Глава 11, *Доходы от прироста капитала*

Here we will only touch on the case when you have accurately estimated the current value of your house. For the other cases (over-, and under-estimated), please check Глава 11, *Доходы от прироста капитала*.

```
-Assets
  -Fixed Assets
    -House
      -Cost
      -Unrealized Gain
  -Current Assets
    -Saving
-Income
  -Realized Gain
    -House
  -Unrealized Gain
```

-House

You bought a house for \$300,000 once upon a time, and over the years kept a close look on the market and updated your records with the estimated current value of your house. At the time you want to sell it, you have determined that the current market value is \$600,000.

The difference between \$600,000 (estimated market value) and \$300,000 (purchase value) is the current Unrealized Gain value. Therefore you have a total of \$300,000 in your *Assets:Fixed Assets:House:Unrealized Gain* account

How do you record this sell transaction?

To record this you need to increase your bank account with the \$600k, and decrease some other accounts with \$600k. You must first change from unrealized gain to realized gain for your *Income* accounts. Lastly you need to transfer the full amounts from the *Assets:Fixed Assets:House* sub-accounts.

The transaction you enter into your *Income:Realized Gain:House* account should look like this.

Таблица 8.5. Selling an asset (house) with a profit

Account	Increase	Decrease
Income:Realized Gain:House	\$300,000	
Income:Unrealized Gain:House		\$300,000

The transaction you enter into your *Assets:Current Assets:Saving* account should look like this.

Таблица 8.6. Selling an asset (house) with a profit 2

Account	Increase	Decrease
Assets:Current Assets:Saving	\$600,000	
Assets:Fixed Assets:House:Cost		\$300,000
Assets:Fixed Assets:House:Unrealized Gain		\$300,000

After having recorded these transactions you see that your House Asset have a value of 0, your Savings account have increased with \$600,000, and lastly, the *Income:Realized Gain* have increased to \$300,000.

Глава 9. Инвестиции

This chapter explains how to manage your investments with GnuCash. Most people have an investment plan, whether its just putting money into a CD account, investing through a company sponsored plan at your workplace or buying and selling stocks and bonds through a brokerage. GnuCash gives you tools to help you manage these investments such as the *Price Editor* which allows you to record changes in the prices of stocks you own.

Basic Concepts

An investment is something that you purchase in the hopes of generating income, or that you hope to sell in the future for more than you paid. Using this simple definition, many things could be considered investments: the house you live in, a valuable painting, stocks in publicly traded companies, your savings account at the bank, or a certificate of deposit. These many types of investments will be discussed in this chapter in terms of how to track them using GnuCash.

Terminology

Before discussing investments specifically, it will be helpful to present a glossary of investment terminology. The terms presented below represent some of the basic concepts of investing. It is a good idea to become familiar with these terms, or at least, refer back to this list if you encounter an unfamiliar word in the later sections.

Capital gains

The difference between the purchase and selling prices of an investment. If the selling price is lower than the purchase price, this is called a *capital loss*. Also known as *realized gain/loss*.

Commission

The fee you pay to a broker to buy or sell securities.

Common stock

A security that represents a certain fractional ownership of a company. This is what you buy when you «buy stock» in a company on the open market. This is also sometimes known as *capital stock*.

Compounding

The concept that the reinvested interest can later earn interest of its own (interest on interest). This is often referred to as *compound interest*.

Dividends

Dividends are cash payments a company makes to shareholders. The amount of this payment is usually determined as some amount of the profits of the company. Note that not all common stocks give dividends.

Equities

Equities are investments in which the investor becomes part (or whole) owner in something. This includes common stock in a company, or real estate.

<i>Interest</i>	What a borrower pays a lender for the use of their money. Normally, this is expressed in terms of a percentage of the principal per year. For example, a savings account with 1% interest (you are the lender, the bank is the borrower) will pay you \$1 for every \$100 you keep there per year.
<i>Liquidity</i>	A measure of how easily convertible an investment is to cash. Money in a savings account is very liquid, while money invested in a house has low liquidity because it takes time to sell a house.
<i>Principal</i>	The original amount of money invested or borrowed.
<i>Realized vs Unrealized Gain/Loss</i>	Unrealized gain or loss occurs when you've got a change in price of an asset. You realize the gain/loss when you actually sell the asset. See also <i>capital gain/loss</i> .
<i>Return</i>	The total income plus capital gains or losses of an investment. See also <i>Yield</i> .
<i>Risk</i>	The probability that the return on investment is different from what was expected. Investments are often grouped on a scale from low risk (savings account, government bonds) to high risk (common stock, junk bonds). As a general rule of thumb, the higher the risk the higher the possible return.
<i>Shareholder</i>	A shareholder is a person who holds common stock in a company.
<i>Stock split</i>	Occurs when a company offers to issue some additional multiple of shares for each existing stock. For example, a «2 for 1» stock split means that if you own 100 shares of a stock, you will receive an additional 100 at no cost to you. The unit price of the shares will be adjusted so there is no net change in the value, so in this example the price per share will be halved.
<i>Valuation</i>	The process of determining the market value or the price the investment would sell at in a «reasonable time frame».
<i>Yield</i>	A measure of the amount of money you earn from an investment (IE: how much income you receive from the investment). Typically this is reported as a percentage of the principal amount. Yield does not include capital gains or losses (see Return). Eg: A stock sells for \$100

and gives \$2 in dividends per year has a yield of 2%.

Types of Investments

Below is presented some of the broad types of investments available, and examples of each type.

- *Interest-bearing account or instrument*

This type of investment usually allows you immediate access to your money, and will typically pay you interest every month based on the amount of money you have deposited. Examples are bank savings accounts (and some interest bearing checking accounts) and cash accounts at your brokerage. This is a very low risk investment, in the US these accounts are often insured against loss, to a specified limit.

Sometimes an interest bearing investment is *time-locked*. This type of investment requires you to commit your money to be invested for a given period of time for which you receive a set rate of return. Usually, the longer you commit the higher the interest rates. If you withdraw your money before the maturity date, you will usually have to pay an early withdrawal penalty. This is a relatively lower risk investment. Examples are certificates of deposit or some government bonds. Other types of Bonds may have higher yields based on the higher risks from the quality of the issuer's «credit rating».

- *Stocks and Mutual Funds*

This is an investment you make in a company, in which you effectively become a part owner. There is usually no time lock on publicly traded stock, however there may be changes in the tax rates you pay on capital gains depending on how long you hold the stock. Thus, stocks are typically quite liquid, you can access your money relatively quickly. This investment is a higher risk, as you have no guarantee on the future price of a stock.

A mutual fund is a group investment mechanism in which you can buy into many stocks simultaneously. For example, a "S&P 500 index fund" is a fund which purchases all 500 stocks listed in the Standard and Poor's index. When you buy a share of this fund, you are really buying a small amount of each of the 500 stocks contained within the fund. Mutual funds are treated exactly like a single stock, both for tax purposes and in accounting.

- *Fixed Assets*

Assets that increase in value over time are another form of investment. Examples include a house, a plot of land, or a valuable painting. This type of investment is very difficult to determine the value of until you sell it. The tax implications of selling these items is varied, depending on the item. For example, you may have tax relief from selling a house if it is your primary residence, but may not receive this tax break on an expensive painting.

Fixed asset investments are discussed in Глава 11, *Доходы от прироста капитала* and Глава 16, *Depreciation*. Typically, there is not much to do in terms of accounting for fixed asset investments except recording the buying and selling transactions.

Setting Up Accounts

To setup investment accounts in GnuCash you can either use the predefined investment account hierarchy or create your own. The minimum you need to do to track investments is to setup an asset account for each type of investment you own. However, as we have seen in previous chapters, it is usually more logical to create a structured account hierarchy, grouping related investments together. For example, you may want to group all your publicly traded stocks under a parent account named after the brokerage firm you used to buy the stocks.

Примечание

Regardless of how you setup your account hierarchy, remember that you can always move accounts around later (without losing the work you've put into them), so your initial account hierarchy does not have to be perfect.

Using Predefined Investment Accounts

The Investment Accounts option of the New Account Hierarchy Setup assistant will automatically create a basic investment account hierarchy for you. To access the predefined investment accounts hierarchy, you must make sure your GnuCash file is open, switch to the Accounts tab, and choose Actions → New Account Hierarchy . This will run the New Account Hierarchy Setup assistant and allow you to select additional accounts to add to your account hierarchy. Choose the Investment Accounts option (along with any others you are interested in). Assuming only investment accounts were selected, this will create an account hierarchy as shown below.

Подсказка

You can also run the New Account Hierarchy Setup assistant by creating a new GnuCash file.

Account Name	Description	Total
Assets	Assets	\$0.00
Investments	Investments	\$0.00
Brokerage Acco	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Expenses	Expenses	\$0.00
Commissions	Commissions	\$0.00
Income	Income	\$0.00
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$0.00
Bond Interest	Bond Interest	\$0.00
\$, Grand Total:		Net Assets: \$0.00 Profits: \$0.00

This is a screen image of the Accounts tab after creating a new file and selecting only the default investment accounts.

You will probably at least want to add a *Bank* account to the Assets and probably an *Equity:Opening Balances* account, as we have done in previous chapters. Don't forget to save your new account file with a relevant name!

Creating Investment Accounts Manually

If you want to set up your own investment accounts hierarchy, you may of course do so. Investments usually have a number of associated accounts that need to be created: an asset account to track the investment

itself; an income account to track dividend transactions; and expense accounts to track investment fees and commissions.

In a typical account structure, security accounts are sub accounts of an asset account representing an account at a brokerage firm. The brokerage account would be denominated in your local currency and it would include sub accounts for each security that you trade there.

Related purchases, sales, income and expense accounts should also be in the same currency as the brokerage account.

The security sub accounts would each be configured to contain units of a single security selected from the master (user defined) security list and they are expected to use the same currency as the brokerage account.

Security prices are kept in a separate area of GnuCash (the Price Database - Tools → Price Editor). This contains prices for individual securities (not security accounts). All prices for an individual security are in a single currency. If a security is traded in multiple currencies, then a separate security and separate accounts should be set up for each currency.

Custom Accounts Example

The following is a somewhat more complicated example of setting up GnuCash to track your investments, which has the advantage that it groups each different investment under the brokerage that deals with the investments. This way it is easier to compare the statements you get from your brokerage with the accounts you have in GnuCash and spot where GnuCash differs from the statement.

```

Assets
  Investments
    Brokerage Accounts
      I*Trade
        Stocks
          ACME Corp
        Money Market Funds
          I*Trade Municipal Fund
        Cash
      My Stockbroker
        Money Market Funds
          Active Assets Fund
        Government Securities
          Treas Bond xxx
          Treas Note yyy
        Mutual Funds
          Fund A
          Fund B
        Cash
  Income
    Investments
      Brokerage Accounts
        Capital Gains
          I*Trade
        My Stockbroker
      Dividends
        I*Trade
          Taxable
  
```

```

        Non-taxable
    My Stockbroker
        Taxable
        Non-taxable
Interest Income
    I*Trade
        Taxable
        Non-taxable
    My Stockbroker
        Taxable
        Non-taxable
Expenses
    Investment Expenses
        Commissions
            I*Trade
            My Stockbroker
        Management Fees
            I*Trade
            My Stockbroker
    
```

Подсказка

There really is no standard way to set up your investment account hierarchy. Play around, try different layouts until you find something which divides your investment accounts into logical groups which make sense to you.

Interest Bearing Accounts

Investments which have a fixed or variable rate of interest are one of the simplest and most common form of investments available. Interest bearing investments include your bank account, a certificate of deposit, or any other kind of investment in which you receive interest from the principal. This section will describe how to handle these kinds of investments in GnuCash.

Account Setup

When you purchase the interest bearing investment, you must create an asset account to record the purchase of the investment, an income account to record earnings from interest, and an expense account to record bank charges. Below is an account layout example, in which you have an interest bearing savings account and a certificate of deposit at your bank.

```

Assets
    Bank ABC
        CD
        Savings
Expenses
    Bank ABC
        Charges
Income
    Interest Income
        CD
        Savings
    
```

As usual, this account hierarchy is simply presented as an example, you should create your accounts in a form which best matches your actual situation.

Example

Now let's populate these accounts with real numbers. Let's assume that you start with \$10000 in your bank account, which pays 1% interest and you buy a \$5000 certificate of deposit with a 6 month maturity date and a 2% yield. Clearly, it is much better to keep your money in the CD than in the savings account. After the initial purchase, your accounts should look something like this:

The screenshot shows the GnuCash Accounts window with the following data:

Account Name	Description	Total
Assets	Assets	\$10,000.00
Bank ABC		\$10,000.00
CD	6 month CD @ 2%	\$5,000.00
Savings	Savings @ 1%	\$5,000.00
Investments	Investments	\$0.00
Brokerage Account	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Equity		\$10,000.00
Opening balances		\$10,000.00
Expenses	Expenses	\$0.00
Bank ABC		\$0.00
Charges	Bank ABC service charges	\$0.00
Commissions	Commissions	\$0.00
Income	Income	\$0.00
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$0.00
Bond Interest	Bond Interest	\$0.00
CD	6 month CD interest	\$0.00
Savings	Interest on savings - Bank ABC	\$0.00
\$, Grand Total:		Net Assets: \$10,000.00
		Profits: \$0.00

This is an image of the account register after creating and investing in a CD investment.

Now, during the course of the next 6 months, you receive monthly bank statements which describe the activity of your account. In our fictional example, we do nothing with the money at this bank, so the only activity is income from interest and bank charges. The monthly bank charges are \$2. After 6 months, the register window for the CD and for the savings account should look like these:

Date	Num	Description	Transfer	R	Increase	Decrease	Balance
01/01/05		Purchase CD	Assets:Bank ABC	n	5,000.00		5,000.00
01/31/05		Interest	Income:Interest Income:CD	n	8.33		5,008.33
02/28/05		Interest	Income:Interest Income:CD	n	8.35		5,016.68
03/31/05		Interest	Income:Interest Income:CD	n	8.36		5,025.04
04/30/05		Interest	Income:Interest Income:CD	n	8.38		5,033.42
05/31/05		Interest	Income:Interest Income:CD	n	8.39		5,041.81
06/30/05		Interest	Income:Interest Income:CD	n	8.40		5,050.21
06/30/05	Num	Description	Transfer	n	Increase	Decrease	Balance

Present: \$5,050.21 Future: \$5,050.21 Cleared: \$0.00 Reconciled: \$0.00 Projected Minimum: \$5,050.21
Thursday 30 June 2005

This is an image of the register of the CD account after 6 months.

Date	Num	Description	Transfer	R	Increase	Decrease	Balance
02/28/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,004.34
03/31/05		Interest	Income:Interest Income:Savings	n	4.17		5,008.51
03/31/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,006.51
04/30/05		Interest	Income:Interest Income:Savings	n	4.17		5,010.68
04/30/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,008.68
05/31/05		Interest	Income:Interest Income:Savings	n	4.17		5,012.85
05/31/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,010.85
06/30/05		Interest	Income:Interest Income:Savings	n	4.18		5,015.03
06/30/05		Charges	Expenses:Bank ABC:Charges	n		2.00	5,013.03
06/30/05	Num	Description	Transfer	n	Increase	Decrease	Balance

Present: \$5,013.03 Future: \$5,013.03 Cleared: \$0.00 Reconciled: \$0.00 Projected Minimum: \$5,013.03
Enter a description of the transaction

This is an image of the register of the Savings account after 6 months.

And this is the main GnuCash account window:

Account Name	Description	Total
Assets	Assets	\$10,063.24
Bank ABC		\$10,063.24
CD	6 month CD @ 2%	\$5,050.21
Savings	Savings @ 1%	\$5,013.03
Investments	Investments	\$0.00
Brokerage Acco	Brokerage Account	\$0.00
Bond	Bond	\$0.00
Market Index	Market Index	\$0.00
Mutual Fund	Mutual Fund	\$0.00
Stock	Stock	\$0.00
Equity		\$10,000.00
Opening balances		\$10,000.00
Expenses	Expenses	\$12.00
Bank ABC		\$12.00
Charges	Bank ABC service charges	\$12.00
Commissions	Commissions	\$0.00
Income	Income	\$75.24
Dividend Income	Dividend Income	\$0.00
Interest Income	Interest Income	\$75.24
Bond Interest	Bond Interest	\$0.00
CD	6 month CD interest	\$50.21
Savings	Interest on savings - Bank ABC	\$25.03
\$, Grand Total:		Net Assets: \$10,063.24 Profits: \$0.00

This is a screen capture of the accounts after 6 months.

From the above image of the main GnuCash account window you see a nice summary of what happened to these investments over the 6 months. While the yield on the CD is double that of the savings account, the return on the CD was \$50.21 versus \$13.03 for the savings account, or almost 4 times more. Why? Because of the pesky \$2 bank charges that hit the savings account (which counted for \$12 over 6 months).

After this 6 month period, the CD has reached maturity which means you may sell it with no early withdrawal penalty. To do so, simply transfer the \$5050.21 from the CD account into the savings account.

Setup Investment Portfolio

Now that you have built an account hierarchy in the previous section, this section will show you how to create and populate the accounts with your investment portfolio. After this initial setup of your portfolio, you may have shares of stock purchased from before you started using GnuCash. For these stocks, follow the instructions in the *Entering Preexisting Shares* section below. If you have just purchased your stocks, then use the *Buying New Shares* section.

Setup Accounts for Stocks and Mutual Funds

This section will show you how to add stocks and mutual fund accounts to GnuCash. In this section, we will assume you are using the basic account setup introduced in the previous section, but the principles can be applied to any account hierarchy.

You should have within the top level Asset account, a few levels down, an account entitled Stock. Open the account tree to this level by clicking on the «right facing triangle marker» signs next to the account names until the tree is opened to the depth of the new account. You will need to create a sub-account (of type *stock*) under the Stock account for every stock you own. Every stock is a separate account. The naming of these stock accounts is usually done using the stock ticker abbreviation, though account names may be anything that is clear to you and other users. So, for example, you could name your accounts *AMZN*, *IBM* and *NST* for your Amazon, IBM and NSTAR stocks respectively. Below is a schematic model of the layout (only showing the Assets sub-accounts).

```

Assets
  Investments
    Brokerage Accounts
      Bond
      Mutual Funds
      Market Index
      Stock
        AMZN
        IBM
        NST
  
```

Примечание

If you want to track income (dividends/interest/capital gains) on a per-stock or fund basis, you will need to create an *Income:Dividends:STOCKSYMBOL*, *Income:Cap Gain (Long):STOCKSYMBOL*, *Income:Cap Gain (Short):STOCKSYMBOL* and *Income:Interest:STOCKSYMBOL* account for each stock you own that pays dividends or interest.

Example Stock Account

As an example, let's assume that you currently own 100 shares of Amazon stock. First, create the stock account *AMZN* by selecting the Stock account and click on the menu *Actions+New Account...* . The New Account dialog will appear, follow the steps, in the sequence below to setup your new stock account.

New Account Window

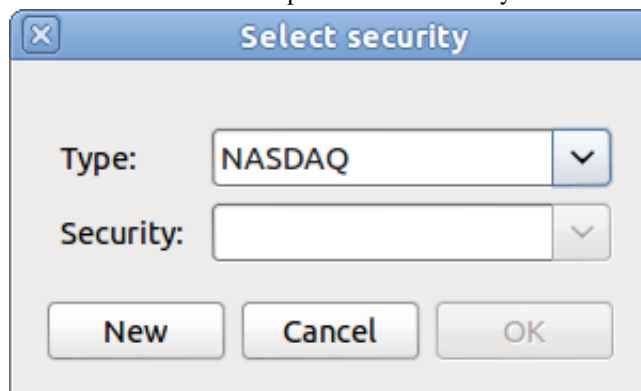
1. *Account Name* - Usually, use the stock ticker abbreviation, IE: «AMZN»
2. *Account Code* - Optional field, use CUSIP, the newspaper listing symbol, mutual fund family ID or code of your own choosing.
3. *Description* - Optional field for detailed description of the commodity/stock. Note this field by default is displayed in the Account tab tree.
4. *Account Type* - Select the type of account you are creating from the lower left-hand list.
5. *Parent Account* - Select the parent account for the new account from the right hand listing. Expand list of accounts if necessary.
6. *Create the New Security* - To use a new stock, you must create the stock as a new commodity

Примечание

Be sure to first select Account Type *Stock* or *Mutual Fund* so that the Select... button brings up the list of securities rather than currencies.

- *Select Security/Currency* - Click on the Select ... button next to the security/currency line. We must change the security from the default (your default currency) to this specific stock. This will bring up the Select Security dialog.
- *Type* - Select the exchange where the security/commodity is traded (in this example NASDAQ).

Select the New button to open the New Security window.



Select Security Window

- *Create the Security* - Click on the New... button and enter the appropriate information for this stock on the new form New Security.
 - The Full name: is «Amazon.com».
 - The Symbol/abbreviation: is «AMZN». The symbol is the stock ticker used in your quote source several lines down on the form. Note that different symbols will be utilized on different price sources for the same stock, an example is Ericsson on the Stockholm Exchange is ERIC-B while on Yahoo it is ERRICB.ST
 - The Type: should already be NASDAQ, because this is what was selected in the security selector, but you can change it here, including adding more categories. More information about this can be found in the Help Manual in section 8.7, «Security Editor».
 - The ISIN, CUSIP or other code is where you can enter some other coding number or text (leave it blank in this example).
 - The Fraction traded should be adjusted to the smallest fraction of this security which can be traded, usually 1/100 or 1/10000.
 - The checkbox «Get Online Quotes», the quote source and the timezone should be selected to define the sources for updating prices on-line. See Also «Setting Stock Price Automatically».

Примечание

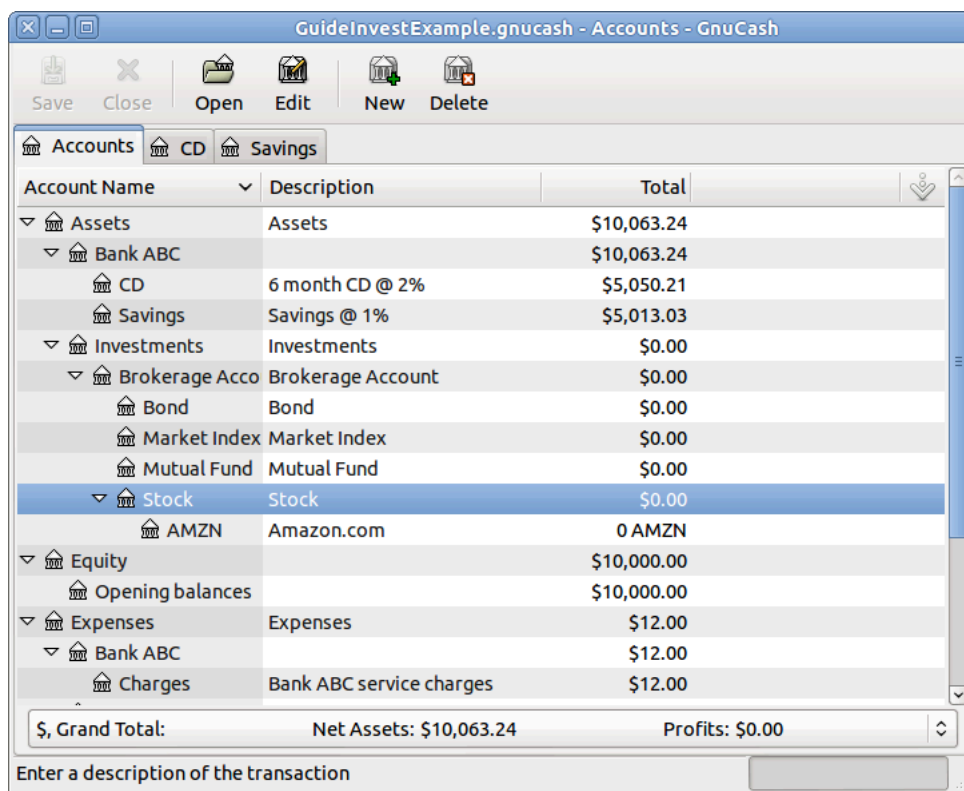
If the Get Online Quotes button is not highlighted, and it is not tickable, then the Finance::Quote package is not installed. See the section on «Installing Finance::Quote».

Below is what this window should look like when finished:

New Security Window

- *Save Security* - Click on the OK button to save this new security, this will close the New Security window and return to the New Account window.
7. *Select the Security* - you should now see the newly created security available in the pull down menu for Security/Currency. Select it (it is probably already selected) and click on OK.
 8. *Smallest Fraction* - Specify the smallest fraction of the security/commodity that is traded.
 9. *Notes* - Enter any notes or messages related to this security/commodity.
 10. *Tax Related* - Go to Edit → Tax Report Options to check this box if this account's transactions will relate to Income Taxes.
 11. *Placeholder* - Check box if this account is a «Placeholder», that is it will contain no transactions.
 12. *Finished* - You should now have been automatically returned to the New Account dialog, with the symbol/abbreviation: line set to «AMZN (Amazon.com)». Click on OK to save this new stock account.

You have now created the Amazon stock account, your main account should look something like this (notice that there are a few extra accounts here, a bank account, and an equity account):



This image is after the creation of the first stock account (AMZN)

Open the account register window for this AMZN stock account (double click on it). Here you see the **Commodity** view. This gives you an overview of the transactions in this commodity including the number of units (shares for a stock or mutual fund) bought or sold, the net price per unit, and the total amount. Obviously, we have not bought or sold any shares of AMZN yet, so the register should not contain any transactions.

Buying Shares

Entering Preexisting Shares

The examples in this section use Transaction Journal view.

To register the initial 100 shares of this stock that you purchased previously, on the first (transaction) line, enter the date of the purchase (eg: Jan. 1 2005) and Description (eg: Opening Balance). On the first split line, enter 100 in Shares , delete the (unit) Price (it will be calculated when you **Tab** out of the split) and enter 2000 in the Buy column.

Примечание

It is also possible to use GnuCash to calculate Shares or Buy from the other 2 columns but to avoid rounding errors, it is better to automatically calculate Price.

Tab to the second split line, enter transfer from account *Equity:Opening Balances*. For simplicity, this example assumed there were no commissions on this transaction. Your AMZN Commodity view should now appear like this:

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	Balance
01/01/2005		Opening Balance			100			100	100
	Buy		Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000	Sell	
			Equity:Opening Balances	n					2,000.00
							1		
01/01/2005					0.00				
				n			1		

Shares: 100 AMZN Current Value: \$3,600.00

Enter a description of the split

This image is of the transaction register of the AMZN account after the first stock «purchase».

Notice that the Balance (last column) is in the units of the commodity (AMZN shares) not in currency units. Thus, the balance is 100 (AMZN units) rather than \$2000. This is how it should be.

Buying New Shares

The main difference between setting up a new stock purchase versus the setup for preexisting stocks as described in the previous section is that instead of transferring the money used to purchase the stock from the *Equity:Opening Balances* account, you transfer from your *Assets:Bank ABC* or *Assets:Brokerage Account* account.

Handling Commissions and Fees

For conciseness, this document will refer to the money you pay to a broker for buying and selling securities as *Commissions*. Government fees may also be payable. Unless otherwise stated, fees are handled in a similar way.

In GnuCash there are 2 alternate ways to handle commissions (for simplicity this document section will refer to these ways as net pricing and gross pricing):

- *Net Pricing*: You enter a net price (adjusted by commissions) when buying and selling securities. You do *not* also record commissions in a specific commissions account in order to later claim it as an expense, as this would be claiming commissions twice. This way *is* compatible with using «Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots». This results in a slightly misleading price being added to the price database (the effective price you paid) but is not usually of any concern.

OR

- *Gross Pricing*: You enter the price not adjusted by commissions and enter the commissions expense on a separate split in the transaction. This enables the tracking of commissions but is *not* compatible with using «Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots». Scrubbing doesn't know to deduct commissions and fees from the gains, so capital gains or losses must be manually calculated (see «Selling Shares with Manual Calculation of Capital Gain or Loss»).

Please get professional advice if you are unsure which of these ways are applicable to your jurisdiction.

Example: Buying Shares with Gross Pricing

In this example you will purchase \$5000 of IBM stock, with a commission of \$100. First step will be to create the stock account for IBM. The existing *Expenses:Commission* account will be used. If you wish to track commissions to the individual stock level an additional sub-account would be necessary. E.g. *Expenses:Commission:IBM*.

Now for the transaction, on the first (transaction) line, enter the Date of the purchase (eg: Jan. 3 2005) and Description (eg: Initial IBM Purchase). On the first split line, enter 50 in Shares, delete Price (leave it empty so it will be calculated)), and enter 5000 in Buy. You do not need to fill in the Price column, as it will be calculated for you when you **Tab** to the next split. The next line in the split transaction will be *Expenses:Commissions* and fill in Buy (\$100). The third line will be to transfer \$5100 from account *Assets:Bank ABC* to balance the transaction. Your IBM Commodity view should now appear like this:

Actio	Memo	Account	R	Shares	Price	Buy	Sell
01/03/2005	Initial IBM Purchase			50		50	50
	Buy 50 shares @\$100 = \$5000	Assets:Brokerage Account:Stock:IBM	n	50	100	5,000	Sell
		Expenses:Commission:IBM	n			100.00	
		Assets:Bank ABC	n				5,100.00
16/03/2017				0.00		1	

Shares: 50 IBM Current Value: \$5,000.00
50 shares @\$100 = \$5000

This image is of the transaction register of the IBM account after the first stock «purchase» with a commission.

Example: Buying Shares with Net Pricing

Repeating the previous example using Net Pricing instead of Gross Pricing, in Transaction Journal view:

Purchase \$5000 of IBM stock being 50 Shares for \$100.00 each, plus a commission of \$100.

Now for the transaction, on the first (transaction) line, enter the Date of the purchase (eg: Jan. 3 2005) and a Description (eg: Initial IBM Purchase). On the first split line, optionally enter more details in Memo, then 50 in Shares, delete anything in Price (so it will be calculated by dividing Buy by Shares when you **Tab** out of the split), 5100 in Buy ($50 * \$100.00 + \100). Alternatively use GnuCash to calculate Buy by entering the formula $5000+100$ or $(50 * 100) + 100$ in Buy (Buy will be calculated when you **Tab** out of the column). Use the **Tab** key as many times as needed to proceed to the next split.

Do *not* enter a separate split for Commission as it has already been included in the Buy value. The second split line will be to transfer from *Assets:Bank ABC* \$5100 to balance the transaction. After the splits are all correct, use the **Enter** key to save the transaction. Your IBM Commodity view should now appear like this:

Actio	Memo	Account	R	Shares	Price	Buy	Sell	
01/03/2005	Initial IBM Purchase			50		50		50
	Buy	50 shares @\$100 = \$5000 + Commission \$100 = \$5100		50	102	5,100		
		Assets:Brokerage Account:Stock:IBM	n					
		Assets:Bank ABC	n				5,100.00	
						1		
16/03/2017				0.00				

Shares: 50 IBM Current Value: \$5,100.00
50 shares @\$100 = \$5000 + Commission \$100 = \$5100

This image is of the transaction register of the IBM account after the first stock «purchase» with a commission.

Setting Share Price

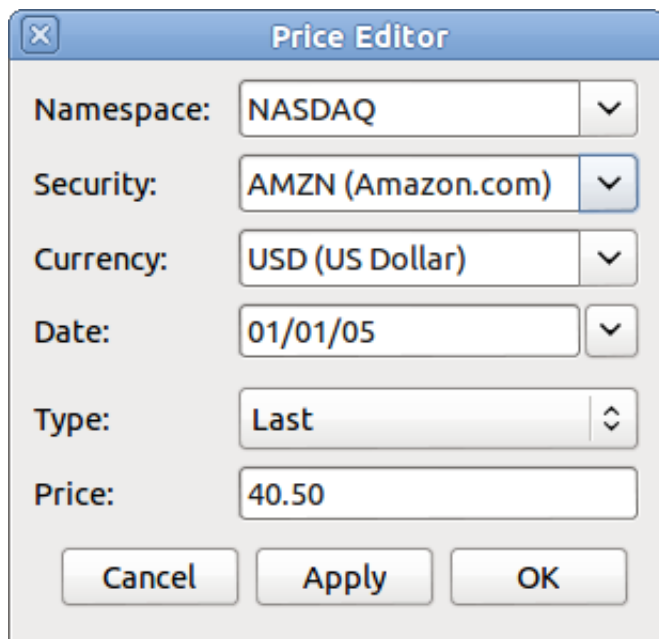
The value of a commodity, such as a stock, must be explicitly set. The stock accounts track the quantity of stocks you own, but the value of the stock is stored in the *Price Editor*. The values set in the Price Editor can be updated manually or automatically.

Initial Price Editor Setup

To use the Price Editor to track a stock value, you must initially insert the stock. To do so, open the Price Editor (Tools → Price Editor) and click on Add button. The first time a Commodity/Stock is entered this window will be blank except for the control buttons on the bottom. Select the appropriate Commodity you want to insert into the Price Editor. At this point, you can input the price of the commodity manually. There are 6 fields in the New Commodity window:

Namespace	The exchange market where the security/commodity is traded (in this example NASDAQ)
Security	The name of the commodity, must be chosen from the Select... list
Currency	The currency in which the Price is expressed.
Date	Date that the price is valid
Type	One of: Bid (the market buying price), Ask (the market selling price), Last (the last transaction price), Net Asset Value (mutual fund price per share), or Unknown. Stocks and currencies will usually give their quotes as one of bid, ask or last. Mutual funds are often given as net asset value. For other commodities, simply choose Unknown. This option is for informational purposes only, it is not used by GnuCash.
Price	The price of one unit of this commodity.

As an example of adding the AMZN commodity to the price editor, with an initial value of \$40.50 per share.



Adding the AMZN commodity to the price editor, with an initial value of \$40.50 per share.

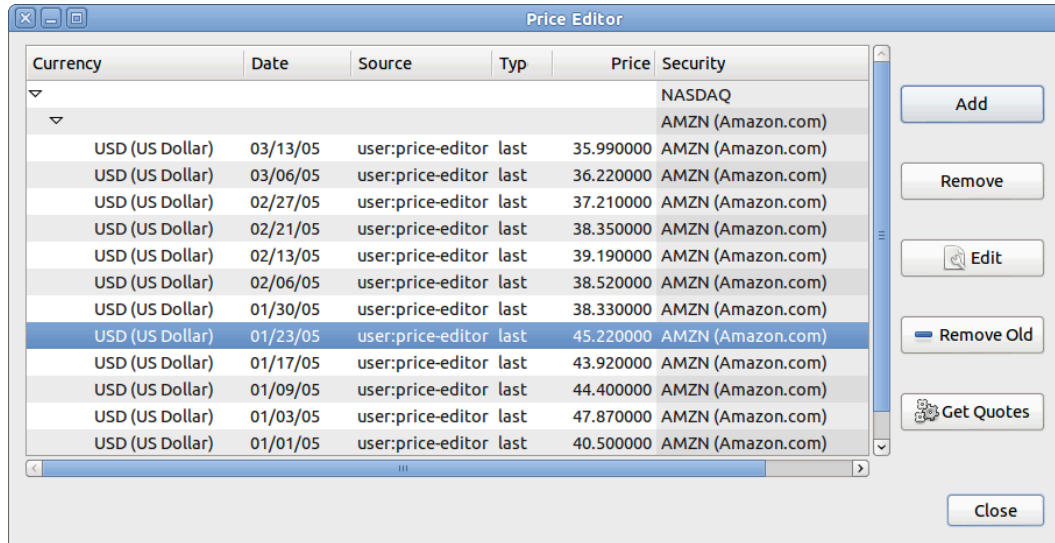
Click OK when finished. Once you have performed this initial placement of the commodity into the Price Editor, you will not have to do it again, even if you use the same commodity in another account.

Примечание

If you have online retrieval of quotes activated (see «Configuring for Automatic Retrieval of Quotes»), you can initialize a commodity without manually making an entry. When you initially add the security in the Security Editor, check Get Online Quotes and save the security. Then, in the Price Editor, click Get Quotes, and the new security will be inserted into the price list with the retrieved price.

Setting Stock Price Manually

If the value of the commodity (stock) changes, you can adjust the value by entering the Price Editor, selecting the commodity, clicking on Edit and entering the new price.



The main price editor window, showing the list of all known commodities.

Configuring for Automatic Retrieval of Quotes

If you have more than a couple of commodities, you will tire of having to update their prices constantly. GnuCash has the ability to automatically download the most recent price for your commodities using the Internet. This is accomplished through the Perl module `Finance::Quote`, which must be installed in order to activate this feature.

To determine if the Perl module `Finance::Quote` is already installed on your system, type **perldoc Finance::Quote** in a terminal window and check to see if there is any documentation available. If you see the documentation, then the module is installed, if you do not see the documentation, then it has not been installed.

Installing Finance::Quote

Windows:

- Close GnuCash.
- Run **Install Online Price Retrieval** which can be found in the GnuCash «Start» menu entry.

macOS: You need to have XCode installed. XCode is an optional item from your macOS distribution DVD. Run the **Update Finance Quote** app in the GnuCash dmg. You can run it from the dmg or copy it to the same folder to which you copied GnuCash. It will open a Terminal window and run a script for you which will ask lots of questions. Accept the default for each unless you know what you're doing.

Linux:

- Close any running GnuCash instances.
- Locate the folder where GnuCash is installed by searching for `gnc-fq-update`
- Change to that directory, open a root shell
- Run the command **gnc-fq-update**

This will launch a Perl CPAN update session that will go out onto the internet and install the Finance::Quote module on your system. The gnc-fq-update program is interactive, however, with most systems you should be able to answer «no» to the first question: «Are you ready for manual configuration? [yes]» and the update will continue automatically from that point.

After installation is complete, you should run the «gnc-fq-dump» test program, in the same directory, distributed with GnuCash to test if Finance::Quote is installed and working properly.

Примечание

If you feel uncomfortable about performing any of these steps, please either email the GnuCash-user mailing list (<gncash-user@gncash.org>) for help or come to the GnuCash IRC channel on irc.gnome.org. You can also leave out this step and manually update your stock prices.

Configuring Securities for Online Quotes

With Finance::Quote installed and functioning correctly, you must configure your GnuCash securities to use this feature to obtain updated price information automatically. Whether creating new securities or modifying securities that have already been setup, use the Tools → Security Editor , to edit the security and check the Get Online Quotes box. You will now be able to modify the radio buttons for Type of quote source, the pull-down menus to specify the specific source(s) and The timezone for these quotes. When finished editing, Close the Security Editor to return to the Price Editor and click on the Get Quotes button to update your stock prices on the Internet.

The command **gncash --add-price-quotes \$HOME/gncash-filename** can be used to fetch the current prices of your stocks. The file specified `$HOME/gncash-filename` will depend on the name and location of your data file. This can be determined by the name displayed in the top frame of the GnuCash window, before the «-». The file name can also be found under File in the recently opened file list; the first item, numbered 1, is the name of the currently open file.

This can be automated by creating a crontab entry. For example, to update your file every Friday evening (16:00) after the relevant exchange markets close (modify the time accordingly for your time zone), you could add the following to your personal crontab:

```
0 16 * * 5 gncash --add-price-quotes $HOME/gncash-filename > /dev/null 2>&1
```

Remember that Mutual Fund «prices» are really «Net Asset Value» and require several hours after the exchange closes before being available. If NAVs are downloaded before the current days NAVs are determined, yesterday's NAVs are retrieved.

Displaying Share Value

The main account window, by default, only shows the quantity of each commodity that you own, under the column heading Total. In the case of stocks, this commodity is the number of shares. Often, however, you will want to see the value of your stocks expressed in terms of some monetary unit. This is easily accomplished by entering the main window, selecting the Accounts tab, by clicking on the *Titlebar* Options button (the small down pointing arrow on the right side of the main account window titles bar), and selecting the option to display the account total field «Total (USD)». You will see a new column in the main window entitled Total (USD) that will express the value of all commodities in the report currency.

Account Name	Description	Total	Total (USD)
Bond	Bond	\$0.00	\$0.00
Market Index	Market Index	\$0.00	\$0.00
Mutual Fund	Mutual Fund	\$0.00	\$0.00
Stock	Stock	\$12,543.09	\$12,543.09
AMZN	Amazon.com	100 AMZN	\$3,599.00
IBM	IBM stocks	51.7598 IBM	\$8,944.09
Equity		\$12,000.00	\$12,000.00
Opening balances		\$12,000.00	\$12,000.00
Expenses	Expenses	\$112.00	\$112.00
Bank ABC		\$12.00	\$12.00
Charges	Bank ABC service charges	\$12.00	\$12.00
Commissions	Commissions	\$100.00	\$100.00
Income	Income	\$75.24	\$75.24
Dividend Income	Dividend Income	\$0.00	\$0.00
Interest Income	Interest Income	\$75.24	\$75.24
Bond Interest	Bond Interest	\$0.00	\$0.00
\$, Grand Total:		Net Assets: \$17,506.33	Profits: \$0.00

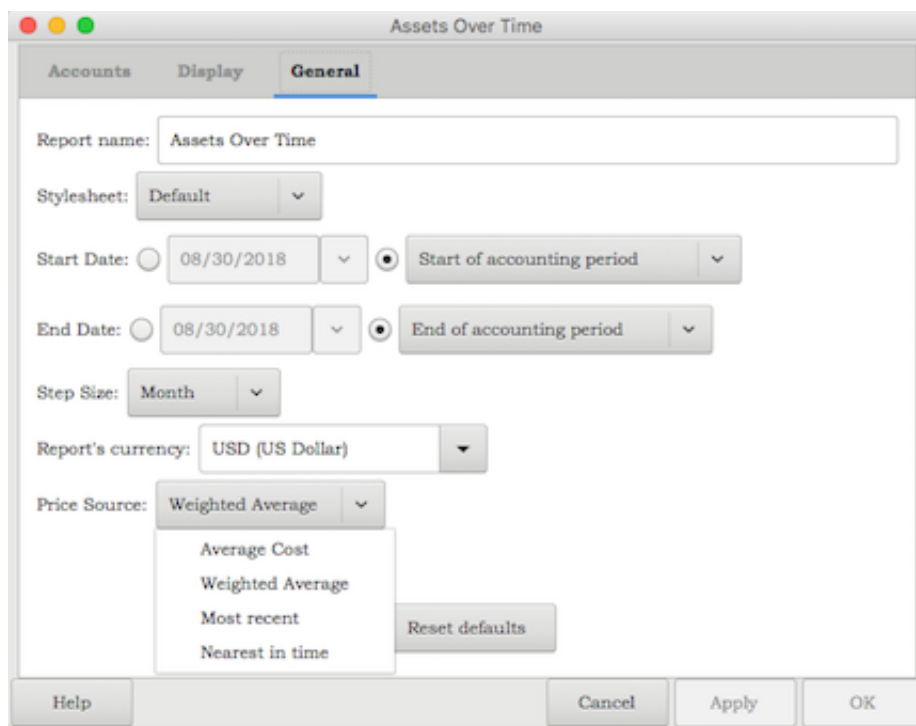
Viewing the value of a stock commodity in the main window using the Total in Report Currency option.

The «Price Source» in Reports

Most GnuCash reports have options to set/modify a number of parameters for the report. The Options dialog box is displayed by selecting the report tab then clicking on either the Options icon in the *Menubar* or selecting Edit → Report Options . Price Source determines how accounts denominated in commodities different from the report currency are converted to the report currency. Depending on the report the selector may appear in either the General, the Commodities, or the Display tab of the Report Options dialog box.

Примечание

In the example below, the report is a customization of the **Average Balance** report in the Assets & Liabilities reports submenu.



Determining the value of a stock commodity or a currency other than the report currency in a report by setting the Price Source option.

- **Weighted Average:** Calculates the price by summing the absolute value of the amount and the absolute value of every split in every account denominated in the commodity, excluding those splits with a zero amount, and dividing the sum of values by the sum of amounts to obtain a price. For example, if you had a buy transaction for 200 shares of XYZ for a total of 2000 and a sell of 100 for 1300 the weighted average would be 3300/300 or 11/share.

Примечание

Gain/Loss splits have an amount of 0 and are *not* included in this calculation.

- **Average Cost:** Calculates the price by summing the amounts and values of every split in every account denominated in the commodity, including the zero amount splits. In the example above, with an additional split (either part of the sale transaction or in a separate transaction) booking the gain at 0 shares and a 300 gain, the average cost is 1000/100 (2000 original cost - 1300 proceeds from the sale + 300 gain)/(200 - 100) shares or 10/share.

Примечание

Gain/Loss splits *are* included in this calculation.

Примечание

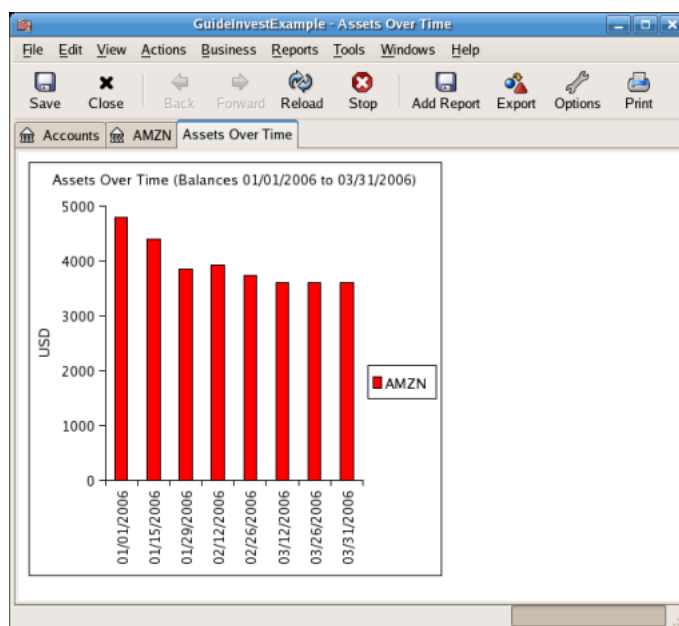
This is the *only* Price Source that will balance the Trial Balance Report and in order for it to balance you *must* correctly book your gains and losses.

- **Most Recent:** Uses the latest price from the price database.

- Nearest in time: Uses the price nearest in time to the report date—the datum date for time series reports like Assets Over Time—from the price database.

Примечание

The nearest date isn't necessarily before the date in question.



Tracking what value your stocks would've had on the stock exchanges.

Selling Shares

Entering an investment sale transaction is done in a similar way to entering a buy transaction (see «Buying New Shares») except the amount entered in the *Shares* column is negative and the proceeds of the transaction is entered in the *Sell* column. The net proceeds from the sale should be transferred from the shares account to your bank or brokerage account.

For information on handling *commissions* and the use of *Net Pricing* or *Gross Pricing*, please see «Handling Commissions and Fees».

If you will be recording a capital gain or loss on the sale, please see Глава 11, *Доходы от прироста капитала* and Глава 16, *Depreciation* for more information on this topic.

To use the GnuCash *Automatic Calculation of Capital Gain or Loss Using Lots* feature, please see «Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots» otherwise continue to the next section.

Selling Shares with Manual Calculation of Capital Gain or Loss

Примечание

In order for GnuCash to commit the zero-share, zero-price split for account *Assets:Stock:SYMBOL* to the transaction in the following schemes, you **must** **Tab** out of that split. If you use the **Enter** key, GnuCash will convert the split into shares of the commodity.

In the schemes of transaction splits presented below, the following symbols are used:

- NUM_SHARES: number of shares you are selling
- COMMISSION: brokerage commissions or fees
- GROSS_SELL_PRICE: unit price for which you sold the shares, not reduced by COMMISSION
- NET_SELL_PRICE: unit price for which you sold the shares, reduced by COMMISSION
- GROSS_BUY_PRICE: unit price for which you bought the shares, not increased by COMMISSION
- NET_BUY_PRICE: unit price for which you bought the shares, increased by COMMISSION
- GROSS_BUY: total price for which you bought shares, excluding COMMISSION, equal to $\text{NUM_SHARES} * \text{GROSS_BUY_PRICE}$
- NET_BUY: amount of money for which you bought shares including COMMISSION, equal to $\text{GROSS_BUY} + \text{COMMISSION}$.
- GROSS_SALE: total price for which you sold shares, equal to $\text{NUM_SHARES} * \text{GROSS_SELL_PRICE}$
- NET_SALE: amount of money received from the sale, equal to $\text{GROSS_SALE} - \text{COMMISSION}$
- GROSS_PROFIT: amount of money you made on the sale, not reduced by COMMISSION
- NET_PROFIT: amount of money you made on the sale, reduced by COMMISSION

There are 2 ways of manually recording the capital gain or loss. The capital gain/loss can be combined with the sale in one transaction or it can be entered in a separate transaction.

Combine the Sale and Capital Gain/Loss in One Transaction

This has the advantage that all parts of the sale event are kept together. This is *not* compatible with using *scrubbing* (see «Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots»). If you may in future use scrubbing on a specific security, save some work later by entering the capital gain/loss splits in a separate transaction now.

When the capital gain/loss splits are combined with the sale splits in one transaction, there are 2 splits for the security account in the same transaction, so the transaction must be entered with the security register in Auto-Split Ledger or Transaction Journal view. One of the splits for the security account is for the sale and the other is for the capital gain or loss. The security account split for the capital gain or loss must be entered with 0 number of shares and 0 price per share to stop the automatic recalculation of these fields.

Account for the profit or loss as coming from an *Income:Capital Gains* or *Expenses:Capital Loss* account.

Combined, Gross Pricing

Таблица 9.1. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Gross Pricing

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Assets:Stock:SYMBOL	0	0	GROSS_PROFIT	(Loss)
Expenses:Commission			COMMISSION	
Assets:Stock:SYMBOL	-NUM_SHARES	GROSS_SELL_PRICE		GROSS_SALE
Income:Capital Gains			(Loss)	GROSS_PROFIT

Combined, Net Pricing

Таблица 9.2. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Combined, Net Pricing

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Assets:Stock:SYMBOL	0	0	NET_PROFIT	(Loss)
Assets:Stock:SYMBOL	-NUM_SHARES	NET_SELL_PRICE		NET_SALE
Income:Capital Gain			(Loss)	NET_PROFIT

Separate the Capital Gain/Loss Transaction from the Sale Transaction.

This is *required* if using *scrubbing* to automatically calculate and create capital gain/loss transactions (otherwise scrubbing will not detect them and will create an incorrectly valued gain/loss transaction).

Separated, Gross Pricing

Таблица 9.3. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Expenses:Commission			COMMISSION	
Assets:Stock:SYMBOL	-NUM_SHARES	GROSS_SELL_PRICE		GROSS_SALE

Таблица 9.4. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
----------------	-------------------------	--------------------	------------------	-------------------

Assets:Stock:SYMBOL	0	0	GROSS_PROFIT(Loss)
Income:Capital Gain			(Loss) GROSS_PROFIT

Separated, Net Pricing

Таблица 9.5. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Sale Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Bank ABC			NET_SALE	
Assets:Stock:SYMBOL	-NUM_SHARES	NET_SELL_PRICE		NET_SALE

Таблица 9.6. Selling Shares Split Scheme, Sale and Capital Gain/Loss Are Separate Transactions, Capital Gain/Loss Transaction

<i>Account</i>	<i>Number of Shares</i>	<i>Share Price</i>	<i>Total Buy</i>	<i>Total Sell</i>
Assets:Stock:SYMBOL	0	0	NET_PROFIT	(Loss)
Income:Capital Gain			(Loss)	NET_PROFIT

Examples of Selling Shares with Manually Entry of Capital Gain or Loss

In these examples we will use the AMZN account created in the previous section.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Combined, Gross Pricing

In this example you bought 100 shares of AMZN for \$20 per share, then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, GROSS_BUY_PRICE is \$20 (the original buying price), NUM_SHARES is 100, GROSS_BUY is \$2000 (the original buying cost), GROSS_SALE is \$3600, and finally GROSS_PROFIT is \$1600 (GROSS_SALE – GROSS_BUY).

Таблица 9.7. Selling Shares Split Scheme, Sale & Gain Combined, Gross Pricing

<i>Account</i>	<i>Shares</i>	<i>Price</i>	<i>Buy</i>	<i>Sell</i>
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:Stock:AMZN	0	0	1600.00	
Expenses:Commission			75.00	
Assets:Brokerage Account:Stock:AMZN	-100	36.00		3600.00
Income:Capital Gain (Long Term):AMZN				1600.00

Date	Account	Shares	Price	Buy	Sell
01/01/2005	Equity:Opening Balances	n	100	20	2,000.00
03/21/2006	-- Split Transaction --	n			1,600.00
03/21/2006	Assets:Bank ABC	n			3,525.00
	Expenses:Commission:AMZN	n			75.00
	Assets:Brokerage Account:Stock:AMZN	n			1,600.00
	Assets:Brokerage Account:Stock:AMZN	n	-100	36	3,600.00
	Income:Capital Gain (Long Term):AMZN	n			1,600.00
01/23/2017		n		1	

Shares: 0 AMZN Current Value: \$0.00

An example of selling shares for gain. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Примечание

In the above screenshot, it appears there are 2 transactions for Mar 21st 2006. This is because the register is in Auto-Split Ledger view and there are 2 splits for the register account in the 1 transaction. Transaction Journal view may be clearer. Refer to «Simple vs. Split Transactions». As there are 2 splits for the register account in the sale transaction, this transaction must be entered in Auto-Split Ledger or Transaction Journal view. It cannot be entered in Basic Ledger view.

Account Name	Description	Total	Total (USD)
Stock	Stock	\$8,944.09	\$8,944.09
AMZN	Amazon.com	0 AMZN	\$0.00
IBM	IBM stocks	51.7598 IBM	\$8,944.09
Equity		\$12,000.00	\$12,000.00
Opening Balances		\$12,000.00	\$12,000.00
Expenses	Expenses	\$187.00	\$187.00
Bank ABC		\$12.00	\$12.00
Charges	Bank ABC service charges	\$12.00	\$12.00
Commissions	Commissions	\$175.00	\$175.00
Income	Income	\$1,675.24	\$1,675.24
Cap Gain (Long)		\$1,600.00	\$1,600.00
Dividend Income	Dividend Income	\$0.00	\$0.00
Interest Income	Interest Income	\$75.24	\$75.24
Bond Interest	Bond Interest	\$0.00	\$0.00
CD	6 month CD interest	\$50.21	\$50.21
Savings	Interest on savings - Bank ABC	\$25.03	\$25.03
\$, Grand Total:		Net Assets: \$13,907.33	Profits: \$0.00

An image of the account tree after the example of selling shares for gain.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Combined, Net Pricing

In this example you bought 100 shares of AMZN for \$20 per share (including commissions), then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, NUM_SHARES is 100, NET_BUY_PRICE is \$20 (the original buying price), NET_BUY is \$2000 (the original buying cost), NET_SELL_PRICE is \$35.25 $((\$3600 - \$75) / 100)$, GROSS_SALE is \$3600, NET_SALE is \$3525, and finally NET_PROFIT is \$1525 (NET_SALE - NET_BUY).

Таблица 9.8. Selling Shares Split Scheme, Sale & Gain Combined, Net Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:Stock:AMZN	0	0	1525.00	
Assets:Brokerage Account:Stock:AMZN	-100	35.25		3525.00
Income:Capital Gain (Long Term):AMZN				1525.00

The screenshot shows the GnuCash interface with a transaction journal for AMZN. The journal entries are as follows:

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	
01/01/2007	Buy	Buy 100 @ 20 ea = \$2000 (including commission)			100			100	100
	Buy		Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000.00		
			Assets:Bank ABC	n				2,000.00	
03/21/2008	Sell	Sell stock for profit, Net Pricing			-100			100	0
		Net Sale = Gross Sale 3600 - Commission 75 = 3525	Assets:Bank ABC	n			3,525.00		
		Net Profit=Net Sale 3525 - Net Buy 2000 =1525	Assets:Brokerage Account:Stock:AMZN	n			1,525.00		
	Sell	Net Sale = Sell 100 @ 36 Ea = 3600 - Commission 75 = 3525	Assets:Brokerage Account:Stock:AMZN	n	-100	35.25		3,525.00	
		Capital Gain (Long) = Net Profit	Income:Capital Gain (Long Term):AMZN	n				1,525.00	
01/23/2017	Transaction		Account	R	Shares	Price	Buy	Sell	
					0.00				
							1		

Shares: 0 AMZN Current Value: \$0.00

An example of selling shares for gain using net pricing in transaction journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Gross Pricing

You bought 100 shares of AMZN for \$20 per share and commissions \$20, then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, GROSS_BUY_PRICE is \$20 (the original buying price), NUM_SHARES is 100, GROSS_BUY is \$2000 (the original buying cost), GROSS_SALE is \$3600, and finally GROSS_PROFIT is \$1600 (GROSS_SALE - GROSS_BUY).

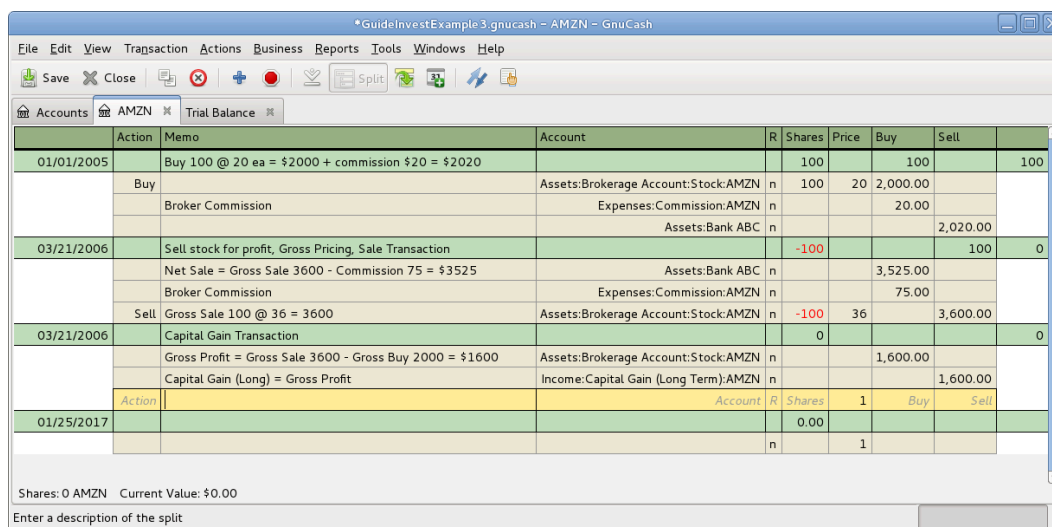
Таблица 9.9. Selling Shares Split Scheme, Sale Transaction, Gross Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	

Expenses:Commission			75.00	
Assets:Brokerage	-100	36.00		3600.00
Account:Stock:AMZN				

Таблица 9.10. Selling Shares Split Scheme, Gain Transaction, Gross Pricing

Account	Shares	Price	Buy	Sell
Assets:Brokerage Account:Stock:AMZN	0	0	1600.00	
Income:Capital Gain (Long Term):AMZN				1600.00



An example of selling shares for gain where the sale and gain are recorded in separate transactions, in Transaction Journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Net Pricing

You bought 100 shares of AMZN for \$20 per share (including commissions), then later sell them all for \$36 per share with a commission of \$75. In the split transaction scheme above, NUM_SHARES is 100, NET_BUY_PRICE is \$20 (the original buying price), NET_BUY is \$2000 (the original buying cost), NET_SELL_PRICE is \$35.25 $((\$3600 - \$75) / 100)$, GROSS_SALE is \$3600, NET_SALE is \$3525, and finally NET_PROFIT is \$1525 (NET_SALE - NET_BUY).

Таблица 9.11. Selling Shares Split Scheme, Sale Transaction, Net Pricing

Account	Shares	Price	Buy	Sell
Assets:Bank ABC			3525.00	
Assets:Brokerage Account:Stock:AMZN	-100	35.25		3525.00

Таблица 9.12. Selling Shares Split Scheme, Gain Transaction, Net Pricing

Account	Shares	Price	Buy	Sell

Assets:Brokerage Account:Stock:AMZN	0	0	1525.00	
Income:Capital Gain (Long Term):AMZN				1525.00

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell	
01/01/2005	Buy	Buy 100 @ 20 ea = \$2000 + commission \$20 = \$2020			100		100		100
	Buy	Broker Commission	Assets:Brokerage Account:Stock:AMZN	n	100	20	2,000.00		
			Expenses:Commission:AMZN	n			20.00		
			Assets:Bank ABC	n				2,020.00	
03/21/2006	Sell	Sell stock for profit, Gross Pricing, Sale Transaction			-100			100	0
		Net Sale = Gross Sale 3600 - Commission 75 = \$3525	Assets:Bank ABC	n			3,525.00		
		Broker Commission	Expenses:Commission:AMZN	n			75.00		
03/21/2006	Sell	Gross Sale 100 @ 36 = 3600	Assets:Brokerage Account:Stock:AMZN	n	-100	36		3,600.00	
		Capital Gain Transaction			0				0
		Gross Profit = Gross Sale 3600 - Gross Buy 2000 = \$1600	Assets:Brokerage Account:Stock:AMZN	n			1,600.00		
		Capital Gain (Long) = Gross Profit	Income:Capital Gain (Long Term):AMZN	n				1,600.00	
	Action						1	Buy	Sell
01/25/2017					0.00				
					n		1		

Shares: 0 AMZN Current Value: \$0.00
Enter a description of the split

An example of selling shares for gain where the sale and gain are recorded in separate transactions, in Transaction Journal view. You bought 100 shares of AMZN for \$20 per share, and sold for \$36.

Selling Shares with Automatic Calculation of Capital Gain or Loss Using Lots

Introduction

Wikipedia [<https://ru.wikipedia.org/wiki/Лот>] includes the following definition of a lot

«a set of goods for sale together in an auction; or a quantity of a financial instrument».

GnuCash has a built-in lot management facility that can be used to keep track of capital gains or losses resulting from security sales. Buy and sell transactions are put into lots for the purpose of calculating the cost of the sale. More specifically, a lot is used to link particular buy and sell transaction splits. Lots can be automatically or manually created and linked. Capital gain or loss can be automatically calculated and transaction(s) created for the difference between the sale value and the cost of the securities sold. GnuCash refers to this process as *scrubbing*.

The term *scrub* is used because security accounts need to be cleaned after sales to ensure the difference between the cost paid for securities, and value received from selling them, is accounted for as capital gain or loss. If the capital gain/loss is not correct, the Trial Balance (Reports → Income & Expense → Trial Balance) bottom line total debits will not balance to total credits.

Примечание

If you make an error, you can delete the lot(s) and capital gain/loss transaction(s) and retry. Ensure you delete the lot, or at least unlink sale transactions from the lot, before you delete a capital gain/loss transaction. Otherwise, the Lots in Account screen will recreate the capital gain/loss transaction when you select the lot.

If you are not familiar with FIFO, LIFO or Average costing, please see Wikipedia FIFO and LIFO accounting [https://ru.wikipedia.org/wiki/FIFO_и_LIFO] and Average cost method [https://en.wikipedia.org/wiki/Average_cost_method].

If you are not familiar with the difference between GnuCash transactions and splits, please see «Simple vs. Split Transactions».

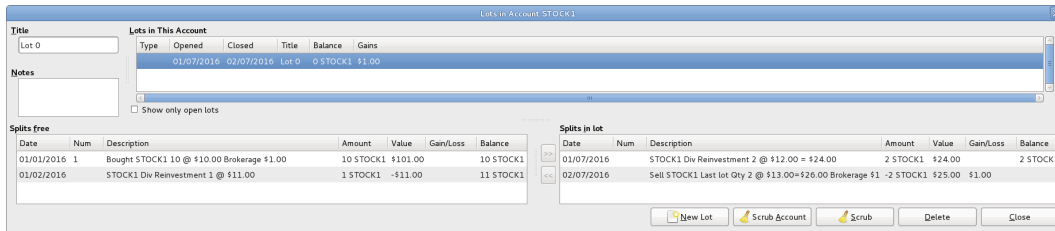
The GnuCash lot management facility can be a useful feature, reducing manual calculation, especially if dividends have been reinvested over years and there are many different costs involved. It can automatically link buy transactions to sell transactions using FIFO cost method and one can manually link specific buy transactions to sell transactions in order to use LIFO. Advanced Portfolio Report basis costs and gains/losses will agree with the costs and gain/loss transactions created by scrubbing if either the FIFO or LIFO cost methods are used.

Lots in Account Window

The Lots in Account SSSS window, where SSSS is a security account, is used to manually or automatically link security transaction splits to lots and create capital gain/loss transactions to account for the difference between the costs of buying a security and the value received by selling it.

To open the Lots in Account window, open the security account register, then select Actions → View Lots .

Рисунок 9.1. Selling Shares - Capital Gains - Lots in Account window



An image of the *Lots in Account* window.

Refer to the Help Manual, Chapter 8 Tools & Assistants, Lots in Account [<https://www.gnucash.org/docs/v4/C/gnucash-help/tool-lots.html>] for details of the Lots in Account screen elements.

Procedure Summary

Using the lot management facility for the automatic calculation of capital gain or loss typically follows these steps:

1. Record the sale transaction using Net Pricing (but stop short of entering the Capital Gain transaction as it will be created by scrubbing). See «Example: Sale of Shares with Profit, Manual Profit/Loss Calculation, Sale & Profit Separated, Net Pricing».
2. «Manual Lot Creation and Linking» (Optional depending on cost method)
3. «Automatic Creation of Capital Gain Or Loss Transactions»
4. «Change Orphaned Gains-CCC to Gain/Loss Account»
5. «Run a Trial Balance» report to ensure total debits balance to total credits

Manual Lot Creation and Linking

Before using this feature, ensure you have read «Considerations».

This functionality allows the manual linking of specific buy and sell transactions. It may be used in the case where a user wishes to use a different cost method than the automatic linking method (FIFO). Effectively, if one wishes the cost basis and capital gains in the Advanced Portfolio Report to be consistent with the capital gains transactions created by scrubbing, manual lot creation only needs to be used when using LIFO or «sale of designated lots» (the same thing for securities as far as US personal tax law is concerned). This is because the scrub function can automatically do FIFO linking so there is no need to do it manually and scrubbing cannot be used for average costing.

See «Example 1: Manual Lot Creation and Linking».

Automatic Creation of Capital Gain Or Loss Transactions

Примечание

Do *NOT* do this unless you are using FIFO or LIFO to cost sales. See «Considerations»

GnuCash can automatically calculate and create security sale capital gain/loss transactions. Lots are used to link buy transaction splits with sell transaction splits so the correct cost of the securities sold can be determined. GnuCash will use any existing lots, and create new lots for any buy transaction splits not already linked to a lot. Buy and sell transaction splits are linked to lots using FIFO method.

See:

«Example 2: Automatic Creation of Capital Gain Or Loss Transactions»

«Example 3: Automatic Creation of Capital Gain Or Loss Transactions, 2 Sales at Once»

«Example 4: Automatic Creation of Capital Gain Or Loss Transactions - After a Simple Stock Split»

Change Orphaned Gains-CCC to Gain/Loss Account

The capital gain/loss transaction(s) created by scrubbing uses an automatically created generic *Orphaned Gains-CCC* account (where CCC is the security currency) because GnuCash doesn't know which capital gain or loss account should be used. After scrubbing, the user should edit the *Orphaned Gains-CCC* transaction split to re-assign the income account to a more meaningful income (or expense) gain or loss account (e.g. *Income:Long Term Capital Gain:IBM*).

See «Example 5: Changing the Orphaned Gains-CCC to Gain/Loss Account».

Run a Trial Balance

Running a Trial Balance report (Reports → Income & Expense → Trial Balance) after creating capital gain/loss transactions, is a basic check that capital gains/losses are correctly accounting for the difference between the cost paid for securities, and value received from selling them. At the end of the report, total debits should equal total credits.

Подсказка

A Trial Balance may not balance due to some other problem. To determine if the cause of an imbalance is from incorrectly accounting for capital gain/loss:

If necessary, temporarily change the date of the sell transaction and the capital gain/loss transaction, so they are the only transactions for a particular date, then run the Trial Balance as at the day before.

If the Trial Balance is still out by the same amount, it is not the capital gain/loss that is causing the problem.

If you find a prior *out of balance* Trial Balance, keep running the Trial Balance report with different dates until you find the date it starts being out of balance. Temporarily change the transaction dates for each transaction on the problem date to the following day, then change the dates back to the correct date 1 at a time, running the Trial Balance each time, until you identify the problem transaction. When you change the date of a security sell transaction, you also need to change the date of the corresponding capital gain transaction as it is only the sum of these that will balance in the Trial Balance.

Considerations

There are some points that should be considered before using the lot management facility.

1. GnuCash implements only the First In/ First Out (FIFO) cost method when automatically linking buy transactions to sell transactions. I.e. The oldest securities are always sold first. The Last In First Out (LIFO) cost method may be used by manually linking the most recent buy security splits to the sell split before scrubbing.
2. The Advanced Portfolio Report does not use lot information when calculating costs, just the security transaction splits. It calculates the cost basis and gains or losses using the selected *Basis calculation method* report option (Average, FIFO or LIFO). If one wishes the Advanced Portfolio Report costs and gains/ losses to be consistent with the capital gain/loss transactions created by scrubbing, the same cost model must be used in both places.
3. Scrubbing does not recognize commissions or fees so makes no allowance for them in the calculation of gain or loss. Therefore you must use *Net Pricing* rather than *Gross Pricing* if you wish to use scrubbing. See «Handling Commissions and Fees».
4. Scrubbing does not recognize capital gain/loss transaction splits if they have been manually entered as part of the sale transaction. Therefore ensure previous sales are recorded as 2 transactions:

Таблица 9.13. Transaction 1 dealing with value received and the reduction of the number of shares

<i>Account</i>	<i>Tot Shares</i>	<i>(Unit) Price</i>	<i>Buy (Debit)</i>	<i>Sell (Credit)</i>
Brokerage or Bank			Debit	
Security	-NumSold	SaleUnitPrice		SaleValue

Таблица 9.14. Transaction 2 capital gain/loss (loss in this example)

<i>Account</i>	<i>Tot Shares</i>	<i>(Unit) Price</i>	<i>Buy (Debit)</i>	<i>Sell (Credit)</i>
Capital Loss			Debit	
Security	0	0		Credit

5. The automatic capital gains calculations can handle straightforward buy, sell, and return of capital transactions but any transaction that affect the number of shares, even simple splits, will cause it to produce wrong answers so those cases must be handled manually.

Example 1: Manual Lot Creation and Linking

Here is an example of selling part of a security holding using the LIFO method. In this example, the most recent buy transaction (dated 01/07/2016, a reinvested dividend), is linked to a lot, along with the sell

transaction, and the GnuCash scrub function is used to calculate capital gain or loss and create the capital gain/loss transaction.

1. Open the security account's register.

Рисунок 9.2. Selling Shares - Capital Gains - Security register before scrubbing a single lot

Date	Num	Description	Tot Shares	Tot Buy	Tot Sell	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10	10		10
		Buy		10	10.1	101.00
		Assets:Investments:Broker1:STOCK1 n				
		Assets:Investments:Broker1 n			101.00	
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1	1		11
		Buy Div qty 10 @ CPS \$2.00 = \$20.00		1	11	11.00
		Assets:Investments:Broker1:STOCK1 n				
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STOCK1 n				
		Income:Dividend:Franked:STOCK1 n			20.00	
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
		Buy Div qty 11 @ CPS \$2.00 = \$22.00		2	12	24.00
		Assets:Investments:Broker1:STOCK1 n				
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00				2.00
		Assets:Investments:DRP Residual:STOCK1 n				
		Income:Dividend:Franked:STOCK1 n				22.00
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2		2	11
		Net Sale			25.00	
		Assets:Investments:Broker1 n				
		Sell Cost qty 2 @ \$12.00 = \$24.00		-2	12.5	25.00
		Assets:Investments:Broker1:STOCK1 n				
23/02/2017	Num		0.00			
				1		

An image of the Security Account register in transaction journal view, before lot scrubbing.

2. Ensure all previous capital gain/loss transactions are separate transactions to the sell transactions which record the reduction in the number of shares and the value received.
3. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.

Рисунок 9.3. Selling Shares - Capital Gains - Lots before scrubbing a single lot

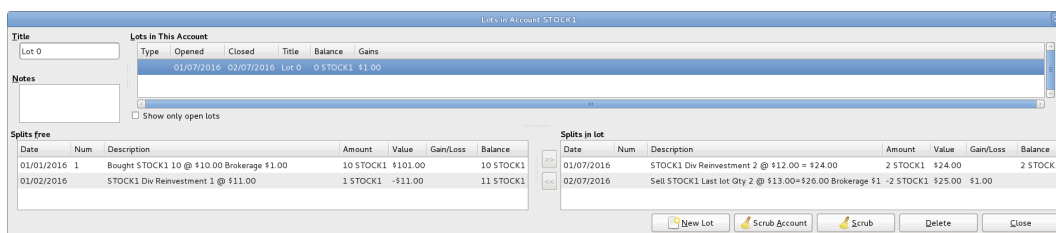
Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10 STOCK1	\$101.00		10 STOCK1
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1 STOCK1	-\$11.00		11 STOCK1
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2 STOCK1	-\$24.00		13 STOCK1
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2 STOCK1	\$25.00		11 STOCK1

An image of the *Lots in Account* window before lot scrubbing.

4. Create a new lot using the New Lot button. Initially this lot is not linked to any buy or sell split.
5. Highlight the new lot in the Lots in This Account panel.
6. Highlight the buy split (dated 01/07/2016) of the security to be sold in the Splits free panel.
7. Click the >> button to link the buy split with the highlighted lot. The split moves from the Splits free panel to the Splits in Lot panel.

8. Repeat the previous 2 steps for any other buy splits that should be included in the lot (in this example, there is only 1 buy split in the sale).
9. Highlight the sell split in the Splits free panel.
10. Click the >> button to link the sell split with the highlighted lot.
11. Check the lot Balance is as expected. I.e. in this example the lot balance should be zero as the number of securities sold in the lot, is matched with the same number of security buys.

Рисунок 9.4. Selling Shares - Capital Gains - Lots before scrubbing a single lot, after manual linking



An image of the *Lots in Account* window before scrubbing a single lot.

12. Click the Scrub button (*NOT* the Scrub Account button).

The Lots in Account window has not changed after using the Scrub button so no example screen image is supplied.

13. Close the Lots in Account SSSS window and return to the security account register.

Рисунок 9.5. Selling Shares - Capital Gains - Register after manual linking and scrubbing a single lot

Date	Num	Description	Tot Shares	Tot Buy	Tot Sell	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10	10		10
		Buy	10	10.1		101.00
		Assets:Investments:Broker1:STOCK1	n			
		Assets:Investments:Broker1	n			101.00
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1	1		11
		Buy Div qty 10 @ CPS \$2.00 = \$20.00	1	11		11.00
		Assets:Investments:Broker1:STOCK1	n			
		Increase in Residual \$20.00 - \$11.00 = \$9.00				9.00
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			20.00
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
		Buy Div qty 11 @ CPS \$2.00 = \$22.00	2	12		24.00
		Assets:Investments:Broker1:STOCK1	n			
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00				2.00
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			22.00
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2		2	11
		Net Sale			25.00	
		Assets:Investments:Broker1	n			
		Sell Cost qty 2 @ \$12.00 = \$24.00	-2	12.5		25.00
		Assets:Investments:Broker1:STOCK1	n			
02/07/2016		Realized Gain/Loss	0			11
		Realized Gain/Loss			1.00	
		Assets:Investments:Broker1:STOCK1	n			
		Realized Gain/Loss			1.00	
		Orphaned Gains-AUD	n			
23/02/2017	Num		0.00	Tot Buy	Tot Sell	Balance
			n	1		

An image of the Register after scrubbing a single lot.

14. Continue to «Change Orphaned Gains-CCC to Gain/Loss Account»

Example 2: Automatic Creation of Capital Gain Or Loss Transactions

Create the capital gains transaction by following these steps:

1. Open the security account's register.
2. Ensure any previous manually entered capital gain/loss transaction splits have been entered in separate transactions to the the sell transactions.
3. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.
4. If using LIFO, use the above procedure «Manual Lot Creation and Linking» to create a lot for each sell transaction, link the lot with the sell transaction and each of the buy transactions that make up the sale.
5. Click the Scrub Account button which:
 - Creates lots for any buy transactions that are not already linked to a lot and links them to sell transactions splits using the FIFO method. As a transaction split can only be linked to 1 lot, if a sell transaction needs to be linked to multiple lots, the sell transaction split is itself split into multiple subsplits. In the case of multiple subsplits, it is possible to have different splits from the same transaction in both the Splits free and Splits in lot panels.
 - Creates a separate transaction per lot for capital gain/loss.
6. Continue to «Change Orphaned Gains-CCC to Gain/Loss Account»

Example 3: Automatic Creation of Capital Gain Or Loss Transactions, 2 Sales at Once

Here is an example of FIFO scrubbing without manual lot creation. In this example, the transactions for 2 sales are scrubbed at once but usually scrubbing would be performed after each sale. One reason for scrubbing 2 sales at once, could be because there were multiple sales on the same day.

Рисунок 9.6. Selling Shares - Capital Gains - Register before Scrub Account

Date	Num	Description	Tot Sh	Tot Buy	Tot Sell	Balance
01/01/2016		Bought 10 @ \$10.00 Brokerage \$1.00	10	10		10
	Buy		10	10.1	101.00	
		Assets:Investments:Broker1:STK2 n				
		Assets:Investments:Broker1 n			101.00	
01/02/2016		Div Reinvestment 1 @ \$11.00	1	1		11
	Buy	Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Assets:Investments:Broker1:STK2 n				
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franded:STK2 n			20.00	
01/07/2016		Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
	Buy	Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Assets:Investments:Broker1:STK2 n				
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00				2.00
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franded:STK2 n			22.00	
02/07/2016		Sell FIFO Qty 11 @ \$13.00=\$143.00	-11		11	2
		Net Sale: \$143.00 - Commission \$1.00 = \$142.00				
		Assets:Investments:Broker1 n			142.00	
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-11	12.9091	142.00	
		Assets:Investments:Broker1:STK2 n				
01/08/2016		Div Reinvestment 1 @ \$14.00 = \$14.00	1	1		3
	Buy	Div qty 2 @ CPS \$4.00 = \$8.00	1	14	14.00	
		Assets:Investments:Broker1:STK2 n				
		Decrease in Residual = (\$7.00 - \$1.00) = \$6.00				6.00
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franded:STK2 n			8.00	
02/08/2016		Sell FIFO Qty 3 @ \$15.00=\$45.00	-3		3	0
		Net Sale: \$45.00 - Commission \$1.00 = \$44.00				
		Assets:Investments:Broker1 n			44.00	
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-3	14.6667	44.00	
		Assets:Investments:Broker1:STK2 n				
28/02/2017	Num		0.00			
					Tot Buy	Tot Sell
				1		Balance

Shares: 0 STK2 Current Value: \$0.00
Enter a description of the transaction

An image of the Security Account register in transaction journal view, before Scrub Account is used.

1. Select Actions → View Lots to open the Lots in Account SSSS window where SSSS is the security account.

Рисунок 9.7. Selling Shares - Capital Gains - Lots before Scrub Account

Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2016		Bought 10 @ \$10.00 Brokerage \$1.00	10 STK2	\$101.00		10 STK2
01/02/2016		Div Reinvestment 1 @ \$11.00	1 STK2	-\$11.00		11 STK2
01/07/2016		Div Reinvestment 2 @ \$12.00 = \$24.00	2 STK2	-\$24.00		13 STK2
02/07/2016		Sell FIFO Qty 11 @ \$13.00=\$143.00	-11 STK2	\$142.00		2 STK2
01/08/2016		Div Reinvestment 1 @ \$14.00 = \$14.00	1 STK2	-\$14.00		3 STK2
02/08/2016		Sell FIFO Qty 3 @ \$15.00=\$45.00	-3 STK2	\$44.00		

Buttons: New Lot, Scrub Account, Scrub, Delete, Close

An image of the *Lots in Account* window before Scrub Account is used.

2. Click the Scrub Account button.

Рисунок 9.8. Selling Shares - Capital Gains - Lots after Scrub Account

The screenshot shows the 'Lots in Account' window for 'STK2'. The main table lists four lots with their respective dates, types, and gains. The 'Splits in lot' table shows two transactions: a purchase on 01/01/2016 and a sale on 02/07/2016. The 'Scrub Account' button is highlighted in the interface.

Type	Opened	Closed	Title	Balance	Gains
	01/01/2016	02/07/2016	Lot 0	0 STK2	\$28.09
	01/02/2016	02/07/2016	Lot 1	0 STK2	\$1.91
	01/07/2016	02/08/2016	Lot 2	0 STK2	\$5.33
	01/08/2016	02/08/2016	Lot 3	0 STK2	\$0.67

Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2016	10	Bought 10 @ \$10.00 Brokerage \$1.00	10 STK2	\$101.00		10 STK2
02/07/2016	11	Sell FIFO Qty 11 @ \$13.00=\$143.00	-10 STK2	\$129.09	\$28.09	

An image of the *Lots in Account* window after using Scrub Account.

Примечание

After using the Scrub Account button only the last lot is shown, so the above image is after the Lots in Account window has been closed and reopened so all the lots show.

3. Close the Lots in Account SSSS window and return to the security account register.

Рисунок 9.9. Selling Shares - Capital Gains - Register after Scrub Account

Date	Num	Description	Tot Sh	Tot Buy	Tot Sell	Balance
01/01/2016		Bought 10 @ \$10.00 Brokerage \$1.00	10	10		10
	Buy		10	10.1	101.00	
		Assets:Investments:Broker1:STK2 n				
		Assets:Investments:Broker1 n			101.00	
01/02/2016		Div Reinvestment 1 @ \$11.00	1	1		11
	Buy	Div qty 10 @ CPS \$2.00 = \$20.00	1	11	11.00	
		Assets:Investments:Broker1:STK2 n				
		Increase in Residual \$20.00 - \$11.00 = \$9.00			9.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			20.00	
01/07/2016		Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
	Buy	Div qty 11 @ CPS \$2.00 = \$22.00	2	12	24.00	
		Assets:Investments:Broker1:STK2 n				
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00			2.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			22.00	
02/07/2016		Sell FIFO Qty 11 @ \$13.00=\$143.00	-11		11	2
		Net Sale: \$143.00 - Commission \$1.00 = \$142.00			142.00	
		Assets:Investments:Broker1 n				
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-10	12.909	129.09	
		Assets:Investments:Broker1:STK2 n				
	Sell	Cost (10@10.10)+(1@11.00) = \$112.00	-1	12.91	12.91	
		Assets:Investments:Broker1:STK2 n				
02/07/2016		Realized Gain/Loss	0			2
		Realized Gain/Loss			1.91	
		Assets:Investments:Broker1:STK2 n				
		Realized Gain/Loss			1.91	
		Orphaned Gains-AUD n				
02/07/2016		Realized Gain/Loss	0			2
		Realized Gain/Loss			28.09	
		Assets:Investments:Broker1:STK2 n				
		Realized Gain/Loss			28.09	
		Orphaned Gains-AUD n				
01/08/2016		Div Reinvestment 1 @ \$14.00 = \$14.00	1	1		3
	Buy	Div qty 2 @ CPS \$4.00 = \$8.00	1	14	14.00	
		Assets:Investments:Broker1:STK2 n				
		Decrease in Residual = (\$7.00 - \$1.00) = \$6.00			6.00	
		Assets:Investments:DRP Residual:STK2 n				
		Income:Dividend:Franked:STK2 n			8.00	
02/08/2016		Sell FIFO Qty 3 @ \$15.00=\$45.00	-3		3	0
		Net Sale: \$45.00 - Commission \$1.00 = \$44.00			44.00	
		Assets:Investments:Broker1 n				
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-2	14.665	29.33	
		Assets:Investments:Broker1:STK2 n				
	Sell	Cost (2@12.00)+(1@14.00) = \$38.00	-1	14.67	14.67	
		Assets:Investments:Broker1:STK2 n				
02/08/2016		Realized Gain/Loss	0			0
		Realized Gain/Loss			5.33	
		Assets:Investments:Broker1:STK2 n				
		Realized Gain/Loss			5.33	
		Orphaned Gains-AUD n				
02/08/2016		Realized Gain/Loss	0			0
		Realized Gain/Loss			0.67	
		Assets:Investments:Broker1:STK2 n				
		Realized Gain/Loss			0.67	
		Orphaned Gains-AUD n				
28/02/2017	Num		0.00	Tot Buy	Tot Sell	Balance
				1		

Shares: 0 STK2 Current Value: \$0.00

An image of the *security register* after using Scrub Account.

Примечание

The security splits in the sell transactions have been split into subplits, one subsplit per lot, and a capital gain transaction has been created for each security subsplit of each sell transaction.

- Continue to «Change Orphaned Gains-CCC to Gain/Loss Account»

Example 4: Automatic Creation of Capital Gain Or Loss Transactions - After a Simple Stock Split

Here is an example of FIFO scrubbing without manual lot creation/linking, where the Stock Split Assistant has been used for a simple stock split. In this example, 100 shares of security XYZ were bought for \$10.00

each, there was a simple 2 for 1 stock split for zero cost (so the holding was then 200 shares @ \$5.00 each), then all 200 shares were sold for \$6.00 each.

Рисунок 9.10. Selling Shares - Capital Gains - Register after Scrub Account

	Action	Memo	Account	R	Shares	Price	Buy	Sell	
01/01/2008	Buy qty 100 @ \$10.00				100		100		100
	Buy		Assets:Investments:Broker1:XYZ	n	100	10	1,000	Sell	
			Assets:Current Assets:Bank1	n				1,000.00	
						1			
01/01/2009	Stock Split				100		100		200
	Split		Assets:Investments:Broker1:XYZ	n	100				
01/07/2009	Sell 200 for \$6.00 ea = \$1200.00				-200			200	0
			Assets:Current Assets:Bank1	n			1,200.00		
	Sell		Assets:Investments:Broker1:XYZ	n	-100	6		600.00	
	Sell		Assets:Investments:Broker1:XYZ	n	-100	6		600.00	
01/07/2009	Realized Gain/Loss				0				0
	Realized Gain/Loss		Assets:Investments:Broker1:XYZ	n			600.00		
	Realized Gain/Loss		Orphaned Gains-AUD	n				600.00	
01/07/2009	Realized Gain/Loss				0				0
	Realized Gain/Loss		Orphaned Gains-AUD	n			400.00		
	Realized Gain/Loss		Assets:Investments:Broker1:XYZ	n				400.00	

Shares: 0 XYZ Current Value: \$0.00

An image of the Security Account register in transaction journal view, after Scrub Account is used.

Рисунок 9.11. Selling Shares - Capital Gains - Lot 0 after Scrub Account

Lots in This Account					
Title	Type	Opened	Closed	Title	Gains
Lot 0		01/01/2008	01/07/2009	Lot 0	0 XYZ -\$400.00
		01/01/2009	01/07/2009	Lot 1	0 XYZ \$600.00

Splits free						
Date	Num	Description	Amount	Value	Gain/Loss	Balance

Splits in lot						
Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2008		Buy qty 100 @ \$10.00	100 XYZ	\$1,000.00		100 XYZ
01/07/2009		Sell 200 for \$6.00 ea = \$1200.00	-100 XYZ	\$600.00	-\$400.00	

An image of the Security Account register in transaction journal view, after Scrub Account is used.

Рисунок 9.12. Selling Shares - Capital Gains - Lot 1 after Scrub Account

The screenshot shows a window titled "Lots in Account XYZ" with a "Title" field containing "Lot 1". The main table displays the following data:

Type	Opened	Closed	Title	Balance	Gains
	01/01/2008	01/07/2009	Lot 0	0 XYZ	-\$400.00
	01/01/2009	01/07/2009	Lot 1	0 XYZ	\$600.00

Below the main table is a "Splits in lot" table:

Date	Num	Description	Amount	Value	Gain/Loss	Balance
01/01/2009		Stock Split	100 XYZ	\$0.00		100 XYZ
01/07/2009		Sell 200 for \$6.00 ea = \$1200.00	-100 XYZ	\$600.00	\$600.00	

At the bottom of the window, there are buttons for "New Lot", "Scrub Account", "Scrub", "Delete", and "Close".

An image of the Security Account register in transaction journal view, after Scrub Account is used.

The above screen shots show that scrubbing created:

2 lots. A separate lot for each buy (it essentially treats the stock split as a buy of 100 for no cost)

2 capital gain transactions (one for each lot) on the date of the sale:

- Lot 0: 1/7/2009 loss \$400 (sale \$600 – cost \$1000)
- Lot 1: 1/7/2009 gain \$600 (sale \$600 – cost \$0)

Total gain \$200 is correct. Whether the gain is a single long-term one or one each of long-term and short-term or whether there's even a distinction depends on the user's tax jurisdiction and the way the split is structured. If the user needs help figuring it out they should consult a professional.

Example 5: Changing the Orphaned Gains-CCC to Gain/Loss Account

1. Close the Lots in Account SSSS window if open and return to the security account register.

Рисунок 9.13. Selling Shares - Capital Gains - Register after scrubbing a single lot

Date	Num	Description	Tot Shares	Tot Buy	Tot Sell	Balance
01/01/2016	1	Bought STOCK1 10 @ \$10.00 Brokerage \$1.00	10	10		10
		Buy				
		Assets:Investments:Broker1:STOCK1	n 10	10.1	101.00	
		Assets:Investments:Broker1	n		101.00	
01/02/2016		STOCK1 Div Reinvestment 1 @ \$11.00	1	1		11
		Buy Div qty 10 @ CPS \$2.00 = \$20.00	n 1	11	11.00	
		Increase in Residual \$20.00 - \$11.00 = \$9.00	n		9.00	
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			20.00
01/07/2016		STOCK1 Div Reinvestment 2 @ \$12.00 = \$24.00	2	2		13
		Buy Div qty 11 @ CPS \$2.00 = \$22.00	n 2	12	24.00	
		Decrease in Residual = (\$9.00 - \$7.00) = \$2.00	n		2.00	
		Assets:Investments:DRP Residual:STOCK1	n			
		Income:Dividend:Franked:STOCK1	n			22.00
02/07/2016		Sell STOCK1 Last lot Qty 2 @ \$13.00=\$26.00 Brokerage \$1	-2		2	11
		Net Sale	n		25.00	
		Assets:Investments:Broker1:STOCK1	n	-2	12.5	25.00
02/07/2016		Realized Gain/Loss	0			11
		Realized Gain/Loss	n		1.00	
		Assets:Investments:Broker1:STOCK1	n			
		Realized Gain/Loss	n		1.00	
		Orphaned Gains-AUD	n			
23/02/2017	Num		0.00	Tot Buy	Tot Sell	Balance
			n	1		

Shares: 11 STOCK1 Current Value: \$143.00
Enter a description of the transaction

An image of the *security register* after scrubbing a single lot.

- Find each new *Realized Gain/Loss* transaction in the security account register (they will have the same date as the sell transactions). Edit the *Orphaned Gains-CCC* transaction split to re-assign the income account to a more meaningful income (or expense) gain or loss account (e.g. *Income:Long Term Capital Gain:IBM*).

Подсказка

You may like to split the capital gain/loss into taxable and non taxable parts if that is in accord with your tax laws.

Dividends

Some companies or mutual funds pay periodic dividends to shareholders. Dividends are typically given in one of two ways, either they are automatically reinvested into the commodity or they are given as cash. Mutual funds are often setup to automatically reinvest the dividend, while common stock dividends usually pay cash.

Dividends in Cash

If the dividend is presented as cash, you should record the transaction in the asset account that received the money, as income from *Income:Dividends*. Additionally if you want to tie the cash dividend to a particular stock holding then add a dummy transaction split to the stock account with quantity 0 price 1 value 0.

As an example consider the following; the dividends deposited as cash into the *Broker* Account with a tie to the stock account.

Date	Description		Tot Re	Tot Sper	Balance
05/06/05	IBM cash dividend	Income:Dividend Income:IBM	n	10.35	10.35
08/08/05	IBM cash dividend		n	10.35	20.70
		Assets:Investments:Brokerage Account:Stock:IBM	n		
		Assets:Investments:Brokerage Account	n	10.35	
		Income:Dividend Income:IBM	n		10.35
11/08/05	IBM cash dividend	-- Split Transaction --	n	10.35	31.05
22/05/14			n		

Present: USD 31.05 Future: USD 31.05 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 31.05
IBM cash dividend

An image of the *Brokerage* Account register after a series of cash dividends.

Примечание

If you want to track dividends on a per-stock basis, you would need to create an *Income:Dividends:STOCKSYMBOL* account for each stock you own that pays dividends.

Dividends Re-Invested

If you receive the dividend in the form of an automatic reinvestment, the transaction for this should be handled within the stock or mutual fund account as income from «Income:Dividend» for the appropriate number of reinvested shares. This type of reinvest account is often referred to as a DRIP (Dividend Re-Investment Program).

As an example consider the following purchase of NSTAR (NST) stock with the dividends reinvested into a DRIP Account. Mutual fund re-investments would be the same.

Starting with the purchase of 100 shares on Jan. 3, 2005, all dividends will be reinvested and an account is created to track the dividend to the specific stock. GnuCash simplifies the entry by allowing calculations within the cells of the transaction. If the first dividend is \$.29/share, enter \$53.28 (purchase price + dividend) in the share Price cell and 100*.29 in the Buy cell. GnuCash will calculate for you the corresponding number of Shares

Date	Num	Description	Transfer	R	Shares	Price	Buy	Sell	Balance
01/03/05		Initial Purchase	Equity:Opening Balances	n	100	52.99	5,299.00		100
01/06/05	Num	Reinvested Dividend	Income:DRIPs:NST	n	0.5443	53.2794	29.00	Sell	100.5443
02/24/14				n			1		

Shares: 100.5443 NST Current Value: \$5,417.33
Reinvested Dividend

An image of the NST Stock Account register after a dividend reinvestment.

Return of Capital

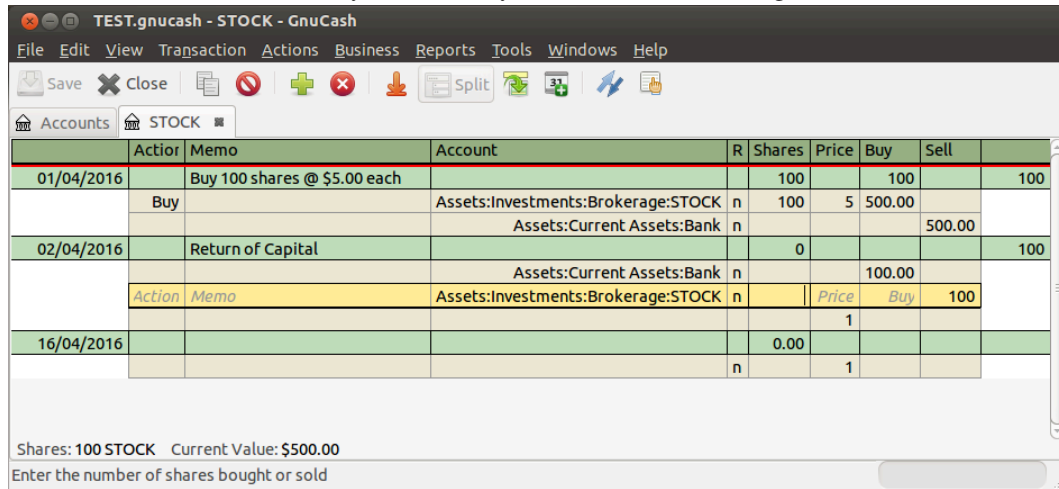
This refers to a transaction where an investment returns capital to the investor and doesn't have any accounting implications other than reducing the cost basis. The number of shares held is not changed.

A Return of Capital transaction can be entered in the stock register by entering the stock split with

Shares	0
--------	---

Price	0
Sell	Return of Capital value

The other side of the double entry would usually be a debit to the brokerage bank account.



An image of the Stock Account register after a return of capital.

Примечание

It is not possible to use the Stock Split Assistant to do this type of transaction.

Подсказка

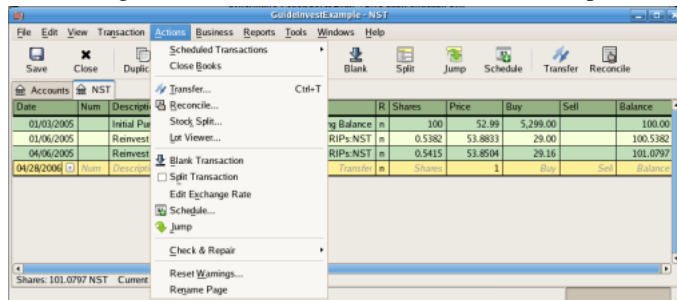
If you accidentally entered a non-zero price in the stock split, GnuCash may have created an unwanted price database entry which could cause reports to be wrong. Check for and remove such an unwanted entry from the price database using Tools → Price Editor .

Splits and Mergers

Companies may split their stock for many reasons but the most common is that the price has risen higher than management thinks is a reasonable price for many investors. Some of these splits are simple exchanges (eg 2 for 1 or 3 for 2) and some are complex exchanges with cash distributions. Splits may also result in fewer shares if the exchange rate is a reverse split (1 for 3 or .75 for 1).

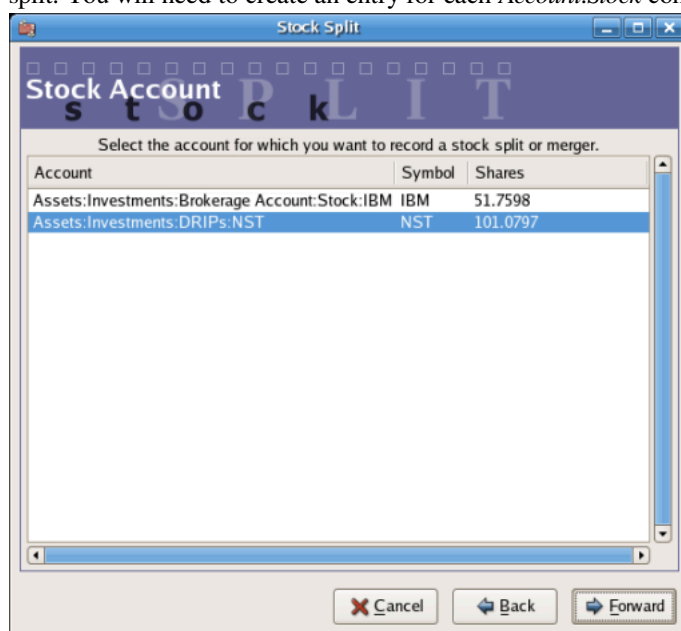
Simple Stock Split

As an example, our holding of NST stock declared a 2 for 1 stock split effective June 6, 2005. The process for entering this transaction is; select Actions → Stock Split to start the assistant.



An image of the selection of the stock split assistant.

The first screen is an Introduction, select Forward to display the selection of the account and stock for the split. You will need to create an entry for each *Account:Stock* combination you hold.



An image of the stock split assistant at step 2 - Selection of Account/Stock.

Select the *Assets:Investments:DRIPs:NST* and click on Forward.

The next screen presents 5 fields in the Stock Splits Details window:

- Date - Enter the date of the split.
- Shares - The number of shares increased (or decreased) in the transaction.

In our example it is a 2 for 1 split so the number of additional shares is the number of shares currently in the register.

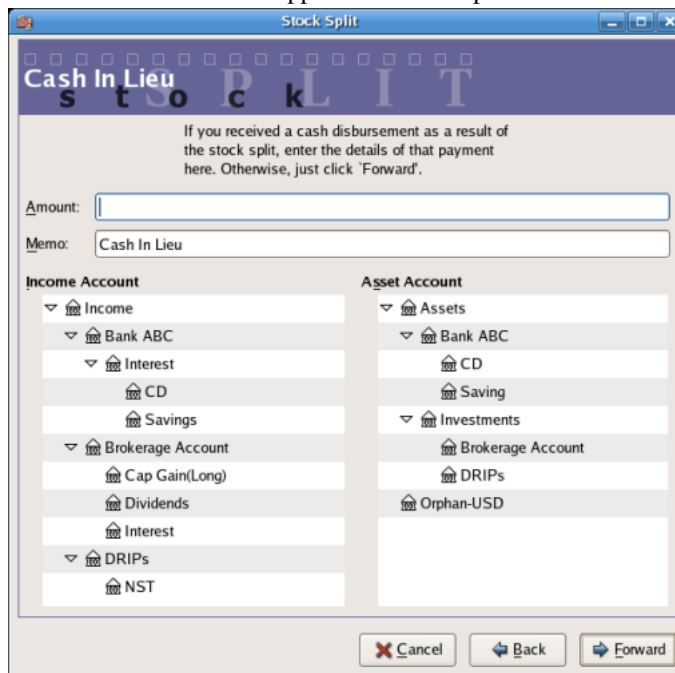
- Description - The Description should give a brief explanation of the transaction.
- New Price - If desired the new price of the stock, after the split, may be entered.
- Currency - The currency of the transaction is required. This should be the same as the stock purchase currency.

Click on the Forward button.



An image of the stock split assistant at step 3 - Split Details.

The next screen will be skipped in this example as there was no «Cash in Lieu».



An image of the stock split assistant at step 4 - Cash in Lieu.

A final Finish screen will give a last option to; Cancel, Back to modify any data entered or Apply to complete the stock split with the data entered.

Date	Num	Description		Tot Shares	Tot Buy	Tot Sell	Balance
01/03/2005		Initial Purchase	Equity-Opening Balance	n	100	52.99	5,299.00
01/06/2005		Reinvest Dividend	Income-DRIPs-NST	n	0.5382	53.8833	29.00
04/06/2005		Reinvest Dividend	Income-DRIPs-NST	n	0.5415	53.8504	29.16
06/06/2005	100	2:1 Stock Split		n	101.0797	101.0797	202.1594
		Split	Assets-Investments-DRIPs-NST	n	101.0797		
05/09/2006				n		1	

Shares: 202.1594 NST Current Value: \$5,613.97
2:1 Stock Split

An image of the *Assets:Investments:DRIPs:NST* register after a simple stock split transaction.

Moderately Complex Stock Merger

As an example, assume you held AT&T stock during the Nov. 18, 2005 merger of SBC with AT&T. For this example you will have purchased AT&T on April 1, 2005, any dividends will have been paid in cash, therefore not entered into the AT&T stock register.

The conditions of the merger were .77942 share of SBC stock were exchanged for each share of AT&T stock. The merged company continued to use the symbol «T» from AT&T.

AT&T paid a «dividend» of \$1.20/share on the transaction date, however this will not appear in the stock account as it was a cash distribution.

The process for entering this transaction is identical to the simple split until the «Details» screen. You will need to create a split entry in each *Investment Account:Stock* account combination that has shares splitting.

Stock Split

Select the account for which you want to record a stock split or merger.

Account	Symbol	Shares
Assets:Investments:Brokerage Account:Stock:IBM	IBM	51.7598
Assets:Investments:Brokerage Account:Stock:T	T	100
Assets:Investments:DRIPs:NST	NST	202.1594

Buttons: Cancel, Back, Forward

An image of the stock split assistant at step 2 - Selection of Account/Stock (*Investment Account:T*).

Select the *Assets:Investments:Brokerage Account:Stock:T* and click on Forward.

The next screen presents 5 fields in the Stock Splits Details window:

- Date - Enter the date of the split. Here we'll enter November 18, 2005.
- Shares - The number of shares increased (or decreased) in the transaction.

In our example it is a .77942 for 1 split so the number of shares will decrease from the number of shares currently in the register. You may use GnuCash's ability to perform calculations on an entry form by entering data directly (E.g. «(.77942*100)-100») to calculate the decrease in shares from the split.

- Description - The Description should give a brief explanation of the transaction.
- New Price - If desired the new price of the stock, after the split, may be entered.
- Currency - The currency of the transaction is required. This should be the same as the stock purchase currency.

Click on the Forward button.

Stock Split

Stock Split Details

Enter the date and the number of shares you gained or lost from the stock split or merger. For stock mergers (negative splits) use a negative value for the share distribution. You can also enter a description of the transaction, or accept the default one.

Date: 11/18/2005

Shares: (.77942*100)-100

Description: SBC / AT&T merger

If you want to record a stock price for the split, enter it below. You may safely leave it blank.

New Price: 24.38

Currency: USD (US Dollar)

Cancel Back Forward

An image of the stock split assistant at step 3 - Split Details.

The next screen will be skipped in this example as there was no «Cash in Lieu».

A final «Finish» screen will give a last option to Back to modify any data entered or Apply to complete the stock split with the data entered.

Date	Action	Memo	Account	R	Shares	Price	Buy	Sell
04/01/2005	Initial Purchase		Equity Opening Balance	n	100	23.66	2,366.00	100.00
11/18/2005	SBC / AT&T merger			n		-22.058		22.058
	Split		Assets Investments Brokerage A	n		-22.058	Price	Buy
				n			1	Sell
04/01/2005				n			1	

Shares: 77.942 T Current Value: \$1,900.23
Assets: Investments: Brokerage Account: Stock: T

An image of the *Investment Account:T* register after a stock split transaction that decreases the shares.

Глава 10. Отчеты

GnuCash is a powerful double entry accounting software package that allows users to enter and track their money in a reliable manner. However, putting this information into GnuCash is only a part of the process. To be truly helpful, you need to be able to extract this information in meaningful ways. GnuCash's reporting features allow you to just that.

GnuCash's reporting features allow you to display nearly any group of transactions in a wide variety of formats. This makes it easy to answer questions about your finances, such as "How much did I spend on groceries last month?" or "How much did I earn in the previous six months?"

GnuCash includes a number of common report types, which can be modified to meet your specific needs. If these common reports are insufficient, it is possible to modify or even write your own custom reports (although this is not recommended for beginners).

Overview

There are many standard reports pre-built in GnuCash, all available from the Reports pulldown menu in the main account window.

When you select a report from the list of reports, that report is first run with its default settings. Once you have opened the report, you can modify its parameters by clicking on the Options button on the toolbar. Under Options, you will see the different settings that you can change for each report. Note that for different reports, the options will be different.

Saved Reports Configurations Concepts

Once you have modified a report to meet your needs, you may wish to save that report for reuse at a later point. GnuCash allows custom reports to be saved, using the Save Report Configuration command.

To save a report configuration:

- Go to the Reports Menu and choose the desired report.
- Change the settings on the report until it includes what is needed.
- Go to the General tab of the report's options and change the Report Name to something meaningful (Do not confuse this with the Report Title).
- Apply the changes and close the dialog.
- Click the Save Report Configuration or Save Report Configuration As... button

This will store the report options in a file in your home directory.

The first time you save a report with a name that has not already been saved, you can use either the Save Report Configuration or the Save Report Configuration As... button. You can modify the report name before saving it.

Once a report has been saved with the current name, the Save Report Configuration button will immediately update the saved report configuration. Use the Save Report Configuration As button to save the current report configuration with a new name.

Saved report configurations are available for use under the Reports->Saved Report Configurations entry. They will also be available for use on multicolumn reports.

Saved report configurations can be deleted in the Saved Report Configurations dialog by clicking the trashcan icon.

To edit saved report configurations, open the report via Reports->Saved Report Configurations, edit and apply the new options, and click Save Report Configuration.

Standard Reports Overview

The standard reports that are included in GnuCash are presented here in the order that they appear in the Reports menu. In each section, a short description for each report is given, which explains what the report is intended to show, and its primary purpose.

Assets & Liabilities Group

Reports in this group provide general information about assets and liabilities.

Advanced Portfolio

The Advanced Portfolio produces a report on commodity accounts (stock and mutual fund type accounts) using price information stored in the GnuCash price database and within the GnuCash transaction data. If you do not have stock price information in your file, the report will indicate an error. This report includes extended information about commodity holdings, including information about the basis, gain, and return of individual commodities.

Advanced Portfolio Capital Gains

The Advanced Portfolio report doesn't use the capital gain splits to calculate capital gains. It calculates the gains from the various buy and sell transactions in the account without regard to whether the gains and losses are recorded or not. Any realized gain splits are ignored. Realized gain splits are recognized as two splits, one in the stock's account with a zero number of shares and a non-zero value, the other in an income or expense account with a value that is the negative of the split in the stock account. These two splits can be in a separate transaction (as created by scrubbing) or in the same transaction as the sale (this will cause incorrect future scrubbing). The income or expense split can be split into multiple splits, say for taxable/non-taxable or short/long term gains, without affecting this report.

Asset Barchart

The Asset Barchart presents the value of assets on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific asset types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Asset Piechart

The Asset Piechart presents the value of assets on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific asset types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Average Balance

The Average Balance report displays monthly averages for the current accounting period.

Balance Sheet

The Balance Sheet lists Asset, Liability, and Equity account balances for all such accounts, and provides totals as of a given date. Balance sheets are commonly run for the last day of each fiscal year to give an overall sense of the financial condition of the entity.

General Journal

The General Journal produces a register of all transactions (beginning to end) in order by date, showing the accounts and the amounts involved, and totals the Net Change by all currencies and assets.

This report is not customizable by date or account, though you can include more or fewer details about the individual transactions, and whether to include running balances and totals for the credits and debits. If you need a report restricted to particular accounts, consider the Transaction Report or open a particular account and choose the Account Transaction Report.

General Ledger

The General Ledger produces information about all transactions for a selected set of accounts. When first run, this report loads no data, and the report options must be changed to retrieve information from the file.

Investment Portfolio

The Investment Portfolio produces a report of commodity accounts (that is, accounts with type "Stock" or "Mutual Fund"), giving holdings, price and value information about commodities in the file.

Liability Barchart

The Liability Barchart presents the value of liabilities on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific asset types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Liability Piechart

The Liability Piechart presents the value of liabilities on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific asset types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Net Worth Barchart

The Net Worth Barchart summarizes Asset accounts, Liability accounts, and overall Net Worth as bars on a graph on a monthly basis for the current financial period. This report provides a graphic overview of the file over time.

Net Worth Linechart

The Net Worth Linechart summarizes Asset accounts, Liability accounts, and overall Net Worth as a line graph on a monthly basis for the current financial period. This report provides a graphic overview of the file over time.

Price Scatterplot

The Price Scatterplot displays the value of one commodity relative to another commodity, for example the value of a stock relative to a currency. When first run, this report loads no data, and the report options must be changed to retrieve information from the file. Specifically, the "Price of Commodity" setting on the Price options tab must be changed to a specific commodity.

Budget Group

Budget reports in GnuCash allow you to gather summary information related to budgets you may have created. In order for these reports to work, you must first create a budget. The reports in this group are specifically based on budget information. To use these reports, you need to have a budget saved in your file.

Budget Balance Sheet

Budget Barchart

Budget Flow

Budget Income Statement

Budget Profit & Loss

Budget Report

Business Group

Reports in this group provide general information about activities related to a business.

Customer Report

Customer Summary

Customer Summary is a customer profit report that can help with job analysis by comparing the income and expenses for a specific customer.

All invoices have an Owner in GnuCash, so invoices that are made will show a customer and show in the report. When creating a Bill, the Default Chargeback Customer is blank. To use the profit report, this field needs an entry, since this is the tag that decides the line to which to attach the expense. Left blank, the bill will be assigned to "No Customer." Similarly, when income is entered directly in a register rather than creating an invoice, it will also be assigned to "No Customer."

Thus, if this report includes an entry for "No Customer", this means that the report may be inaccurate, as the results are not all properly labeled.

Possible use scenarios include:

- Tracking retail sales from different cities
- Tracking rental properties
- Tracking types of business
- Tracking commission sales

Each of these scenarios assumes that the account structure includes breakdowns for individual tracked categories. Changing settings on the Income and Expense tabs under Options can hone the information displayed. By default all income and expense accounts are included; however, since GnuCash can't really predict the names and classification of income and expense accounts, it must group them all into the "No Customer" entry.

Note that inventory-based businesses won't benefit from this report because of its nature.

Useful options:

- The Expense Accounts tab allows the selection of one or more expense accounts.

- The Income Accounts tab allows the selection of one or more income accounts.
- The Display tab allows sorting by name, profit percentage, or amount of profit.

Easy Invoice

Employee Report

Fancy Invoice

Payable Aging

Printable Invoice

Receivable Aging

This report provides a listing of all customers, their current balance, and how much they have outstanding from invoices over different time periods—how much they owe from 0-30 days, from 31-60 days, from 61-90 days, and over 90 days. The report also contains links to each customer and to their current customer report.

Vendor Report

Income & Expense Group

Reports in this group provide information about Income and Expense

Cash Flow

This report shows the change in value for a set of accounts (the flow of cash) over a given period of time. By default, this report is based on accounts in Assets and Special Accounts, and covers the current financial period. The report enumerates all money coming in to and going out of the base accounts, broken down by the other account.

Equity Statement

This report can be seen as extension of the Balance Sheet report. The Balance Sheet states the balance of Assets, Liabilities and Equity at a specific point of time. The Equity Statement focuses on the Equity Accounts by showing the cash flow to and from them for a given period of time.

By balancing this cash flow with income, the report shows the available capital at the beginning and end of the selected time period.

Expense Barchart

The Expense Barchart presents the value of expenses on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific expense types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Expense Piechart

The Expense Piechart presents the value of expenses on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific expense types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Expenses vs. Day of Week

Expenses vs. Day of Week presents a pie chart showing the totals for selected expense accounts totaled by the day of the week of the transaction. The report options enable you to make some adjustments (such as accounts, display options, and the date range) but the account selector only allows expense accounts to be chosen. The report aggregates expense transactions by day of week, not by any other period or category. Due to these limitations, the report may be considered a demonstration or an example to someone wanting to examine the source code for composing a useful custom report.

Income Barchart

The Income Barchart presents the value of income on a monthly basis in barchart form. By default, the report displays the eight largest accounts that have specific income types assigned to them, and it displays bars for the current financial period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Bars" option will display more bars in the chart, allowing information for more accounts to display. Additionally, the "Show table" option enables the display of chart information in tabular form below the chart.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Income & Expense Chart

Income Piechart

The Income Piechart presents the value of income on a monthly basis in piechart form. By default, the report shows the seven largest accounts, that have specific income types assigned to them, arranged in descending order by value as of the end of the current accounting period.

Several settings on this report can greatly affect the information included.

- On the Accounts tab, the "Show Accounts until level" option changes how the report aggregates account totals. Change this value to see information at deeper levels of the account structure.
- On the Display tab, the "Maximum Slices" option will display more slices in the chart, allowing information for more accounts to display.
- On the General tab, the "Price Source" option can significantly affect the reported value of various commodities included in the report.

Income Statement

This report lists Income and Expense account totals for a set period. By default, it shows all Expense and Income accounts down to 3 levels of sub-accounts for the current financial period.

An Income Statement is also called a "Profit and Loss" report or "Revenue Statement."

In earlier versions of GnuCash, this report was called "Profit & Loss," but with version 2, the report was renamed "Income Statement" to use more common accounting terminology.

The Income Statement helps show where money is coming from and where it is going for a given time period.

Income vs. Day of Week

Income vs. Day of Week presents a piechart showing the totals for selected income accounts totaled by the day of the week of the transaction. The report options enable you to make some adjustments (such as accounts, display options, and the date range) but the account selector only allows income accounts to be chosen. The report aggregates income transactions by day of week, not by any other period or category. Due to these limitations, the report may be considered a demonstration or an example to someone wanting to examine the source code for composing a useful custom report.

Trial Balance

Trial Balance lists the ending balances in all accounts as of a particular date. It is typically run at the end of an accounting period and is primarily used to ensure that the total of all debits equals the total of all credits.

Sample & Custom Group

The reports in this group offer examples on how reports can be customized or modified to suit personal need.

Custom Multicolumn Report

This report provides a base that allows several standard and custom reports to be combined into one view. Note that this report opens with an empty window; you must open the options and designate which reports to

include for display. Once the reports have been selected, the settings for individual reports in the multicolumn display can be edited.

Sample Report with Examples

This is a sample report that users can examine to learn how to write their own reports.

Welcome Sample Report

This report demonstrates how the Multicolumn Report can be use to create custom dashboard-type reports.

Other Reports

Several reports are included on the main Reports menu. These are described below.

Account Summary

This lists the balances of all accounts and subaccounts as of a particular date. By default, this report shows accounts and totals down to third-level subaccounts.

This report gives effectively the same information as the Chart of Accounts. You can use this report to export and print the Chart of Accounts.

Примечание

To generate a report of account totals over a particular time period (especially if you do not close your books at regular intervals), you might consider using the Income Statement, or Cash Flow reports.

Future Scheduled Transactions Summary

Tax Report & TXF Export

Generates a report and a downloadable .txf file of taxable income and deductible expenses for a particular accounting period. To download the report data, choose the Export button on the toolbar and choose between html and .txf downloadable versions.

To use this report, you must use Edit --> Tax Options to identify which form the taxing authority uses for each income or expense account. Note that you can see but not modify the "Tax related" checkbox in Edit --> Edit Account.

Transaction Report

This report lists the transactions in selected accounts during a specified financial period. When first run, this report loads no data, and the report options must be changed to retrieve information from the file.

Saved Report Configurations

Selecting this will open a dialog with a list of available Saved Report Configurations. "Saved Report Configurations" means sets of customized settings for standard reports.

These sets must be saved by the user before they appear here. See Report Concepts above for instructions on how to save report configurations.

Account Report

The Account Report menu entry only appears when an account register is the active tab. This report produces a list of all transactions in the open register.

Note that if you conduct a search that retrieves several transactions, the results are displayed in a new search register, which can then be used to create a report for just those transactions.

Account Transaction Report

This report also only appears when an account register is the active tab. However, this report only lists transactions that have been selected (e.g. by mouse click) in the current register. If no transactions are selected, an empty report will be generated.

Глава 11. Доходы от прироста капитала

This chapter will present some of the techniques used to keep track of the unrealized and realized gains and losses, better known as capital gains and losses.

Basic Concepts

This chapter will present some of the techniques used to keep track of the unrealized and realized gains and losses, better known as capital gains and losses.

Certain resellable assets can change value over time, such as stocks, bonds, houses, or cars. Some assets (eg: a stock) could increase in value, some (eg: a car) could decrease in value. It is important to be able to track some of these time-dependent asset valuations, this chapter will show you how.

Probably everything you own will increase or decrease in value over time. So, the question is for which of these assets should you track this changing value? The simple answer is that you only need to track this for items which could be sold for cash in the future or which relate to taxation.

Consumable and disposable items (eg: food, gas for your car, or printer paper) are obviously not involved. Thus, even though the new clothes you recently bought will certainly depreciate, you would not want to track this depreciation since you have no intention of reselling the clothes and there is no tax implications to the depreciation on clothing. So, for this example, the purchase of new clothes should be recorded as a pure expense... you spent the money, and it is gone.

Asset appreciation occurs when something you own increases in value over time. When you own an asset which has increased in value, the difference between the original purchase price and the new value is known as *unrealized gains*. When you sell the asset, the profit you earn is known as *realized gains* or *capital gains*. An example of an asset from which you could have unrealized gains, and eventually capital gains, is stock in a publicly traded company.

Estimating Valuation

As mentioned in the introduction to this chapter, capital gains are the profits received from the sale of an asset. This section will describe how to record capital gains in GnuCash.

The accounting methods for handling asset appreciation differs somewhat from depreciation because typically you are only concerned with the moment you sell the asset and realize the capital gains. This is opposed to the continuous nature of tracking depreciation. Capital gains are an important subject in the world of taxation, because governments tend to be quite interested in taxing capital gains in one manner or another.

Примечание

As always, there are exceptions. If you hold a bond that pays all of its interest at maturity, tax authorities often require that you recognize interest each year, and refuse this to be treated as a capital gain. Consult the appropriate tax codes to determine the preferred treatment for each type of asset you have which may be affected by capital gains taxes.

Estimating the increasing value of assets is generally not simple, because often it is difficult to know its exact value until the moment it is sold.

Securities traded daily on open markets such as stock exchanges are possibly the easiest type of asset to predict the value of, and selling the asset at market prices may be as simple as calling a broker and issuing a Market Order. On the other hand, estimating the value of a house is more difficult. Homes are sold less often than stocks, and the sales tend to involve expending considerable effort and negotiations, which means that estimates are likely to be less precise. Similarly, selling a used automobile involves a negotiation process that makes pricing a bit less predictable.

Values of collectible objects such as jewelry, works of art, baseball cards, and «Beanie Babies» are even harder to estimate. The markets for such objects are much less open than the securities markets and less open than the housing market. Worse still are one-of-a-kind assets. Factories often contain presses and dies customized to build a very specific product that cost tens or hundreds of thousands of dollars; this equipment may be worthless outside of that very specific context. In such cases, several conflicting values might be attached to the asset, none of them unambiguously correct.

The general rule of thumb in accounting for estimating unrealized gains (or losses) is that you should only revalue assets such as stocks which are readily sellable and for which there are very good estimates of the value. For all other assets, it is better to simply wait until you sell them, at which time you can exactly determine the capital gains. Of course, there is no hard rule on this, and in fact different accountants may prefer to do this differently.

Account Setup

As with most accounting practices, there are a number of different ways to setup capital gains accounts. We will present here a general method which should be flexible enough to handle most situations. The first account you will need is an *Asset Cost* account (GnuCash account type Asset), which is simply a place where you record the original purchase of the asset. Usually this purchase is accomplished by a transaction from your bank account.

In order to keep track of the appreciation of the asset, you will need three accounts. The first is an *Unrealized Gains* asset account in which to collect the sum of all of the appreciation amounts. The *Unrealized Gains* asset account is balanced by a *Unrealized Gains* income account, in which all periodic appreciation income is recorded. Finally, another income account is necessary, called a *Realized Gains* in which you record the actual capital gains upon selling the asset.

Below is a generic account hierarchy for tracking the appreciation of 2 assets, *ITEM1* and *ITEM2*. The *Assets:Fixed Assets:ITEM1:Cost* accounts are balanced by the *Assets:Current Assets:Savings Account* account, the *Assets:Fixed Assets:ITEM1:Unrealized Gains* accounts are balanced by the *Income:Unrealized Gains* account (similar for *ITEM2*).

```
-Assets
  -Current Assets
    -Savings Account
  -Fixed Assets
    -ITEM1
      -Cost
      -Unrealized Gain
    -ITEM2
      -Cost
      -Unrealized Gain
-Income
  -Realized Gains
  -Unrealized Gains
```

Example

Let's suppose you buy an asset expected to increase in value, say a Degas painting, and want to track this. (The insurance company will care about this, even if nobody else does.)

Start with an account hierarchy similar to that shown in «Account Setup», but replace «ITEM1» with «Degas» and you can remove the «ITEM2» accounts. We will assume that the Degas painting had an initial value of one hundred thousand dollars. Begin by giving your self \$100,000 in the bank and then transferring that from your bank account to your *Assets:Fixed Assets:Degas:Cost* account (the asset purchase transaction). You should now have a main account window which appears like this:

Account Name	Type	Total
Assets	Asset	USD 100,000.00
Current Assets	Asset	USD 0.00
Fixed Assets	Asset	USD 100,000.00
Degas	Asset	USD 100,000.00
Cost	Asset	USD 100,000.00
Unrealized Gain	Asset	USD 0.00
Equity	Equity	USD 100,000.00
Income	Income	USD 0.00
Realized Gains	Income	USD 0.00
Unrealized Gains	Income	USD 0.00

USD, grand total: Assets: USD 100,000.00 Profits: USD 0.00

The asset appreciation example main window

Unrealized Gains

A month later, you have reason to suspect that the value of your painting has increased by \$10,000 (an unrealized gain). In order to record this you transfer \$10,000 from your *Accrued Gains* income account (*Income:Unrealized Gains*) to your asset Unrealized Gains account (*Assets:Fixed Assets:Degas:Unrealized Gain*). Your main window will resemble this:

Account Name	Type	Total
Assets	Asset	USD 110,000.00
Current Assets	Asset	USD 0.00
Fixed Assets	Asset	USD 110,000.00
Degas	Asset	USD 110,000.00
Cost	Asset	USD 100,000.00
Unrealized Gain	Asset	USD 10,000.00
Equity	Equity	USD 100,000.00
Income	Income	USD 10,000.00
Realized Gains	Income	USD 0.00
Unrealized Gains	Income	USD 10,000.00

USD, grand total: Assets: USD 110,000.00 Profits: USD 10,000.00

Chart of Accounts after unrealized gain

Selling

Let's suppose another month later prices for Degas paintings have gone up some more, in this case about \$20,000, you estimate. You duly record the \$20,000 as an unrealized income like above, then decide to sell the painting.

Three possibilities arise. You may have *accurately estimated* the unrealized gain, *overestimated* the unrealized gain, or *underestimated* the unrealized gain.

1. *Accurate estimation of unrealized gain.*

Your optimistic estimate of the painting's value was correct. First you must record that the profits made are now realized gains, not unrealized gains. Do this by transferring the income from the *Income:Unrealized Gains* to the *Income:Realized Gains* account.

Secondly, you must credit your bank account with the selling price of the painting. This money comes directly from your *Assets:Fixed Assets:Degas* sub-accounts. Transfer the full *Assets:Fixed Assets:Degas:Cost* value into *Assets:Current Assets:Savings Account*, and the full *Assets:Fixed Assets:Degas:Unrealized Gain* into *Assets:Current Assets:Savings Account*.

These transactions should now appear as follows:

Таблица 11.1. Turning an Accrued Gain into a Realized Gain

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$30,000	\$0
Assets:Fixed Assets:Degas:Cost	Assets:Current Assets:Savings Account	\$100,000	\$0
Assets:Fixed Assets:Degas:Unrealized Gains	Assets:Current Assets:Savings Account	\$30,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$130000 and *Income:Realized Gains* with a total of \$30000.

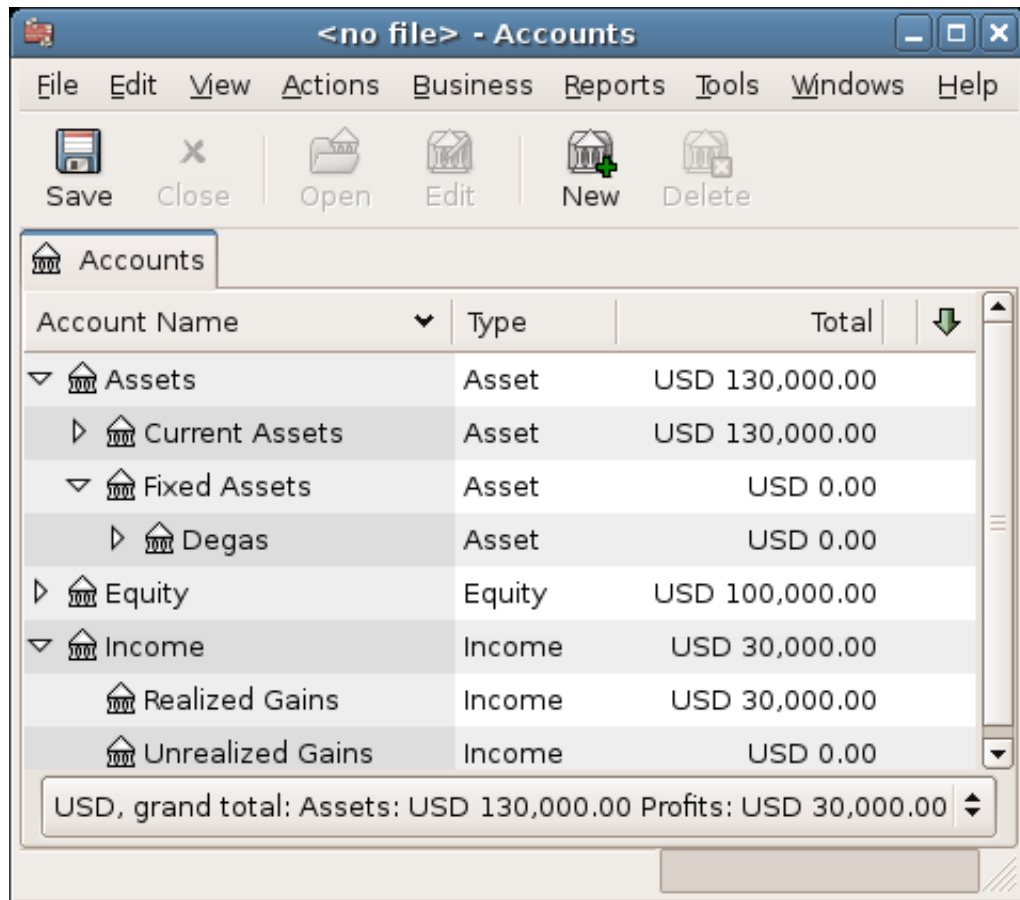


Chart of Accounts after realized gain

2. *Over estimation* of unrealized gain.

You were over-optimistic about the value of the painting. Instead of the \$130000 you thought the painting was worth you are only offered \$120000. But you still decide to sell, because you value \$120000 more than you value the painting. The numbers change a little bit, but not too dramatically.

The transactions should now appear as follows (observe the last transaction which balances the *Unrealized Gains* accounts):

Таблица 11.2. Turning an Accrued Gain into a Realized Gain

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$20,000	\$10,000
Assets:Fixed Assets:Degas:Cost	Assets:Current Assets:Savings Account	\$100,000	\$0
Assets:Fixed Assets:Degas:Unrealized Gains	Assets:Current Assets:Savings Account	\$20,000	\$10,000
Assets:Fixed Assets:Degas:Unrealized Gains	Income:Unrealized Gains	\$10,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$120000 and *Income:Realized Gains* with a total of \$20000.

3. *Under estimation of unrealized gain.*

You manage to sell your painting for more than you thought in your wildest dreams (\$150,000). The extra value is, again, recorded as a gain, i.e. an income.

The transactions should now appear as follows (observe the last transaction which balances the *Unrealized Gains* accounts):

Таблица 11.3. Turning an Accrued Gain into a Realized Gain

<i>Account</i>	<i>Transfer to</i>	<i>Transaction Amount</i>	<i>Account Total</i>
Income:Unrealized Gains	Income:Realized Gains	\$50,000	\$-20,000
Assets:Fixed Assets:Degas:Cost	Assets:Current Assets:Savings Account	\$100,000	\$0
Assets:Fixed Assets:Degas:Unrealized Gains	Assets:Current Assets:Savings Account	\$50,000	\$-20,000
Income:Unrealized Gains	Assets:Fixed Assets:Degas:Unrealized Gains	\$20,000	\$0

This leaves the *Assets:Current Assets:Savings Account* account with a total of \$150,000 and *Income:Realized Gains* with a total of \$50,000.

Taxation

Taxation policies vary considerably between countries, so it is virtually impossible to say anything that will be universally useful. However, it is common for income generated by capital gains to not be subject to taxation until the date that the asset is actually sold, and sometimes not even then. North American home owners

usually find that when they sell personal residences, capital gains that occur are exempt from taxation. It appears that other countries treat sale of homes differently, taxing people on such gains. German authorities, for example, tax those gains only if you owned the property for less than ten years.

Chris Browne has a story from his professional tax preparation days where a family sold a farm, and expected a considerable tax bill that turned out to be virtually nil due to having owned the property before 1971 (wherein lies a critical «Valuation Day» date in Canada) and due to it being a dairy farm, with some really peculiar resulting deductions. The point of this story is that while the presentation here is fairly simple, taxation often gets terribly complicated...

Глава 12. Мультивалютные операции

This chapter will show how to set up GnuCash accounts to use multiple currencies.

Basic Concepts

GnuCash supports over a hundred currencies, from the Andorran Franc to the Zimbabwe Dollar. For example, you can have a bank account set up in Euros, and another using Hong Kong Dollars.

Some of the issues which arise when using multiple currencies are, how do you transfer funds between accounts with different currencies? How do you calculate the overall value when you have mixed currency accounts? How do reports deal with mixed currencies?

You can either deal with multiple currencies using manually entered transactions to record currency gains and losses as described in «Manually Recording Currency Transaction» or you can utilize currency trading accounts introduced with GnuCash version 2.3.14 to automatically record the gains and losses on transactions between currencies as described in the subsequent section. Trading accounts are not enabled by default in GnuCash and must be explicitly enabled as described in «Automatically Recording Currency Transactions using Trading Accounts».

Manually Recording Currency Transaction

Account Setup

Your default account currency is set in the Account tab under Edit → Preferences (GnuCash → Preferences on macOS).

Similarly, GnuCash offers an option to set your preferred currency for displaying reports (like the balance sheet and income statement). The option is called Default Report Currency, and is in the Reports tab of the GnuCash Preferences screen. You'll want to set both options when you start using GnuCash because if (for example) your accounts are all in Canadian Dollars but the generated reports are all in US Dollars, the reports will just say that there are «no data/transactions (or only zeroes) for the selected time period».

When you create a new account, you have the option to define the commodity in which that account is denominated. For accounts denominated in a currency, you can specify any of the currencies supported by GnuCash by simply selecting it from the currency commodity list. You will notice that the default currency is the currency that is defined for the parent account of the new account.

As an example, let's set up a bank account scenario where you mostly work in US Dollars, but do also have a European bank account using the Euro currency, as well as one bank account in Hong Kong using Hong Kong Dollars. So, set up 3 bank accounts, one denominated in US Dollars, one using Euros, and the third in Hong Kong Dollars. One possible account structure for this would be:

```
-Assets (USD)
  -Current Assets (USD)
    -US Bank (USD)
    -European Bank (EUR)
    -HK Bank (HKD)
-Equity (USD)
  -Opening Balances (USD)
```


- USD (USD)
- EUR (EUR)
- HKD (HKD)

Примечание

The currency of each account is shown in parenthesis.

Since in this example you mostly work in USD, all of the parent accounts are set to USD. Of course, if you mostly work in Euros, you could change the currency of these parent accounts to EUR. The totals shown in the account tree window will always be converted to the currency of each particular account. Notice, we also set up 3 Starting Balances equity accounts, used to initially populate the 3 banks.

Примечание

You could also set up just a single Starting Balance account and use a currency transfer to populate the «different currency» accounts. However, this is more advanced option, which is explained in a later section («Purchase of an Asset with Foreign Currency»).

Below you see the result of this example, in which you start with USD 10,000, EUR 10,000 as well as HKD 10,000 in the three bank accounts. Notice that the total of the parent accounts only shows the value of the currency of sub-accounts with matching currencies. In other words, the Total Assets and Total Equity values only reflect USD amounts, because GnuCash has no way of evaluating the value of EUR or HKD yet. Once you set up exchange rates between the currencies, the parent accounts will calculate the converted value of all sub-accounts. See the later section («Recording and Updating Currency Exchange Rates») on ways to do this.

Account Name	Type	Total	Total (USD)
Assets	Asset	\$10,000.00	\$10,000.00
Current Assets	Asset	\$10,000.00	\$10,000.00
European Bank	Bank	EUR 10,000.00	\$0.00
Hong Kong Bank	Bank	HKD 10,000.00	\$0.00
US Bank	Bank	\$10,000.00	\$10,000.00
Equity	Equity	\$10,000.00	\$10,000.00
Opening Balances	Equity	\$10,000.00	\$10,000.00
EUR	Equity	EUR 10,000.00	\$0.00
HKD	Equity	HKD 10,000.00	\$0.00
USD	Equity	\$10,000.00	\$10,000.00
\$, Grand Total:		Assets: \$10,000.00	Profits: \$0.00

Initial setup of 3 bank accounts with different currencies.

Notice that the "Total (Report)" column is being displayed. This is configured in the column header row, select Arrow down and select «Total(USD)».

User-Defined Currencies

Usually when we talk about currencies, we mean government-backed currencies (or more precisely, currencies defined in ISO 4217 [https://en.wikipedia.org/wiki/ISO_4217]). GnuCash does not allow you to

create your own currencies. If you want to track non-ISO currencies, you can use either of two workarounds, depending on which fits your needs better.

The **first method** is to treat these as if they were a security—that is, like a stock or mutual fund. The second method is to use one of the «dummy» currencies for them.

Let's say for example that you want to track loyalty points you've earned by buying from a certain group of businesses. The account which tracks your loyalty points will be *Assets:Other:LoyaltyGroupRewardMiles*.

In the first method, you define a new security, of type FUND, called RewardMiles. This is pretty straightforward—when you create the new *LoyaltyGroupRewardMiles* account, just set the account type to Stock or Mutual Fund, click the Select... button next to the Security/currency: box, and click New to define a new security of type FUND.

This is not really what the stock and mutual fund account types are meant for, but GnuCash will allow it. The downside is that you'll have to enter a «price» for every transaction involving this account, because GnuCash needs the prices to figure out the monetary value of the points and treat them as one of your assets.

In the **second method**, you use one of the dummy currencies to track the loyalty points. These currencies are «XTS (Code for testing purposes)» and «XXX (No currency)». If you use one of these for your *LoyaltyGroupRewardMiles* account, you can enter transactions into the account without having to enter share prices for every transaction. And, you can keep using the same two dummy currencies to track all sorts of amounts—vacation dollars earned and used so far this year, vacation hours earned and used, health insurance benefits allowance used and remaining, and so on.

The drawback with this second method is that you cannot define exchange rates for the dummy currencies to convert them to ISO currencies. If you want to do that, you really should use the first method.

Recording and Updating Currency Exchange Rates

GnuCash allows you to update the Currency Exchange Rates both manually and automatically. This process is essentially the same as setting share prices for investments (see «Setting Share Price»). In the following two sections we will work through both methods.

Before we start, let's have a quick look at the Chart of Accounts

Account Name	Type	Total	Total (USD)
Assets	Asset	\$10,000.00	\$10,000.00
Current Assets	Asset	\$10,000.00	\$10,000.00
European Bank	Bank	EUR 10,000.00	\$0.00
Hong Kong Bank	Bank	HKD 10,000.00	\$0.00
US Bank	Bank	\$10,000.00	\$10,000.00
Equity	Equity	\$10,000.00	\$10,000.00
Opening Balances	Equity	\$10,000.00	\$10,000.00
EUR	Equity	EUR 10,000.00	\$0.00
HKD	Equity	HKD 10,000.00	\$0.00
USD	Equity	\$10,000.00	\$10,000.00

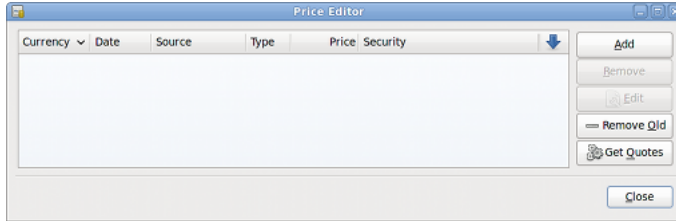
\$, Grand Total: Assets: \$10,000.00 Profits: \$0.00

Initial set up of 3 bank accounts with different currencies.

As you see, the overall balances do not yet reflect any value for EUR or HKD holdings. Adding currency exchange rates will fix this.

Manually Updating Exchange Rates

Open the Price Editor by going to Tools → Price Editor .

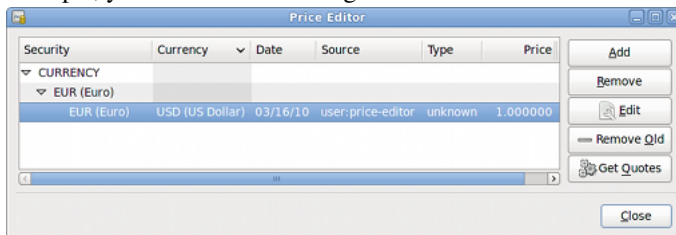


Price Editor Window.

Click on the Add button to add a new currency exchange rate. A window will appear in which you can set up a new exchange rate. This window should appear like this:

Add Price Editor Window

Set the Namespace to Currency and the Security to EUR (Euro). Then set the exchange rate between the selected security and the selected currency. The price box defines how many units of currency are required to purchase one unit of the security. In this case, how many dollars it will take to purchase on Euro. In this example, you will set the exchange rate to 1 EUR for 1 USD.



The Price Editor window after setting the exchange rate between Euros and US Dollars

Account Name	Type	Total	Total (USD)
Assets	Asset	\$20,000.00	\$20,000.00
Current Assets	Asset	\$20,000.00	\$20,000.00
European Bank	Bank	EUR 10,000.00	\$10,000.00
Hong Kong Bank	Bank	HKD 10,000.00	\$0.00
US Bank	Bank	\$10,000.00	\$10,000.00
Equity	Equity	\$20,000.00	\$20,000.00
Opening Balances	Equity	\$20,000.00	\$20,000.00
EUR	Equity	EUR 10,000.00	\$10,000.00
HKD	Equity	HKD 10,000.00	\$0.00
USD	Equity	\$10,000.00	\$10,000.00
\$, Grand Total:		Assets: \$20,000.00	Profits: \$0.00

Chart of Accounts after setting the exchange rate between Euros and US Dollars.

Observe that since you have no exchange rate for HKD, GnuCash doesn't convert the HKD accounts to USD. This will be added in the next section.

Automatic Updating Exchange Rates (How-To)

In the previous section you saw how to manually define a new currency exchange rate, but GnuCash includes an automatic price update feature, which will now be described.

Open the Price Editor by going to Tools → Price Editor .

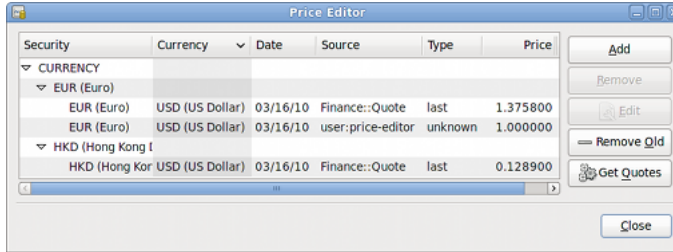
Security	Currency	Date	Source	Type	Price
CURRENCY					
EUR (Euro)					
EUR (Euro)	USD (US Dollar)	03/16/10	user:price-editor	unknown	1.000000

Price Editor Window before you obtain online quotes.

Click on the Get Quotes button to automatically load the various exchange rates you need.

Примечание

If the Get Quotes button is disabled, that means that the Perl module Finance::Quote is not installed. For information on how to install it, please see «Configuring for Automatic Retrieval of Quotes»



Price Editor Window after we obtained online quotes.

GnuCash downloads exchange rates for all currencies that are in use in your various accounts. This will happen every time you click on Get Quotes or request GnuCash to download quotes as per «Configuring for Automatic Retrieval of Quotes»

Now when you check the main Chart of Accounts you will see that GnuCash has automatically converted the HKD amount to USD amount on the parent accounts that are in USD, as well as on the Total (USD) column. Also the Euro accounts have been updated with the latest exchange rate.

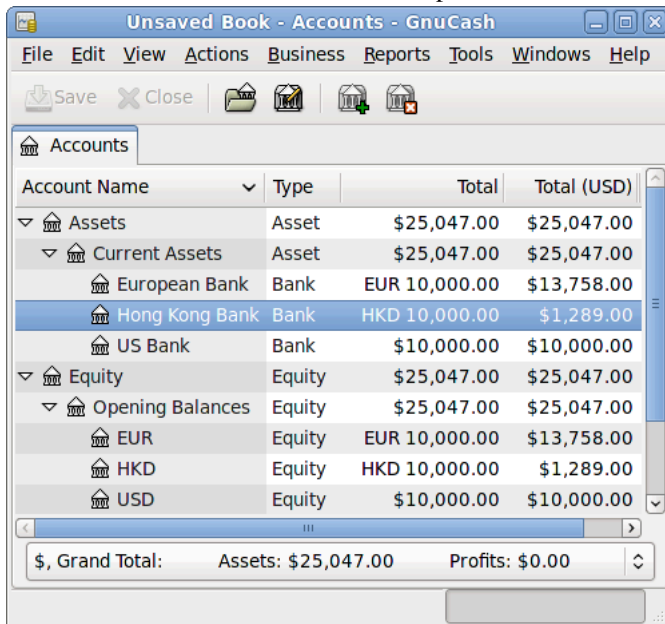


Chart of Accounts after we obtain online quotes.

Disabling Exchange Rate Retrieval

Whenever you create an account that uses a non-default currency, exchange rate retrieval will be automatically enabled for that currency. However, if you later delete that account, GnuCash will not automatically disable exchange rate retrieval for that currency.

If you have deleted the last account for a particular currency, and you do not wish to retrieve exchange rates for that currency anymore, do the following:

- Open the Securities window by selecting Tools → Security Editor .
- Make sure the Show National Currencies box is selected.
- Expand the CURRENCY row.

- Double click on the currency for which you want to disable exchange rate retrieval.
- Deselect the Get Online Quotes box and click OK.

Recording Purchases in a Foreign Currency

Purchases in a foreign currency can be managed in two different ways.

- 1) Use GnuCash's built-in currency exchange functions when you do your transactions. This is mainly used for one-time transactions, and nothing which happens regularly.
- 2) Use separate accounts to track transactions, where all involved accounts use the same currency. This is the recommended method, since it allows much better tracking and follow up. In this way, you do one currency exchange transaction, and after that you do normal transactions in the native currency.

The rest of this section will explain more based upon option 2).

Purchase of an Asset with Foreign Currency

You are using USD as your default currency. But, you decide to purchase a boat in Jamaica. To do this, you opened a bank account in Jamaica, moved some money from the US, and then purchased your boat.

To record this in GnuCash we use the following basic account structure:

```
-Assets (USD)
  -Current Assets (USD)
    -US Bank (USD)
    -Jamaican Bank (JMD)
  -Fixed Assets (USD)
    -Boat (JMD)
-Equity (USD)
  -Opening Balances (USD)
    -USD (USD)
```

Примечание

The currency of each account is shown in parenthesis.

First you need to transfer some money (\$10,000) to Jamaica, and you use your US bank account (with a balance of \$100,000) for that. The bank gives you an exchange rate of USD 1 = JMD 64, but charges you USD 150 to transfer the money.

F	Memo	Account	R	Deposit	Withdrawal
2006-01-01	Opening Balance	Equity:Opening Balances:USD	n	100,000.00	100,000.00
2006-02-01	Transfere money to jamaica	Assets:Current Assets:US Bank	n	10,000.00	90,000.00
	Memo	Expenses:Service Charge	n	150.00	
		Assets:Current Assets:jamaican Bank	n	9,850.00	Withdrawal
		Assets:Current Assets:US Bank	n	10,000.00	

Present: USD 90,000.00 Future: USD 90,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: USD 90,000.00
Assets:Current Assets:jamaican Bank

Transfer money to Jamaica

Select the Jamaica transaction line (\$9,850.00), right click and select Edit Exchange Rate

A dialog window where the exchange rate in a currency transaction is specified

As Exchange Rate, you enter 1 USD = 64 JMD, since this is the rate your bank gave. Press ok in the Transfer Funds (Edit Exchange Rate) window, and then save this split transaction. Below is how it now looks in the main Chart of Accounts.

Account Name	Type	Total	Total (USD)
Assets	Asset	USD 99,850.00	USD 99,850.00
Current Assets	Asset	USD 99,850.00	USD 99,850.00
Jamaican Bank	Bank	JMD 630,400.00	USD 9,850.00
US Bank	Bank	USD 90,000.00	USD 90,000.00
Fixed Assets	Asset	USD 0.00	USD 0.00
Boat	Asset	JMD 0.00	USD 0.00
Equity	Equity	USD 100,000.00	USD 100,000.00
Opening Balances	Equity	USD 100,000.00	USD 100,000.00
USD	Equity	USD 100,000.00	USD 100,000.00
Expenses	Expens	USD 150.00	USD 150.00
Service Charge	Expens	USD 150.00	USD 150.00
USD, grand total:		Assets: USD 99,850.00	Profits: -USD 150.00

Chart of Accounts before purchasing the boat

You choose to buy a boat for JMD 509,000. To record this transaction in GnuCash, you will need to enter a simple transaction in *Assets:Current Assets:Jamaican Bank* withdrawing JMD 509,000 and transferring it to *Assets:Fixed Assets:Boat*

Account Name	Type	Total	Total (USD)
Assets	Asset	USD 99,850.00	USD 99,850.00
Current Assets	Asset	USD 91,896.88	USD 91,896.88
Jamaican Bank	Bank	JMD 121,400.00	USD 1,896.88
US Bank	Bank	USD 90,000.00	USD 90,000.00
Fixed Assets	Asset	USD 7,953.12	USD 7,953.12
Boat	Asset	JMD 509,000.00	USD 7,953.12
Equity	Equity	USD 100,000.00	USD 100,000.00
Opening Balances	Equity	USD 100,000.00	USD 100,000.00
USD	Equity	USD 100,000.00	USD 100,000.00
Expenses	Expens	USD 150.00	USD 150.00
Service Charge	Expens	USD 150.00	USD 150.00

USD, grand total: Assets: USD 99,850.00 Profits: -USD 150.00

Chart of Accounts after purchasing the boat

The Chart of Accounts now reflects that your bank account has been reduced by JMD 509,000, and that your Fixed Assets boat account has been increased by the same amount. If you also have turned on the CoA (Column Choice) "Total (USD)" you will see the corresponding value in USD. The USD value will always reflect the latest currency exchange rate you have either automatically or manually retrieved.

Purchasing Foreign Stocks

This example will show how to purchase stocks that are priced in a currency other than your primary currency.

Assume that you live in New York and therefore you have set the default currency to USD. You decide to purchase a stock traded in Hong Kong that is priced in HKD. You would also like to be able to track the various income and expense amounts per stock and broker.

You decide to purchase stock in the Beijing Airport (Hong Kong). The ticker for this stock is 0694.HK on Yahoo! Since you wanted to track all various income and expense amounts, here is the necessary account structure:

```
Assets:Investments:Brokerage Accounts:Boom:0694.HK (0694.HK)
Assets:Investments:Brokerage Accounts:Boom:Bank (HKD)
Equity:Opening Balances:HKD (HKD)
Expenses:Commissions:Boom.0694.HK (HKD)
Income:Investments:Dividend:Boom:0694.HK (HKD)
```

The Chart of Accounts looks like this after creating all the needed accounts:

Account Name	Type	Commodity	Total	Total (USD)
Assets	Asset	US Dollar	USD 0.00	USD 0.00
Investments	Asset	US Dollar	USD 0.00	USD 0.00
Brokerage Account	Bank	US Dollar	USD 0.00	USD 0.00
Boom	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Stock	Beijing Airport	0 0694.HK	USD 0.00
Bank	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
Equity	Equity	US Dollar	USD 0.00	USD 0.00
Opening Balances	Equity	US Dollar	USD 0.00	USD 0.00
HKD	Equity	Hong Kong Dollar	HKD 0.00	USD 0.00
Expenses	Expense	US Dollar	USD 0.00	USD 0.00
Commissions	Expense	US Dollar	USD 0.00	USD 0.00
Boom	Expense	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Expense	Hong Kong Dollar	HKD 0.00	USD 0.00
Income	Income	US Dollar	USD 0.00	USD 0.00
Investments	Income	US Dollar	USD 0.00	USD 0.00
Dividend	Income	US Dollar	USD 0.00	USD 0.00
Boom	Income	Hong Kong Dollar	HKD 0.00	USD 0.00

USD, grand total: Assets: USD 0.00 Profits: USD 0.00

Chart of Accounts for international stocks

The stock definition can be seen in the Security Editor. (Tools+Security Editor)

Namespace	Symbol	Name	Source	Timezone
CURRENCY				
HK	0694.HK	Beijing Airport	yahoo_asia	Europe/London

Show National Currencies

+ Add - Remove Edit X Close

International securities

If you have not moved money (HKD 50,000) into the brokerage cash account (*Assets:Investments:Brokerage Account:Boom:Bank*), do so now, either using the Equity (HKD) account, or an existing bank account (Currency Transfer).

There are two ways to enter the actual purchase transaction: you can enter it from the cash account (shown below), or you can enter it from the stock account. *If entered from the stock account, the stock is assumed to be priced in the currency of the parent account.*

Let's assume that the stock price is HKD 3 per share. To record the purchase, open the brokerage's HKD cash account (*Assets:Investments:Brokerage Account:Boom:Bank*), and enter the following:

Buy Stocks

Assets:Investments:Brokerage Account:Boom:Bank Withdrawal 50,000

Expenses:Investments:Commission:Boom_HKD	Deposit	500
Assets:Investments:Brokerage Account:Boom:0694	Deposit	49,500 (16,500 shares)

If the exchange rate dialog box does not appear automatically, right-click on the stock row, and select Edit Exchange Rate. Enter the number of shares (16,500) as the To Amount.

Setting the number of shares in the Transfer Funds dialog

When you return to the Chart of Accounts, you will see the purchased shares reflected in the stock account's total.

Account Name	Type	Commodity	Total	Total (USD)
Assets	Asset	US Dollar	USD 0.00	USD 0.00
Investments	Asset	US Dollar	USD 0.00	USD 0.00
Brokerage Account	Bank	US Dollar	USD 0.00	USD 0.00
Boom	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
0694.HK	Stock	Beijing Airport	16,500 0694.HK	USD 0.00
Bank	Bank	Hong Kong Dollar	HKD 0.00	USD 0.00
Equity	Equity	US Dollar	USD 0.00	USD 0.00
Opening Balances	Equity	US Dollar	USD 0.00	USD 0.00
HKD	Equity	Hong Kong Dollar	HKD 50,000.00	USD 0.00
Expenses	Expense	US Dollar	USD 0.00	USD 0.00
Commissions	Expense	US Dollar	USD 0.00	USD 0.00
Boom	Expense	Hong Kong Dollar	HKD 500.00	USD 0.00
Income	Income	US Dollar	USD 0.00	USD 0.00
USD, grand total:			Assets: USD 0.00	Profits: USD 0.00

Chart of Accounts with some international stocks

However, as you can see, the USD totals may be zero if GnuCash doesn't have an exchange rate between USD and HKD. To fix this, go to Tools → Price Editor and click the Get Quotes button to automatically retrieve the exchange rates you need.

Примечание

To reiterate, this example shows how stock can be purchased in any currency by entering the transaction in the register of the cash account used to make payment. It is also possible to enter the purchase in the stock account's register, but be aware that the stock is assumed to be priced in the currency of the stock account's parent.

In this example, the stock account's parent (*Assets:Investments:Brokerage Account:Boom*) is denominated in HKD. Since this is same currency as the stock price, the purchase can be safely entered in the stock account's register.

Tracking Currency Investments

Currency investment is when you decide to invest in a different country's currency, and hope that it will rise in value relative your own currency.

When you enter these transactions into GnuCash, you will have to decide on how much detail you would like to have.

If you are not interested in detail at all, a very simple account structure would suffice:

```
Assets:Investments:Currency:Bank (USD)
Assets:Investments:Currency:XXX (XXX)
```

You would simply enter transfers between the two accounts, noting exchange rates as you went.

But, if you do want to be able to track capital gains or losses, as well as any fees, you do need a more complex account structure, such as:

```
Assets:Investments:Currency:Bank (USD)
Assets:Investments:Currency:Currency Bank:XXX (XXX)
Expenses:Investments:Currency:Currency Bank:XXX (XXX)
Income:Investments:Currency Bank:Capital Gains:XXX (XXX)
```

Purchasing Currency

When purchasing another currency, you will buy a certain number of units of foreign currency with your own currency, at a particular rate. For example, you might buy USD 10,000 worth of Andorran Francs, at 5 Francs to the dollar, with a transaction fee of \$150.

Buy Currency

Assets:Investments:Currency:Bank	Withdrawal	10,000
Expenses:Investments:Currency:Currency Bank:ADF	Deposit	150
Assets:Investments:Currency:ADF	Deposit	49,250

The Exchange Rate window should pop up when you leave the last row in the split above (Currency Transaction). If this window does not pop up, right click on the row or select Actions, and select Edit Exchange Rate. In the Exchange Rate window you specify the exchange rate you got from the bank.

Selling a currency investment

Entering a currency sale is done in the same way as a currency buy except that you are now transferring money from the Currency account to your Savings account (very similar to «Selling Shares»).

The proper recording of the currency sale *must* account for realized gains or losses. This can be done using a split transaction. In the split transaction, you must account for the profit (or loss) as coming from an *Income:Capital Gains* account (or *Expenses:Capital Loss*). To balance this income, you will need to enter the Currency asset twice in the split—once to record the actual sale (using the correct amount and correct exchange rate), and once to balance the income profit (setting the amount to 0).

In short, a selling Currency transaction should look something like below, seen again from the *Assets:Investments:Currency:Bank*.

Таблица 12.1. Selling a currency with a Split Transaction Scheme

Account	Deposit	Withdrawal
Assets:Investments:Currency:Bank	Sold Amount - Exchange Fee	
Expenses:Investments:Currency:Currency Bank:XXX	Exchange Fee	
Assets:Investments:Currency:XXX		Sold Amount
Income:Investments:Currency Bank:Capital Gains:XXX	[LOSS]	PROFIT
Assets:Investments:Currency:XXX	PROFIT (with To Amount = 0)	[LOSS (with To Amount = 0)]

Reconciling Statements in a Foreign Currency

Reconciling foreign statement are done in the same manner as when you reconcile your local bank statement. If you have created a Chart of Accounts structure which allows you to have the same currency per account as your statement, it is actually exactly the same as reconciling your local bank statement.

If you have different currencies you might have to manually convert the amounts from one currency to another while you reconcile the accounts.

Automatically Recording Currency Transactions using Trading Accounts

Trading accounts were introduced as a feature from GnuCash version 2.3.14. The conceptual basis for trading accounts is described in Tutorial on multiple currency accounting [<https://www.mathstat.dal.ca/~selinger/accounting/tutorial.html>] by Peter Selinger. A second tutorial Multiple currency accounting in GnuCash [<https://www.mathstat.dal.ca/~selinger/accounting/gnucash.html>] by Peter Selinger describes the manual creation and use of trading accounts in GnuCash prior to version 2.3.14.

Trading accounts are not enabled by default in GnuCash. To enable them go to File → Properties → Accounts tab and check the Use Trading Accounts checkbox.

Trading Account Concepts

In accounting terms, trading accounts are specialized equity accounts to record changes in revenue which result from transactions between two or more currencies. In GnuCash they are implemented as a top level

account type of Trading. When trading accounts are enabled the required sub accounts of Trading are automatically created if they do not already exist when a transaction between one or more currencies is created.

In the extended Accounting Equation, Trading accounts would appear as follows:

$$\text{Assets} = \text{Liabilities} + \text{Equity} (+ \text{Income} - \text{Expenses}) + \text{Trading} \quad (12.1)$$

Внимание

The user is prevented from manually making entries directly to the registers for any of the accounts in the Trading top level account group. All entries to these accounts are automatically generated when transactions between currencies are created in other account registers within the GnuCashaccount heirarchy.

The Trading account group is structured below the top level account Trading with a sub-account CURRENCY which in turn has a sub-account for each currency between which transactions have been made. For the example previously used in Manually Recording Currency Transactions, the additional accounts which will be created automatically when transactions are created between different currencies with trading accounts enabled are:

```
Trading
  CURRENCY
    EUR
    HKD
    USD
```

Внимание

The names of these accounts are again assigned automatically and cannot be changed by a user without disrupting the functionality of the trading accounts in GnuCash.

Recording Foreign Currency Transactions with Trading Accounts

Setup of Accounts for Trading Accounts

The same account structure used in the manual recording of currency transactions in the previous section is required. The initial account configuration for Assets and Equity accounts are as follows:

Initial setup of bank accounts in multiple currencies.

The following prices were entered in the Price Database (Tools → Price Database) as at 01/01/2020 to convert the account balances for the foreign currency accounts to USD:

Price Database window after setting initial exchange rates between USD and HKD and EUR.

With the currency prices set as shown, the Accounts tab will now display the values of the foreign accounts in USD in the Total(USD) column:

Accounts tab after setting exchange rates to USD.

Transfer of Funds to a Foreign Currency

Let us assume we wish to purchase an item in Hong Kong using the Hong Kong bank account for \$20000 HKD on 01/02/2020. The current funds in the Hong Kong account are insufficient and we will need to transfer another \$10200 HKD from the US bank account. The exchange rate at the time of the transfer is 1 USD = 7.7884 HKD and we will have to transfer \$1309.64 USD for which the bank charges a \$40 USD transfer fee. The transaction to effect this is created with the transfer funds dialog as shown below:

Transfer of 10200 HKD from US Bank account to Hong Kong bank account.

The debit amount has been specified in HKD and the transaction amount being transferred in USD. There is no provision to enter the transfer fee in the dialog. On closing the dialog the following transaction as viewed in the US Bank Account register has been created:

Примечание

Entering the Amount for the account that the funds are being transferred from the selected Credit Account and selecting the Debit Amount radio button and then entering the foreign currency amount to be debited generally provides a transaction recording the correct amounts whereas entering an exchange rate will often not give the exact value actually transferred in the foreign currency because of rounding errors.

Transaction to transfer from US bank account to Hong Kong Bank account after closing transfer dialog.

The transaction can be opened in the US Bank Account register and may then be edited to add splits for the transfer fee as follows:

Transaction to transfer from US bank account to Hong Kong Bank account after adding the splits for the transaction fee.

Returning to the Accounts tab we can see the result of the transfer transaction on the accounts:

Account balances in the Accounts tab after the transfer of funds from the US Bank account to the Hong Kong bank account.

The balances of the Asset and Equity accounts are presented with values set by the exchange rate entered in the transaction to transfer funds on 01/02/2020.

The trading accounts have been automatically created and the amounts of the transfer have been entered into the accounts. There are no entries associated with the pre-existing opening balances of the accounts prior to the transfer. This reflects that the trading accounts only reflect gains and losses since the book was opened.

At this point there have been no trading gains or losses. The balances of the USD and HKD trading accounts are the same when converted to USD. The HKD trading account has a debit (-ve balance) and the USD trading account has a credit balance (+ve balance). The nett balance of the CURRENCY sub account of Trading, and Trading itself, is 0 indicating that at this point no gains or losses have been recorded in the trading of currencies.

The hypothetical purchase in Hong Kong fails to take place and a month later on 01/03/2020 the funds are required in the US account for another purpose. A transfer of \$10200.00 HKD is made from the Hong Kong

bank account back to the US bank account. The exchange rate at the time of the transfer is 1USD = 7.7933 HKD and a fee of \$20.00 USD is charged for the transfer. The transaction to effect the transfer is:

The transaction transfers \$10200.00 HKD from the Hong Kong Bank account to the US Bank account.

After transferring the funds back to the US Bank account, the prices database entries are as follows:

The price database showing prices for the transfer of funds to HKD and back to USD.

The Accounts tab balances after transferring the funds back are:

State of the accounts after the funds have been transferred back.

The Assets and Equity balances now reflect the the values of the accounts at the exchange rate for the transfer of funds back to the US Bank account. The Trading accounts now indicate a modest realized loss of US\$0.82 on the currency transactions indicated by the balances in the CURRENCY and Trading placeholder accounts. The associated transfer fees appear in the Expenses total. Not a profitable exercise but still illustrative.

Примечание

The gains or losses reported using trading accounts are realized gains and losses.

Finally we have the balance sheet after the above sequence of transactions reporting the Trading Loss incurred:

Balance Sheet after these transactions reflecting the trading loss incurred.

Часть III. Организация бизнес финансов

Содержание

13. Business Features	199
Introduction to Business Features	199
Business Setup	199
Account Setup	199
Setting up Sales Tax Tables	200
Enter Company Information	202
Setting Business Preferences	204
Setting Billing Terms	204
Accounts Receivable	205
System Components	206
Customers	206
Invoices	208
Customer Jobs	211
Process Payment	212
Changing the Invoice Appearance	213
Accounts Payable	215
System Components	215
Vendors	215
Bills	217
Vendor Jobs	220
Process Payment	220
Payroll	221
Basic Concepts	221
Account Setup	221
Payroll Protocol Sample	222
Business Payroll Example	224
14. Budgets	228
Basic Concepts	228
Terminology	228
Creating a Budget	228
Choose Which Accounts To Budget For	228
Choosing a Budget Period	229
Getting Started	229
Entering Budget Values	229
Budget Reporting	229
Budgeted Income Statement	230
Budgeted Balance Sheet	230
15. Other Assets	231
General Concepts	231
Other Assets Described	231
Current Assets	231
Long-term (Fixed) Assets	231
Current Assets	231
Short-term Receivables	231
Reimbursable Expenses	232
Travel Advances	233
Prepaid Premiums or Prepaid Rent	233
Suspense or Wash Accounts	234
Short or Long-term Assets	235
Long-term (Fixed) Assets	235
Land	235

Buildings	235
Leasehold Improvements	236
Vehicles or Equipment	236
Intangibles	236
16. Depreciation	237
Basic Concepts	237
Personal Finances	237
Business	237
Estimating Valuation	238
Depreciation Schemes	238
Account Setup	240
Example	241
17. Python Bindings	244
18. Importing Business Data	245
Importing Bills and Invoices	245
General	245
The format of the import file	245
Import your data	247
Feedback and statistics	247
What could go wrong?	248
Not supported invoice functionality	249
Importing Customers and Vendors	250
General	250
The format of the import file	250
Import your data	251
Feedback and statistics	252
What could go wrong?	252
Not supported customer/vendor functionality	253

Глава 13. Business Features

Introduction to Business Features

The accounting needs of a business are quite different from that of a person. Businesses have customers that owe money, vendors which are owed money, employee payroll, more complex tax laws, etc. GnuCash offers business oriented features to facilitate these needs.

Accounts Receivable (A/R) are used by businesses to record sales for which they are not immediately paid. This is represented on the balance sheet as an asset, because the expectation is that you will receive payment soon.

Accounts Payable (A/P) record bills that businesses have received, but may not pay until later. This is represented on the balance sheet as a liability because you will have to pay for them.

A/R and A/P accounts are used primarily when you have a lot of bills and receipts flowing in and out, and do not want to lose track of them just because you do not pay or get paid right away. For most home users, A/R and A/P are too complicated to be worthwhile.

Business Setup

To set up GnuCash to handle accounts receivable or accounts payable for a company, these preliminary steps must be done.

- Build an appropriate Account Hierarchy.
- Set up Sales Tax Tables.
- Enter the company information in GnuCash.
- Set Business Preferences.
- Set up Billing Terms.

Account Setup

There are many different ways to set up a business account hierarchy. You can start with the Business Accounts setup which is available from the New Account Hierarchy assistant, or you could build one manually. To access the prebuilt Business Accounts, start GnuCash and click on File → New File and proceed until you see the list of available accounts, select Business Accounts.

The prebuilt Business Account hierarchy will not meet your needs exactly. You will need make adjustments to the hierarchy so that it will meet your particular needs. It should be close enough, however, that it is recommended you begin with it.

To use GnuCash's integrated accounts receivable system, you must first set up a special account (usually a sub-account under Assets) to hold transactions for receivables. This account must be defined with account type *A/Receivable*. GnuCash will use this account to place transactions related to the integrated accounts receivable system.

To use GnuCash's integrated accounts payable system, you must first set up an account (usually a sub-account under Liabilities) to hold transactions for payables. This account must be defined with account type

A/Payable. GnuCash will use this account to place transactions related to the integrated accounts payable system.

Basic A/R and A/P Account Hierarchy:

```
-Assets
  -Accounts Receivable
  -Checking
-Expenses
  ... (as required)
-Income
  -Sales
-Liabilities
  -Accounts Payable
  -Tax
    -Tax on Purchases
    -Tax on Sales
```

You need to add additional accounts to this hierarchy for it to be useful.

Примечание

You do not need to create an individual A/R account for each customer. GnuCash keeps track of customers internally and provides per-customer reports based on the internal tracking. The same applies to A/P and vendors.

Примечание

If you deal with customers in more than one currency you will need a separate Accounts Receivable account *for each currency*.

If you deal with vendors in more than one currency you will need a separate Accounts Payable account *for each currency*.

Примечание

Transactions involving an Accounts Receivable or Accounts Payable account should not be added, changed or deleted in any way other than by using Post/Unpost Bill/Invoice/Voucher or Process Payment!

Setting up Sales Tax Tables

Sales Tax Tables can be used to determine the tax for customer invoices (or vendor bills).

A tax table entry can be assigned to an invoice line or bill line.

Set up distinct tax tables for customers and vendors.

The default invoice tax table entry can be assigned to each customer and the default bill tax table entry can be assigned to each vendor.

The default tax table entry for new customers or new vendors can be specified in the *Book Options* window which can be accessed by File → Properties → Business tab.

Sales Tax Tables are maintained using the *Sales Tax Table* editor which is accessed via menu **Business** → **Sales Tax Table** .

Рисунок 13.1. Sales Tax Tables Editor

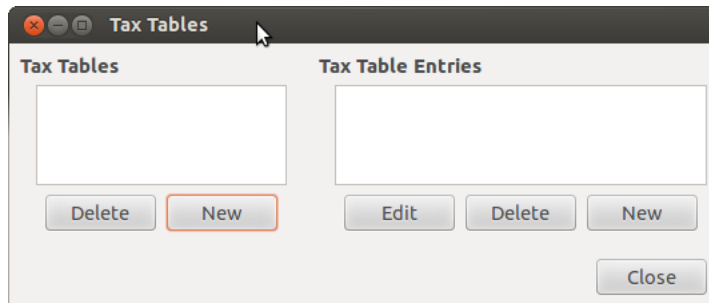
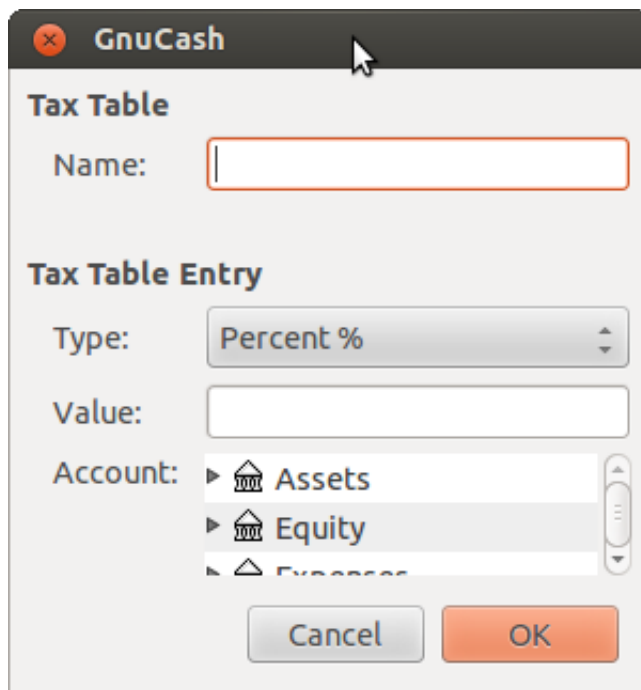


Рисунок 13.2. New Sales Tax Table Entry



- Name This is the tax table name.
- Type Either Percent % or Value \$.
- Value This is the percentage or value depending on Type.
- Account This is the account to which tax will be posted. For tax collected from customers, this should probably be a Liability account as it must be payed to the government. For tax paid to vendors, if tax laws allow tax paid to vendors to offset tax collected from customers, this should probably also be a Liability account (even though it will usually have a debit balance) so that the net tax owed to the government can be easily observed.

If you set up Tax on Purchases and Tax on Sales as subaccounts of Liabilities:Tax then the net tax will be rolled up and can be seen in the GnuCash Accounts tab.

If unsure about tax law requirements, get professional advice.

The following charts illustrate sample tax tables and may be used as starting points to determine the setup appropriate for a particular jurisdiction.

Таблица 13.1. Sample Tax Table Entries for EU country (e.g. 21% / 6% / 0% Belgium, 20% / 5% / 0% UK etc.) (2017)

Tax Table	Tax Table Entries [Asset/ Liability]	Percentage or Amount
Standard VAT Sales	VAT:Sales:Standard [L]	21%
Reduced VAT Sales	VAT:Sales:Reduced [L]	6%
Zero-Rated VAT Sales	VAT:Sales:Zero [L]	0%
EC Sales	VAT:Sales:EC [L]	21%
	VAT:Sales:Reverse EC [L]	-21%
Standard VAT Purchases	VAT:Purchases:Standard [A]	21%
Reduced VAT Purchases	VAT:Purchases:Reduced [A]	6%
Zero-Rated VAT Purchases	VAT:Purchases:Zero [A]	0%

Таблица 13.2. Sample Tax Table Entries for Australia (2017)

Tax Table	Tax Table Entries [Asset/ Liability]	Percentage or Amount
Standard GST Sales	GST:Sales:Standard [L]	10%
GST-free Sales	GST:Sales:Zero [L]	0%
Standard GST Purchases	GST:Purchases:Standard [A]	10%
GST-free Purchases	GST:Purchases:Zero [A]	0%

Таблица 13.3. Sample Tax Table Entries for Cook County, Illinois (2017)

Tax Table	Tax Table Entries [Asset/ Liability]	Percentage or Amount
Chicago Sales Taxes	Taxes:Sales:State [L]	6.25%
	Taxes:Sales:City [L]	1.25%
	Taxes:Sales:County [L]	1.75%
	Taxes:Sales:Region [L]	1%

Enter Company Information

After you have built the account structure and defined your tax tables, designate your company in the GnuCash file. To do this, select the Business tab in the Book Options window, which can be accessed from File → Properties .

Рисунок 13.3. Entering Company Information

Book Options

Accounts Budgeting **Business** Counters

Company Name:

Company Address

Company Contact Person:

Company Phone Number:

Company Fax Number:

Company Email Address:

Company Website URL:

Company ID:

Default Customer TaxTable:

Default Vendor TaxTable:

Fancy Date Format:

Months: Number Abbreviation Name

Years: Include Century

Format:

Sample: 29/08/2015

Here you can:

- Enter the name of your company along with contact information such as your phone number, fax number, e-mail address and website URL.
- Enter your company's tax payer id number in the Company ID field.

- Select default tax tables applicable to your most common customers and vendors.

Setting Business Preferences

Set options on the Business tab of the GnuCash preferences, which is accessed via Edit → Preferences (GnuCash → Preferences on macOS). See Help manual chapter 10.3.3 Business Book Options Tab.

Setting Billing Terms

Billing Terms can be used to determine the payment due date and be a guide for determining discount for early payment of invoices (or vendor bills).

Примечание

As of GnuCash 2.6.7, Billing Terms are only partially supported. Date due is calculated using the Billing Terms but discount amount is not.

Discount for early invoice payment is not implemented. There are 2 ways this may be done, although neither is recommended, and professional advice should be used to confirm that regulations are being complied with:

- After creating and posting a payment which pays the invoice in full, manually edit the payment transaction (usually strongly discouraged) and split the payment to reduce it by the amount of the discount and create a compensating split in an income (discount) account.
- Alternatively, after creating and posting a payment for the discounted amount, create a credit note for the discount using a specific negative sales income (discount) account for the transfer account.

You can specify the billing terms on each invoice/bill. Invoice billing terms will default from the customer billing terms. Bill billing terms will default from the vendor billing terms.

Billing Terms are maintained using the Billing Terms Editor which is accessed via menu Business → Billing Terms Editor .

Рисунок 13.4. Billing Terms Editor

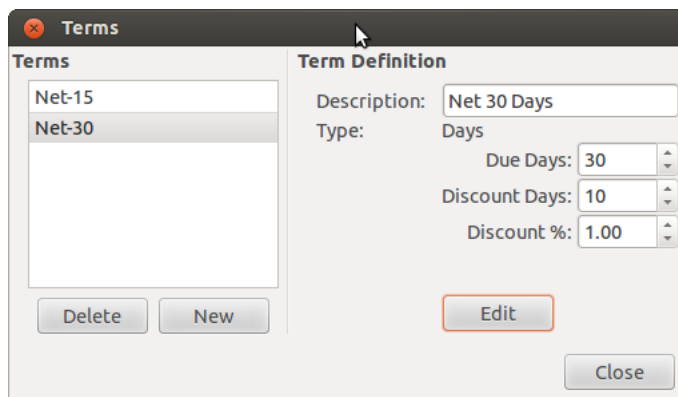


Рисунок 13.5. New Billing Term

- Name The internal name of the billing term. For some examples of billing term names and descriptions see https://wiki.gnucash.org/wiki/Payment_Terms.
- Description The description of the billing term, printed on invoices
- There are 2 types of billing terms, with different information to be entered
 - Type Days
 - Due Days The invoice or bill is due to be paid within this number of days after the post date
 - Discount Days The number of days after the post date during which a discount will be applied for early payment
 - Discount % The percentage discount applied for early payment
 - Type Proximo
 - Due Day The day of the month bills are due
 - Discount Day The last day of the month for the early payment discount
 - Discount % The discount percentage applied if paid early
 - Cutoff Day The cutoff day for applying bills to the next month. After the cutoff, bills are applied to the following month. Negative values count backwards from the end of the month.

Accounts Receivable

Accounts Receivable (or A/R) refers to products or services provided by your company for which payment has not yet been received.

System Components

Transactions generated by the A/R system are recorded within the Accounts Receivable account. *You should not work directly with this account.* Instead, you will work with the four integrated GnuCash A/R application components available through the Business → Customer sub-menu. These four components are:

- Customers are people or companies to whom you sell products or services on credit.
- Invoices represent the physical invoice you send to a customer to request payment. This invoice contains an itemized list of things you sold.

In addition, GnuCash also has support for Credit Notes which represent the inverse of Invoices. A credit note is usually handed to a customer to correct items that were incorrectly invoiced or returned.

Both document types will be set up using the same menu items. Credit notes were introduced starting with GnuCash stable release 2.6.0.

- Jobs (optional) is where you register Customer Jobs. Jobs are a mechanism by which you can group multiple invoices to a particular customer.
- Process Payments is used to register payments you received from a customer.

Customers

Customers are people or companies to whom you sell goods or services. They must be registered within the A/R system.

New

To register a new customer, enter the menu Business → Customer → New Customer . Fill in customer information, such as Company Name, Address, Phone, Fax, etc.

Рисунок 13.6. New Customer Registration Window

New Customer - ABC Inc ()

Customer | Billing Information | Shipping Address

Identification

Customer Number:

Company Name:

Active

Billing Address

Name:

Address:

Phone:

Fax:

Email:

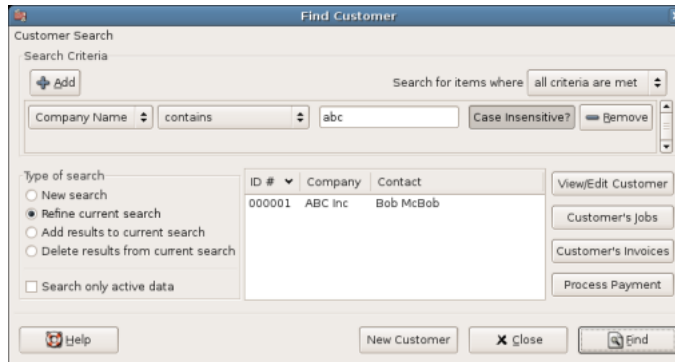
Notes

Help Cancel OK

Find and Edit

To search for an existing customer, use the Business → Customer → Find Customer window. You select a customer to View/Edit from the results of the search. This window is also used to look up customers when creating invoices and processing payments.

Рисунок 13.7. Find Customer Window



If many customers match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the customer you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the customer is not in the result of the original search, and you only search within this set, the customer cannot be found, regardless of new search criteria.

Примечание

To return a list of all registered active customers, set the search criterion to matches regex, and place a single dot "." in the text field area. Make sure Search only active data is checked, then click Find. The regular expression "." means to match anything.

Invoices

An invoice is the paperwork you send to a customer to request payment for products or services rendered. GnuCash can generate and track invoices.

A credit note is the paperwork you send to a customer to correct products or services rendered that were incorrectly invoiced. GnuCash can generate and track credit notes via the same menu entries as invoices.

Примечание

This section applies to both invoices and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to invoices. You can apply it equally to credit notes. Only where the behavior of credit notes differs from invoices this will be explicitly mentioned.

New

To send an invoice to a customer you must first create the new document. To create an invoice use Business → Customer → New Invoice . The New Invoice window must be filled in appropriately.

Рисунок 13.8. Creating a New Invoice

New Invoice

Invoice Information

Invoice ID

Date Opened ▼

Billing Information

Customer Select...

Job Select...

Billing ID

Terms ▲▼

Notes

Your personal notes go here.
Notes do not appear on printed invoices.

Help Cancel OK

When you click the OK button, the Edit Invoice window opens.

Edit

From the Edit Invoice window you can enter an itemized list of goods and services you sold on this invoice in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services you refunded instead.

Рисунок 13.9. Edit Invoice Window

documentation - Edit Invoice - 000001

File Edit View Actions Business Reports Tools Windows Help

Save Close Edit Invoice Enter Cancel Delete Duplicate Blank Post Unpost

Accounts Edit Invoice - 000001

Invoice Information: Invoice ID 000001, Date Opened 04/19/06, Active

Billing Information: Customer ABC Inc, Job, Billing ID ABC Purchase Order # 12988, Terms 30 Days

Notes: Your personal notes go here. Notes do not appear on printed invoices.

Date	Description	Action	Income Account	Quantity	Unit Price	Discount	Subtotal	Tax
04/19/06	X Nails		Income:Sales	1,000.00	0.10	% <	100.00	0.00
04/19/06	X Hammer		Income:Sales	1.00	500.00	% < 5.00 X	475.00	0.00
04/19/06	Description	Action	Income Account	Quantity	Unit Price	% < Discount X	0.00	0.00

Total: \$575.00 Subtotal: \$575.00 Tax: \$0.00

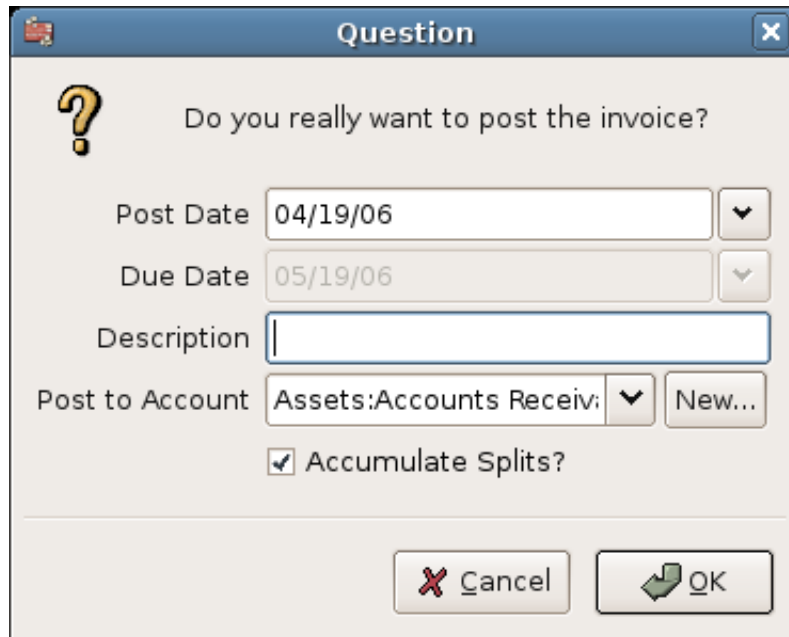
Wednesday 19 April 2006

When you have finished entering all the items, you can Post and print the invoice.

Post

When you finish editing an invoice and are ready to print, you must Post the invoice. The invoice does not have to be posted immediately. In fact, you should only post an invoice when you are ready to print it. Posting an invoice places the transactions in an accounts receivable account.

Рисунок 13.10. Post Invoice Window



Find

To find an existing invoice, use the Business → Customer → Find Invoice menu item. From the results of the search, you can select an invoice to edit or view.

Примечание

Before you can edit a posted invoice, you will need to Unpost it.

One of the design goals in GnuCash's Account Receivable system was to allow different processes to get to the same state, so you can reach an invoice from different directions based on the way you think about the problem:

- You can search for the customer first, then list their invoices.
- You can search for invoices by number or by company name.
- You can list invoices associated with a customer job.

Print

After you post an invoice, you should print it and send it to your customer. To print an invoice use File → Print Invoice menu item.

Рисунок 13.11. Invoice Print Output

Invoice #000001							
Invoice Date: 04/19/06				My Company			
Due Date: 05/19/06				9876 Second St.			
				Othercity, SS 12345			
				April 19, 2006			
ABC Inc							
123 First Ave.							
Somecity, SS 12345							
Reference: ABC Purchase Order # 12988							
Terms: 30 Days - same as cash							
Date	Description	Charge Type	Quantity	Unit Price	Discount	Taxable	Total
04/19/06	Nails	Material	1,000.00	\$0.10	0.00%		\$100.00
04/19/06	Hammer	Material	1.00	\$500.00	5.00%		\$475.00
Subtotal							\$575.00
Tax							\$0.00
Amount Due							\$575.00
Thank you for your patronage							

Примечание

You can modify the appearance of the invoice, IE: add a company logo, etc. To do so, see the «Changing the Invoice Appearance».

Invoices can also be printed from the main window by selecting Reports → Business Reports → Printable Invoice from the main menu. The resulting report window states that no valid invoice is selected. To select the invoice to print:

1. Use the Options *Toolbar* button or select Edit → Report Options from the main menu.
2. Select the General tab of the report options dialog.
3. Click the Select button next to the Invoice Number field.
4. Search for the invoice as usual.

You can also print invoices from within the Process Payment dialog. See the «Process Payment» for instructions on how to do so.

Assign Starting Invoice Number

By default, GnuCash starts with invoice number 1 and increments from there. You can manually type an invoice number into the text box each time you create an invoice, but this gets tiring and sooner or later leads to duplicate numbers.

You can change the starting invoice number if it is important you. Use File → Properties , access the Counters tab, change the Invoice number value to be one less than your desired starting invoice number and click the OK button or the Apply button.

Customer Jobs

Customer Jobs are used to group multiple invoices and credit notes to the same customer. Use of the Customer Jobs feature is optional. The feature is useful when you have multiple jobs for the same customer, and would like to view all the invoices and credit notes related to a single job.

Рисунок 13.12. New Customer Job

The screenshot shows a dialog box titled "New Job - ABC Deck Construction ()". It is divided into three sections:

- Job Information:** Contains two text input fields. "Job Number" is empty, and "Job Name" contains the text "ABC Deck Construction".
- Owner Information:** Contains two text input fields. "Customer" contains "ABC Inc" and has a "Select..." button to its right. "Billing ID" contains "ABC Purchase Order # 12988".
- Active:** Contains a checked checkbox labeled "Job Active".

At the bottom of the dialog are three buttons: "Help" (with a question mark icon), "Cancel" (with a red X icon), and "OK" (with a green checkmark icon).

To use customer jobs, you must create them using the Business → Customer → New Job menu item. You will see the New Job window.

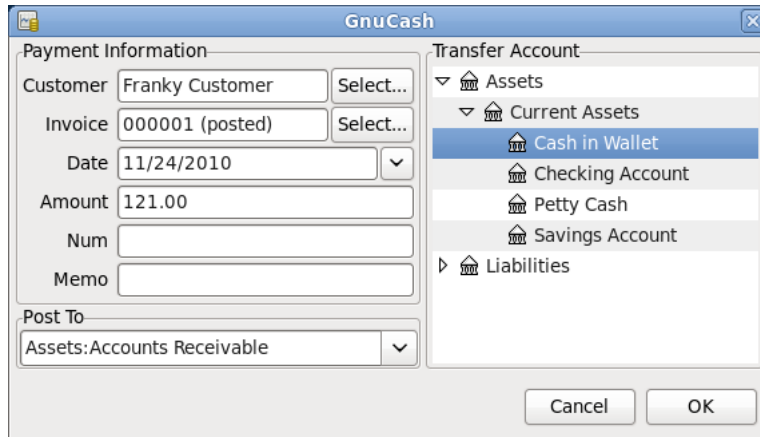
To edit an existing customer job, use the Business → Customer → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

To select from the invoices and credit notes associated with a given job, use Business → Customer → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing invoices and credit notes associated with this job appears. Select an invoice or credit note and click the View Invoice button to open an invoice editor in the main application window.

Process Payment

Eventually, you will receive payment from your customers for outstanding invoices. To register these payments, use the Process Payment application found in Business → Customer → Process Payment .

Рисунок 13.13. Process Customer Payment



Process Payment from Customer

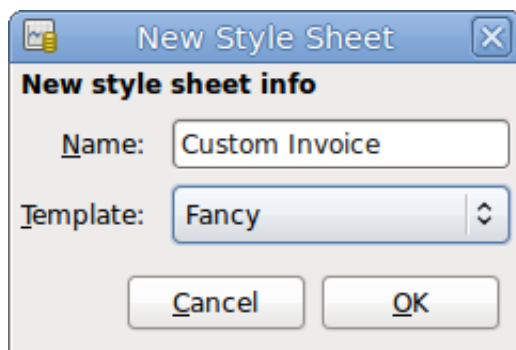
Changing the Invoice Appearance

The default Invoice style, as shown in «Print», is fairly barren. The default invoice style leaves the top part of the form blank, so you can print on company letterhead paper. There are some things you can do to change invoice appearance.

Use File → Properties to enter your Company information in the Business tab of the Book Options window. Some of the entered information is printed on the right side of invoices.

To add a customized background, heading banner or logo to invoices, modify the invoice style sheets. To do this, go to Edit → Style Sheets and select the New button in the Select HTML Style Sheet window that will appear. You will then see a window like this:

Рисунок 13.14. The New Style Sheet Window

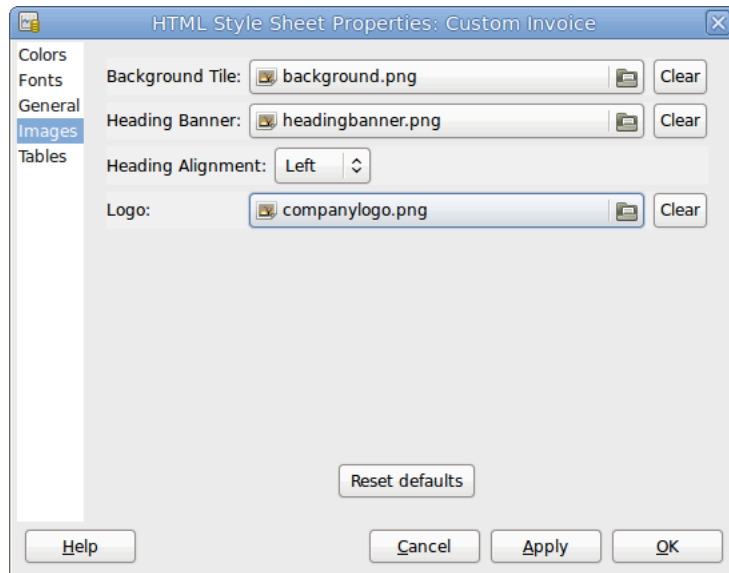


Give a Name to the new style sheet (e.g. Custom Invoice) and select the Fancy Template. When you click the OK button, the HTML Style Sheet Properties window is displayed. This window presents you five sections listed in the left pane: Colors, Fonts, General, Images, and Tables. The Colors section allows you to change the colors of various items of the invoice. The Fonts section lets you set fonts type and dimensions. The General section allows you to set the Preparer and Prepared for information, and to Enable Links. The Images section allows you to import graphics into the style sheet. The Tables section allows you to adjust the spacing around the tables which make up the invoice.

To include a company logo, banner heading and background image, use your favorite graphics application such as The Gimp or OpenOffice Draw to save the images in either GIF or PNG format. Then import them into the style sheet using the Images section described above.

Below is an example that imports all three types of images.

Рисунок 13.15. HTML Style Sheets Example Window



The HTML Style Sheets window with an example Background Tile, Heading Banner, and Logo.

Примечание

The images are placed in the invoice as follows. The Background Tile is tiled to become the background image, the Heading Banner goes to above the invoice text, and the Logo is placed in the upper left corner of the invoice to the left of the Heading Banner. You will probably have to try a few different sized images until you get the invoices to print nicely. Some sizing suggestions are that the Logo should be 1 square cm (~0.5 inch), and the Heading Banner should be 15 cm (~6 inches) wide and 1 cm (~0.5 inch) tall.

With the style sheet configured, when you print the invoice, you select the style sheet to use from the Options menu. Below is the resultant invoice after applying the style sheet demonstrated above.

Рисунок 13.16. HTML Style Sheets Example Output

My Company Logo **Heading Banner**

Invoice #000001
 Invoice Date: 04/19/06
 Due Date: 05/19/06

My Company
 9876 Second St.
 Othercity, SS 12345
 April 23, 2006

ABC Inc
 123 First Ave.
 Somecity, SS 12345

Reference: ABC Purchase Order # 12988
 Terms: 30 Days - same as cash

Date	Description	Charge Type	Quantity	Unit Price	Discount	Taxable	Total
04/19/06	Nails	Material	1,000.00	\$0.10	0.00%		\$100.00
04/19/06	Hammer	Material	1.00	\$500.00	5.00%		\$475.00
Subtotal							\$575.00
Tax							\$0.00
Amount Due							\$575.00

Thank you for your patronage

The hideous invoice which results from the graphics selected in the style sheet.

Accounts Payable

Accounts Payable (or A/P) refers to the accounting of products or services which a company has bought and needs to pay for.

System Components

GnuCash has an integrated accounts payable system. The transactions generated by the A/P system are placed within the Accounts Payable account, as a record of what occurs. Generally you do not directly work with this account but use the four integrated GnuCash A/P application components. The A/P components are available from the Business → Vendor sub-menu. These A/P components are:

- Vendors are people or companies from which you buy products or services on credit.
- Bills represent the physical bills vendors send to request payment from you. A bill contains an itemized list of things you purchased.

In addition, GnuCash also has support for Credit Notes which represent the inverse of Bills. A credit note is usually received from a vendor to correct items that were erroneously billed or returned.

Both document types will be set up using the same menu items.

- Jobs (optional) is where you register Vendor Jobs. Jobs are mechanism by which you can group multiple bills from a particular vendor.
- Process Payments is where you register payments to a vendor to whom you owe money.

The following sections introduce the individual Accounts Payable application components.

Vendors

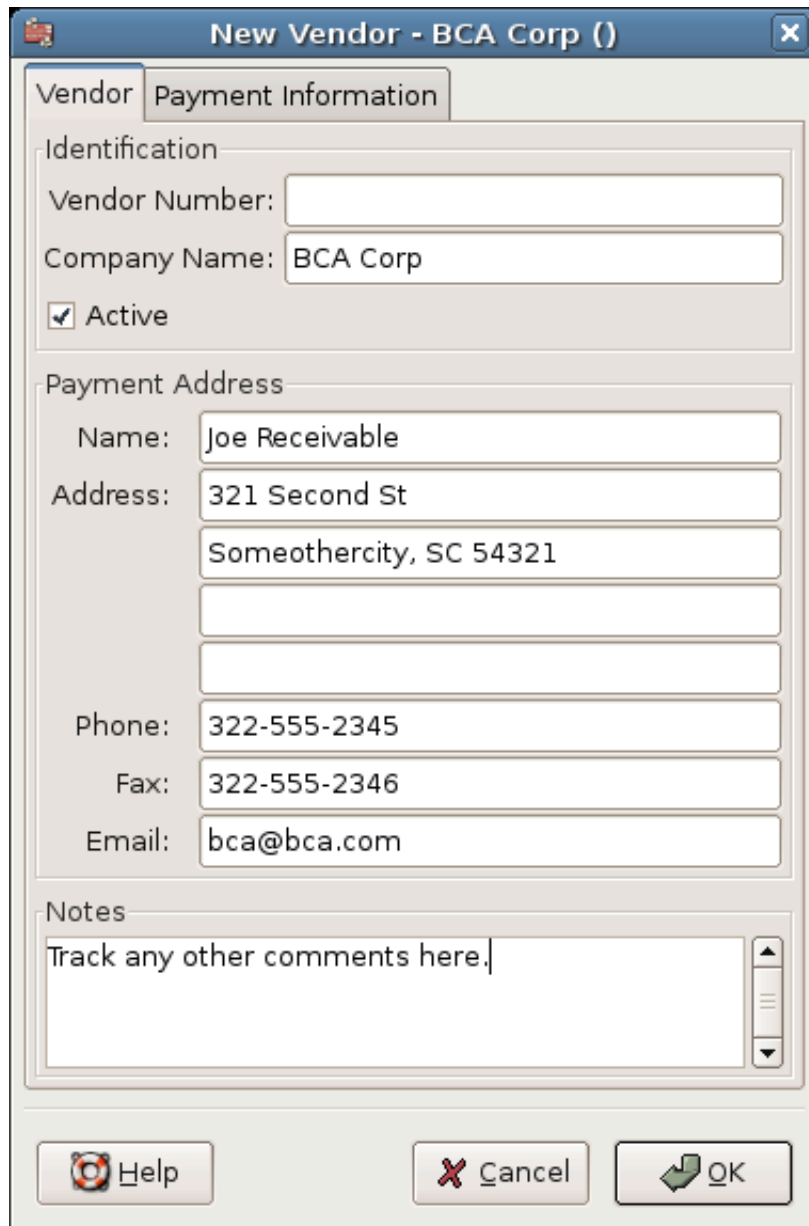
A vendor is a company or person from whom you purchase goods or services. Vendors must be registered within the A/P system.

New

To register a new vendor, select the Business → Vendor → New Vendor menu item. Fill in general information about the vendor, such as Company Name, Address, Phone, Fax, etc. Below is a list of the other options:

This is what the New Vendor registration window looks like:

Рисунок 13.17. New Vendor Registration Window



The screenshot shows a window titled "New Vendor - BCA Corp ()" with two tabs: "Vendor" (selected) and "Payment Information". The "Vendor" tab contains the following fields:

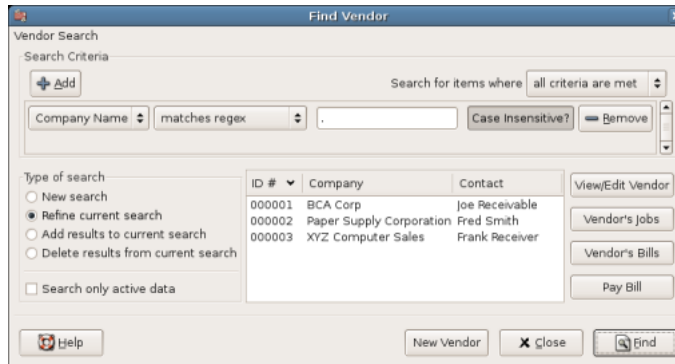
- Identification**
 - Vendor Number: [Empty text box]
 - Company Name: BCA Corp
 - Active
- Payment Address**
 - Name: Joe Receivable
 - Address: 321 Second St
 - Someothercity, SC 54321
 - [Empty text box]
 - [Empty text box]
 - Phone: 322-555-2345
 - Fax: 322-555-2346
 - Email: bca@bca.com
- Notes**
 - Track any other comments here. |

At the bottom of the window are three buttons: "Help" (with a lifebuoy icon), "Cancel" (with a red X icon), and "OK" (with a green checkmark icon).

Find and Edit

To search for an existing vendor, use the Business → Vendor → Find Vendor window. You select a vendor to View/Edit from the results of the search. This window is also used to look up a vendor when entering bills and processing payments.

Рисунок 13.18. Find Vendor Window



If many vendors match the search criteria you provide, the search can be refined by running an additional search within the current results. The current result set is searched when the Refine Current Search radio button is selected. In fact, GnuCash selects this option for you after you run the initial search.

If the vendor you are searching for does not match the supplied search criteria, change the search criteria, click the New Search radio button and then the Find button. The relevant step is the New Search selection. If the vendor is not in the result of the original search, and you only search within this set, the vendor cannot be found, regardless of new search criteria.

Примечание

To return a list of all registered active vendors, set the search criterion to matches regex, and place a single dot «.» in the text field area. Make sure Search only active data is checked, then click Find. The regular expression «.» means to match anything.

Bills

A bill is a request for payment you receive from a vendor. GnuCash can track bills.

A credit note is the document you receive from a vendor to correct products or services rendered that you were incorrectly charged for on a bill. GnuCash can generate and track credit notes via the same menu entries as bills.

Примечание

This section applies to both bills and credit notes. In order to avoid repeating everything twice and to keep the text easier to read it will refer only to bills. You can apply it equally to credit notes. Only where the behaviour of credit notes differs from bills this will be explicitly mentioned.

New

When you receive a bill from a vendor and want to enter it into GnuCash, you must create a new bill. To create a new bill use the Business → Vendor → New Bill menu item, and fill in the resulting window appropriately.

Рисунок 13.19. New Bill Registration Window

The screenshot shows a 'New Bill' registration window with the following fields and controls:

- Invoice Information:**
 - Invoice ID:
 - Date Opened:
- Billing Information:**
 - Vendor: - Job: - Billing ID:
 - Terms:
- Default Chargeback Project:**
 - Customer: - Job:
- Notes:**
 - Additional notes about the bill go here. |

At the bottom of the window are three buttons:

When you click the OK button the Edit Bill window opens.

Edit

From the Edit Bill window you can enter an itemized list of goods and services you purchased, in a manner similar to how the account register works. For credit notes you enter an itemized list of goods and services the vendor refunded instead.

Рисунок 13.20. Edit Bill Window

When you have finished entering all the items, Post the bill.

Post

When you finish editing a bill, you should Post the bill. You do not have to post the bill, you can close it and return to it later. You have to post the bill eventually. Posting a bill places its transactions into an accounts payable account. The Post Bill window appears and asks you to enter information:

Рисунок 13.21. Post Bill Window

Find

To find an existing bill, use the Business → Vendor → Find Bill menu item. From the results of the search, you can select a bill to edit, or view.

Примечание

Before you can edit a posted bill, you will need to Unpost it.

Примечание

There are other ways to access an existing bill. These are similar to accessing invoices for your customers. See «Find» for more information.

Vendor Jobs

Vendor Jobs are used to group multiple bills and credit notes from a single vendor. Use of the vendor jobs feature is optional. The feature is useful when you have multiple jobs for the same vendor, and would like to view all the bills and credit notes for a single job.

To use vendor jobs, you must create them using the Business → Vendor → New Job menu item. You will see the New Job window.

Рисунок 13.22. New Vendor Job

The screenshot shows a dialog box titled "New Job - 2006 Computer Upgrades". It is divided into three main sections:

- Job Information:** Contains a "Job Number" text box (empty) and a "Job Name" text box containing "2006 Computer Upgrades".
- Owner Information:** Contains a "Vendor" text box with "XYZ Computer Sales" and a "Select.." button to its right. Below it is a "Billing ID" text box (empty).
- Active:** Contains a checked checkbox labeled "Job Active".

At the bottom of the dialog are three buttons: "Help" (with a question mark icon), "Cancel" (with a red X icon), and "OK" (with a green checkmark icon).

To edit an existing vendor job, use the Business → Vendor → Find Job menu item. Select the desired job in the search results, and click the View/Edit Job button.

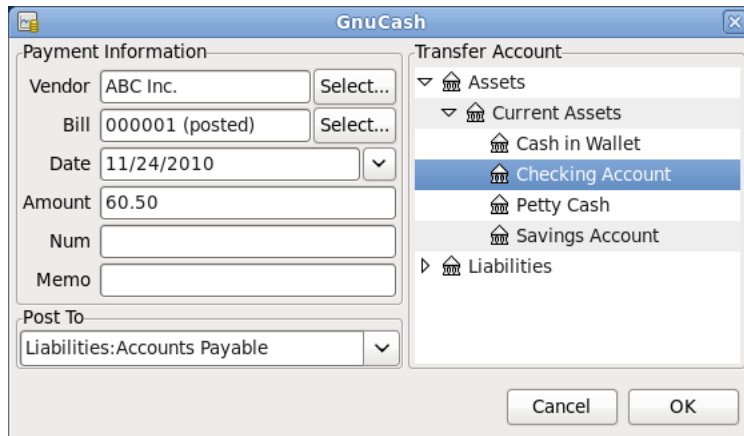
To select from the bills associated with a given job, use Business → Vendor → Find Job menu item. Select the desired job in the search results and click the View Invoices button. A window listing bills and credit notes associated with this job appears. Select a bill or credit note and click the View Invoice button to open a bill editor in the main application window.

Process Payment

Eventually, you need to pay your bills. To do so, use the Process Payment application found in Business → Vendor → Process Payment .

Below is the GnuCash Accounts Payable payment window.

Рисунок 13.23. Process Vendor Payment



Process Payment to Vendor

Payroll

Payroll is a financial record of wages, net pay, paid vacations, and deductions for an employee. This section demonstrates how to track payroll using GnuCash.

Basic Concepts

Payroll is a financial record of wages, net pay, paid vacations, and deductions for an employee. Basically, anything that relates to giving money or benefits to an employee. Payroll is one of the more complex tasks in accounting, because there are many different accounts, people, and agencies involved in paying salaries.

Payroll is typically accounted for as an expense. Sometimes accountants «store» some payroll expenses in a short term liability account. This is useful for things such as payroll taxes, which may be paid at a different time than the employee. The employee might get paid biweekly, while taxes are paid quarterly. This chapter presents a methodology which expenses payroll immediately for salaries, but stores taxes in liability accounts.

Примечание

GnuCash does not have an integrated payroll system. While you can track payroll expenses in GnuCash, the calculation of taxes and deductions has to be done outside of GnuCash.

Account Setup

Local tax law must be considered when setting up accounts. Because there are many different ways payroll taxes are handled throughout the world, this section presents a very simple structure. From this, you should be able to adapt your particular payroll deductions setup.

Assume that you must pay 2 taxes, Tax1 and Tax2, and that each has an employee contribution and an employer contribution.

The employee's salary and these two taxes are expense accounts. The tax components are liability accounts. The tax liability accounts are where you accumulate the taxes withheld for all of your employees. The taxes are later paid to the appropriate government agency.

Simple Payroll Account Layout:

```
-Assets
--Checking
-Liabilities
--Tax1 (short term «storage» account)
--Tax2 (short term «storage» account)
-Expenses
--Salaries
--Tax1
--Tax2
```

Примечание

Resist the temptation to create per-employee sub-accounts to track individual salaries. Creating a sub-account for each employee leads to unmanageably large lists of accounts. Imagine the account structure after a few years of employees coming and going. It is much simpler to keep all of your employees' payroll records within a single account (*Expenses:Salaries* for example) and use reports to view per-employee information.

The Transaction report can be used to sort and total by description or memo (but not by part of them).

To report salary transactions for a specific employee where the employee name or code is entered in the transaction description or memo, use the Find Transaction assistant (Edit → Find) to select the transactions, and then report on them using Reports → Account Report . Further formatting or analysis may be done by copying and pasting the report into a spreadsheet. See Find Transaction [ghelp:gnucash-help?tool-find-txn] in the GnuCash Help Manual.

Payroll Protocol Sample

GnuCash does not have an integrated payroll system. GnuCash can track your payroll expenses, but you need to develop a payroll protocol and perform the calculations outside of GnuCash, in a spreadsheet for example. In this section, one such protocol is presented. You can use the sample protocol as a model.

Step 1: Deductions list

The first step to the payroll protocol is to create a list of all the possible taxes and deductions for each employee. Each entry should include definitions and formulas for calculating each value. Once the protocol is established it needs to be changed only when payroll laws or tax rates change.

In the proposed scenario, such a list would look like this:

- *E_GROSS_SALARY* - Employee gross salary
- *E_TAX1* - Employee contribution to tax1 (X% of *E_GROSS_SALARY*)
- *E_TAX2* - Employee contribution to tax2 (X% of *E_GROSS_SALARY*)
- *C_TAX1* - Company contribution to tax1 (X% of *E_GROSS_SALARY*)
- *C_TAX2* - Company contribution to tax2 (X% of *E_GROSS_SALARY*)

Примечание

The employee's net salary (*E_NET_SALARY*) is defined as *E_GROSS_SALARY* - *E_TAX1* - *E_TAX2* and need not be placed in this list since it is composed of items that already exist.

Place the actual formulas for calculating each deduction in this list. Sometimes these formulas are quite complex, and sometimes they simply say "look it up in table XYZ of the tax codes".

Notice that you can calculate some interesting values using the above definitions. One such value is the total cost to the company: $E_GROSS_SALARY + C_TAX1 + C_TAX2$.

Step 2: Create the Transaction Map

When you record payroll in GnuCash, do so with a single split transaction. This split transaction populates the appropriate expense and liability accounts. If you need to look the payroll details at a later time, open the split transaction.

With the deductions list from above, an employee split transaction map can be generated. Each of the items in the list is mapped to a GnuCash account.

Таблица 13.4. Payroll Transaction Map

Account	Increase	Decrease
Assets:Checking		E_NET_SALARY
Expenses:Salaries	E_GROSS_SALARY	
Liabilities:Tax1		E_TAX1
Liabilities:Tax2		E_TAX2
Expenses:Tax1	C_TAX1	
Liabilities:Tax1		C_TAX1
Expenses:Tax2	C_TAX2	
Liabilities:Tax2		C_TAX2

Note that the C_TAX1 and C_TAX2 components have entries in the both the liability and expense accounts. The company component of each tax is expensed at the time of payroll, but remains a liability until taxes are due.

Step 3: Pay the Employee

Go to the account from which the employee will be paid, for example your *Assets:Checking* account. Open a split transaction and enter the real values using the Transaction Map above as a guide. Repeat this for all employees.

Подсказка

This manual process is tedious, especially if you have a large number of employees.

One GnuCash tool you certainly want use when entering employee payroll is duplicate transaction (use the Duplicate *Toolbar* button). This saves you from having to enter all the transaction splits for each employee. You still need to change the amounts of money to match each employee's real payroll values, but you will not have to build the split for each employee.

If payroll transactions do not change significantly every pay period, you can also use the duplicate transaction feature to duplicate each employee's most recent payroll transaction for the current pay period. If you find you are doing so all the time, read about the Schedule Transactions feature and save even more time!

Step 4: Pay the Government

The final thing to do is to pay the taxes to the government. The liability accounts have been collecting the taxes for various government agencies, and periodically you need to send a check to the government to pay this charge. To do so, you simply enter a 2 account transaction in (for example) your checking account to pay off the tax liability. The transaction is between the checking account and the liability account, no expense account is involved. The expense accounts are charged at the time the tax liability is recorded.

Business Payroll Example

Using the account setup seen previously, let's go through an example. Assume that there are 2 employees (E1 and E2) who each earn \$1000 per month gross salary. The employee contribution to Tax1 and Tax2 are 10% and 5% respectively. The company contribution to Tax1 and Tax2 are 15% and 10% each on top of the employee's gross salary.

Starting with \$50k in the bank, and before doing any payroll, the account hierarchy looks like this:

Рисунок 13.24. Payroll Example: Initial Setup

Account Name	Type	Total
Assets	Asset	\$50,000.00
Checking	Asset	\$50,000.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$0.00
Salaries	Expense	\$0.00
Tax1	Expense	\$0.00
Tax2	Expense	\$0.00
Liabilities	Liability	\$0.00
Tax1	Liability	\$0.00
Tax2	Liability	\$0.00

Summary: \$, grand total: Assets: \$50,000.00 Profits: \$0.00

The deductions list for employee 1 are:

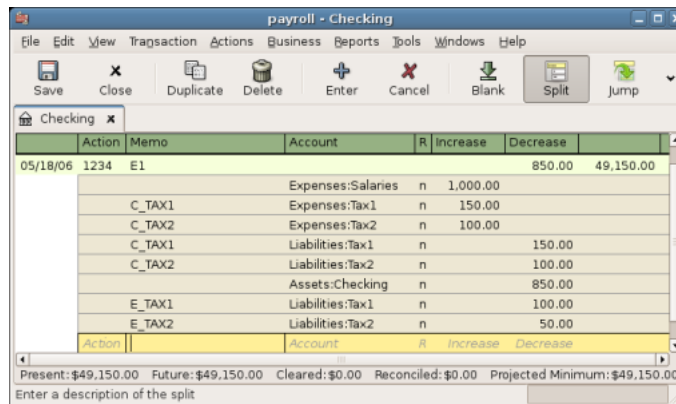
- *E_GROSS_SALARY* - Employee gross salary - \$1000
- *E_TAX1* - Employee contribution to tax1 - \$100 (10% of *E_GROSS_SALARY*)
- *E_TAX2* - Employee contribution to tax2 - \$50 (5% of *E_GROSS_SALARY*)
- *C_TAX1* - Company contribution to tax1 - \$150 (15% of *E_GROSS_SALARY*)
- *C_TAX2* - Company contribution to tax2 - \$100 (10% of *E_GROSS_SALARY*)

Таблица 13.5. Payroll Transaction Map for Employee 1

Account	Increase	Decrease
Assets:Checking		\$850 (E_NET_SALARY)
Expenses:Salaries	\$1000 (E_GROSS_SALARY)	
Liabilities:Tax1		\$100 (E_TAX1)
Liabilities:Tax2		\$50 (E_TAX2)
Expenses:Tax1	\$150 (C_TAX1)	
Liabilities:Tax1		\$150 (C_TAX1)
Expenses:Tax2	\$100 (C_TAX2)	
Liabilities:Tax2		\$100 (C_TAX2)

From the checking account, enter the split transaction for employee 1. It should look like this:

Рисунок 13.25. Payroll Example: Employee Split Transaction



The Split Transaction for Employee 1

Подсказка

When paying employees, enter only the employee name in the Description area. If you decide to use GnuCash's check printing capabilities, the check is automatically made out to the correct employee. If you want to record other information in the transaction besides the employee name, use the Notes area, available when viewing the Register in double-line mode.

Repeat this for the second employee, which leaves the account hierarchy looking like this:

Рисунок 13.26. Payroll Example: Accounts After Salaries Paid

The screenshot shows a software window titled "payroll - Accounts". It has a menu bar with "File", "Edit", "View", "Actions", "Business", "Reports", "Tools", "Windows", and "Help". Below the menu bar is a toolbar with icons for "Save", "Close", "Open", "Edit", "New", and "Delete". The main area displays a table of accounts with columns for "Account Name", "Type", and "Total". The "Checking" account is highlighted. At the bottom, a summary bar shows the grand total for assets and profits.

Account Name	Type	Total
Assets	Asset	\$48,300.00
Checking	Asset	\$48,300.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$2,500.00
Salaries	Expense	\$2,000.00
Tax1	Expense	\$300.00
Tax2	Expense	\$200.00
Liabilities	Liability	\$800.00
Tax1	Liability	\$500.00
Tax2	Liability	\$300.00
\$, grand total:		Assets: \$47,500.00 Profits: -\$2,500.00

Now, you will enter the company contributions. The *Liabilities:Tax1* and *Liabilities:Tax2* accounts track how much you must pay to the government for each tax type. When it is time to pay these agencies, you will make a transaction from the checking account to these liability accounts. No expense accounts are involved. The main account will then appear like this:

Рисунок 13.27. Payroll Example: Accounts After Paying Government

The screenshot shows a software window titled "payroll - Accounts" with a menu bar (File, Edit, View, Actions, Business, Reports, Tools, Windows, Help) and a toolbar (Save, Close, Open, Edit, New, Delete). Below the toolbar is a tab labeled "Accounts". The main area contains a table with the following data:

Account Name	Type	Total
Assets	Asset	\$47,500.00
Checking	Asset	\$47,500.00
Equity	Equity	\$50,000.00
Starting Balances	Equity	\$50,000.00
Expenses	Expense	\$2,500.00
Salaries	Expense	\$2,000.00
Tax1	Expense	\$300.00
Tax2	Expense	\$200.00
Liabilities	Liability	\$0.00
Tax1	Liability	\$0.00
Tax2	Liability	\$0.00

At the bottom of the window, a summary bar displays: \$, grand total: Assets: \$47,500.00 Profits: -\$2,500.00

Глава 14. Budgets

This chapter explains how to create and use budgets with GnuCash.

Basic Concepts

A budget is a tool for estimating expected income and expenses. You can use it to help you plan how you intend for your finances to change over a period of time, and to examine how your actual financial transactions for the period compare to your planned transactions.

The budgeting concept is quite general, so GnuCash offers a budgeting tool that is both simple and flexible. You, the user, have to decide how complex or simple you want to make your budget. This guide will help you make some of those decisions.

Terminology

There are a few helpful terms listed below that will be used to discuss budgeting.

- *Budget* - A financial plan describing the expected revenues and/or disbursements for a particular time period
- *Cash Budget* - A budget planning for expected cash receipts and cash disbursements. This type of budget tracks cash flow -- where your money comes from, where it goes, and, of course, how much.
- *Expense Budget* - A budget chiefly for planning what you spend your money on. This type of budget tracks your expenses. It is typically not concerned with things like appreciation or repayment of liabilities. However, it would account for interest charges. For example, if you buy \$100 worth of groceries with your credit card, you incur an \$100 expense for groceries, and a \$100 liability to your credit card company. When you pay the credit card bill for \$110, you are incurring an additional interest expense of \$10. An expense budget plans for the transaction of buying the groceries and paying the interest, but not the transaction of repaying the credit card company.
- *Capital Budget* - A budget that describes a plan for paying for a large future expense, often through a combination of saving and borrowing money. Note: Capital budgets can sometimes get quite complex because they can try to answer the question "Can we afford to do such-and-such?" by exploring various hypothetical scenarios that can involve hypothetical accounts.
- *Budget Period* - The period of time during which the plan is expected to take place. The most common budget periods are annual and monthly. Sometimes, you may budget for several consecutive periods at once, for convenience or for finer-grained planning. For example, an annual budget may include 12 monthly budget periods.

Creating a Budget

Even before you begin to make a budget, it's important to have given some thought to your account hierarchy. For example, if you want to budget a certain amount for your electric bill and a certain amount for your water bill, you can't have only an *Expenses:Utilities* account. Your accounts must be at least as specific as your budget.

Choose Which Accounts To Budget For

The first step in creating a budget is to decide what it is you want to plan for. This decision will affect which accounts you include in your budget. For example, if you are only interested in tracking your expenses, you

may create an expense budget by only entering amounts for expense accounts. On the other hand, if you want to track all of your cash flow, you may create a cash flow budget by entering amounts for asset, liability, income and expense accounts.

Before you begin to create your budget, you need to make two decisions: What accounts do I want to budget for? and When do I want my budget to be for? You can always change your mind later, after you've created a budget, but you need to start with something.

Подсказка

As a rule of thumb, if you mostly care about *what* you spend your money on, you may want to make an expense report. If you're also concerned about having enough money in the right places at the right times, you may want to use a cash-flow budget.

Choosing a Budget Period

Before creating a budget you must also decide what period of time you want to plan for. The most common budget periods are monthly and annual. If you want your budget to plan for changes in financial patterns over time, then you should include multiple budget periods in your budget. For example, if you want to plan on having higher utility expenses in the winter than in the summer, then you might break your annual budget into 4 quarters or even 12 months, and budget a higher value for the winter periods than for the summer periods.

Getting Started

To create your first budget click on Actions → Budget → New Budget . You will immediately see a new budget with the default settings and no entries. Then click on the Options button. The most important options are the budget period and the number of periods. For the budget period, choose the beginning date and the smallest period of time that you want to plan for. Then, for the number of periods, choose how many periods you want to plan for.

The budget page now shows a list of accounts with a column for each budget period. The date shown in the title of each column is the beginning of that budget period.

Entering Budget Values

Now, you must enter the budget values - the amounts that you expect the account balances to change during the budget period. There are two ways to enter budget values. The first way is to simply click on the cell and enter an amount.

If you have past transactions recorded in GnuCash, the second way is to let GnuCash estimate the budget values by looking at those transactions. First, select the accounts you want GnuCash to estimate. Then click on the Estimate *Toolbar* button. In the Estimate Budget Values dialog, select the date past which GnuCash should look for past transactions. GnuCash will start at that date and look forward for the duration of your budget. For example, if you are making an annual budget, and you select Jan. 1, 2005, GnuCash will look at all the transactions in that account from Jan. 1, 2005 through Dec. 31, 2005.

Budget Reporting

You've already done the hardest part - creating your budget. But now you want to know how your actual financial transactions compare to your plan. You need to run the Budget Report.

Click on Reports → Budget → Budget Report . For each account, the Budget Report will show the budgeted and the actual amounts in two adjacent columns for each period in the budget. If you have created multiple budgets, you can use the Budget Report Options to select which budget to use in the report.

Two other types of budget reports are commonly used in the small business setting. They are the *Budgeted Income Statement* and the *Budgeted Balance Sheet*.

Budgeted Income Statement

The budgeted income statement is similar to the income statement. Both show the revenues and expenses for a given period as well as the profit, which is the difference revenue - expenses. The income statement is based on historical data, but the *budgeted* income statement is based on the predictions made in the budget.

Budgeted Balance Sheet

The budgeted balance sheet is similar to the balance sheet. Both show the assets, liabilities, and equity. The difference is that the balance sheet is based on historical data, and the *budgeted* balance sheet is based on the predictions made in the budget.

Глава 15. Other Assets

General Concepts

This chapter presents many additional accounting treatments for frequently encountered business and less-frequently found personal activities that need recording in accounting books. The explanations below cover both the description and purpose of the activity, and they include also the usual accounting treatments (bookings or recordings) for these transactions.

These concepts have evolved over centuries of experience by those keeping accounting records and will help you maximize your record keeping's utility and meaningfulness.

This section introduces categorization of assets in the balance sheet based on time or the asset's useful life (current and long-term). Sometimes assets are also considered from the standpoint of their *liquidity*, which is regarded as how close or distant the asset is from being turned into cash. Near-cash assets are relatively quickly converted to cash (e.g., accounts receivable), while assets requiring rather a long time to convert to cash are considered to be relatively *fixed* in their non-cash state (e.g., heavy equipment, buildings, land). (Fixed does not mean they were repaired!)

You should find that current assets parallel those with more liquidity, while long-term and fixed assets are those with much less liquidity. Finally, below you will find a few assets that could be either current or long-term based on the nature of the facts constituting them.

Other Assets Described

Current Assets

Current Assets are those activities whose normal expected life would be one year or less. Such activities could be tracking reimbursable expenses, travel advances, short-term loans to a friend or family member, prepaid expenses, annual insurance premium amortization, and so on. The individual entity could have many other kinds of short term activities that reflect what it is doing. (These asset types are explained individually below.)

Long-term (Fixed) Assets

Long-term (Fixed) Assets are those activities whose normal expected life exceeds one or more years. This grouping covers both tangible and intangible assets. Examples of tangible assets are land, buildings, and vehicles (cars, trucks, construction equipment, factory presses, etc.) Intangible assets include such things as patents, copy rights, goodwill, etc. Because the lives of some of these assets show wear and tear and deterioration in value over time, businesses and individuals can allow for that diminution in value by calculating depreciation on such assets. For example, land normally does not depreciate, but buildings do, as do equipment and vehicles. (These asset types are explained individually below.)

Current Assets

This section explains short-term receivables, reimbursable expenses, travel advances, prepaid premiums, prepaid rent, suspense or wash accounts.

Short-term Receivables

This kind of account is useful to reflect an agreement made with someone you trust. Suppose you lent someone \$500 and he agreed to repay you \$50 a month. If he paid on time, the loan you made would be

paid off within a year, which is why it is classified as a short-term receivable. So you could record that loan initially in this account tree: *OtherAssets:Current Assets:LoanToJoe*. At the time you give him the money: your entry is debit (increase) LoanToJoe \$500 and credit (decrease) Bank \$500. Each time you receive Joe's payment you record \$50 debit (increase) to Bank and credit (decrease) LoanToJoe.

Подсказка

Don't become confused by the use of the word «Loan». «Loan-To» is the tipoff that you really have a receivable, that is, you will receive from Joe, the money you previously loaned. Until he actually pays the money owed you, you reflect his debt in your books by an account describing your expectation—you will receive the money owed you, hence the word «receivable».

Reimbursable Expenses

This kind of activity is one in which you spend your own money on behalf of someone else (your employer, perhaps) and later you receive repayment of what you spent. The case might be a business trip. The employer has a policy of covering (paying for) all authorized expenses. After the trip is over, the employee submits a report listing dates and amounts spent with receipts for all the expenditures. The employer reviews the report and pays for all items that it considers as having a valid business reason. (Normally, employees know in advance what the employer will reimburse, so only those items are recorded as a reimbursable expense on the employee's books.)

Because a business trip can involve different kinds of expenditures (air travel, lodging, transportation at the destination, etc.), different kinds of expenditures would be recorded in the one account as long as the expenditures all related to the same trip. In other words, if a second trip is made before the first is fully settled, a second account for a different event could be set up. It would make sense to do this, if it would help to keep separate all the details of one trip from those of another. It is up to the person making the trip to decide how much trouble it would be to put separate trips in separate accounts or to put them all in the same account. The trip taker should remember that the account must be reconciled in order to know with certainty that all expenses have been reimbursed.

Recording the expenditures on the trip would be much the same. That is, if you paid trip expenses by cash you would debit (increase) the reimbursable expense account for the money paid in cash, because it is a receivable to you until it has been reimbursed to you. The credit offsetting your expenditure would decrease the account that shows the cash in your pocket or the account from which you drew the cash for the payment made. If you paid by credit card, the debit side would be the same as just described, but the credit would be an increase to the credit card company account on your books.

When you received your reimbursement, then the journal entry (or transaction) to record receipt of the funds from the employer would be: debit (increase) Bank for the check amount and credit (decrease) the reimbursable expense account for the check amount.

If it turns out that the reimbursable expense account is not zero balance after processing the employer's payment, then it means that there is a difference between you and the employer in handling the expense, which needs to be investigated. If the balance is a debit (a positive balance), your account has some money that was not reimbursed. If the balance is a credit (a negative balance), you were paid for more than what you recorded as due you. In both of those situations you should reconcile the difference between what you recorded and what was paid. That effort should disclose exactly what is causing the discrepancy. You will need to contact the employer's bookkeeper to know what was paid, if the reimbursement check was not accompanied by a detailed list of the items being paid you.

In the event the employer refused to reimburse you for an expenditure, that effectively makes it your expense. In that case, you would make this entry: debit (increase) your own Expense (appropriately named) and credit (decrease) the Reimbursable Expense account. That entry should result in a zero balance in the Reimbursable Expense account. If not, reconcile until you identify the difference.

Подсказка

Sometimes there are small differences that don't match an individual entry. In those cases divide the amount by 2 or by 9. If the unresolved amount is divisible by two, it suggests that both you and the employer entered the item in the same manner: both as debits or both as credits. If it is divisible by 9, then likely one of you transposed adjoining numbers; e.g., one entered 69 and the other entered 96. If the difference is divisible neither by 2 or by 9, then it could be that more than one error is present.

Travel Advances

These are very similar to Reimbursable Expenses. The difference is that someone gives you money first; you spend it, and then you give a report accounting for what you spent it on. The report is supported by invoices establishing who, what, where, when, and how much for each expenditure. In the Reimbursable Expense case, you spent your money first and later recovered it.

In the Travel Advance case when you receive the advance, you record on your books this entry: debit (increase) Bank for the travel advance amount received (say, \$500); credit (increase) the short-term liability Travel Advance (\$500). This is a liability, because you are not gifted with the money, but only loaned it for the purpose of having funds to spend when doing the employer's business.

Frequently, the way these monetary arrangements work is that at the beginning of for example a salesperson's employment, he or she receives the advance and monthly (or more frequently) turns in a report about who, what, where, when, and how much he spent. The money in the report is reimbursed if approved.

During the period after receiving the advance and before filing a request for reimbursement report, the salesperson can record his or her expenditures into the advance liability account. In that case, the balance in the account will show how much of the advance has not yet been spent (assuming the Travel Advance balance is a credit). If no mistakes have been made and all expenses are approved, then the sum of the unspent account balance and the reimbursing check amount will equal the original travel advance amount.

It makes sense for the salesperson to record the travel expenses to this advance account (and not to his or her own expense accounts), because the money is being spent on behalf of the employer, for the employer's authorized expenses. It is not the employee's own money, and therefore not his or her own expense.

When the salesperson receives the report reimbursement (say, \$350), he or she debits (increases) Bank, and credits (increases) again the Travel Advance liability account, assuming that previously he or she had been recording expenditures to the travel advance account. Tracking activity in this manner causes the account to always show the amount that is owed the employer.

See «Reimbursable Expenses» above for what to do if the employer does not accept an item the employee put on the travel advance reimbursement request report. The difference resolution effort is essentially the same for both types of accounts.

Prepaid Premiums or Prepaid Rent

Some types of expenses are usually billed as semi-annual or annual amounts. For example, the insurance industry will bill home insurance annually, while car insurance premiums can be annual or semi-annual. For those that pay an amount that covers several months or a full year, the proper accounting treatment is to reflect in each accounting period the amount that expresses the benefit applying to that period.

In the case of someone who pays a full-year's insurance premium at the beginning of the insurance period, the entry to record this is debit (increase) Prepaid Insurance Premium for say, \$1,200, and credit (decrease) Bank for \$1,200.

Then a monthly recurring journal entry (scheduled transaction) is created that debits (increases) Insurance Expense \$100 and credits (decreases) Prepaid Insurance Premium \$100. This technique spreads the cost over the periods that receive the insurance coverage benefit. Businesses following generally accepted accounting practices would normally use this technique, especially if they had to present financial statements to banks or other lenders. Whether individuals do depends on the person and how concerned they are to match cost with benefit across time periods. Another factor influencing use of this technique would be the number of such situations the person encounters. It is relatively easy to remember one or two, but more difficult if having to manage 10 to 20. You would set up as many or as few as proved useful and important to you.

Suspense or Wash Accounts

The purpose of these accounts is to provide a device to track «change of mind» situations. The objective of these accounts is to provide a temporary location to record charges and credits that are not to be included permanently in your books of record. When the transactions reflected in these accounts have been fully completed, Wash/Suspense accounts will normally carry a zero balance.

For example, say in the grocery store you see canned vegetables on sale, so you buy 6 cans at \$1 per can. Say that the total purchases were \$50. When you come home and are putting things in the cupboard you discover you already had 12 cans. You decide to return the 6 you just bought. Some persons in this situation would charge (increase) the whole bill to Grocery Expense; and when they returned the cans, they would credit (decrease) Grocery Expense. That is one way of handling that. The effect of this method is to leave recorded on your books the cost of items that you really did not purchase from a permanent standpoint. It is only when the items have actually been returned and the vendor's return receipt has also been recorded that the distortion this method generates will then be removed.

Actually, there are several treatments, depending on when and how the original transaction was booked/recorded and when you decided to return the items purchased. Basically, did you change your mind before you recorded the transaction or after doing so?

If you decided to return the items after recording the purchase transaction, you may originally have charged Grocery Expense for the full amount (\$50) of all items. In that scenario, what you kept and the amount of the items to be returned were grouped into one account. You could edit the original transaction and restate the amount charged to the Grocery Expense account to be the difference (\$44) between the total paid (\$50) for groceries and the value of the items to be returned. That leaves the returned-item value as the amount (\$6) you should record to the Suspense account.

Obviously, if you decided to return items before you recorded your purchase, then you would book the original entry as a charge to Grocery Expense for the amount kept (\$44) and as a charge to Suspense for the amount returned (\$6). The off-setting credit (\$50) to cash or credit card is not affected by these treatments.

When there are several persons shopping and at different vendors, there can be a case where there are several returns happening at once and in overlapping time frames. In that case the Wash Account is charged (increased) at time of changing the mind, and either Bank or Credit Card is credited. When the return occurs, the reverse happens: Bank or Credit Card is debited for the cash value of the returned items and the Wash/Suspense Account is credited in the same amount.

If the wash account has a non-zero balance, scanning the debit and credit entries in the account will show the non-matched items. That is, debits not matched by offsetting credits indicate items intended to be returned but not actually returned yet. The reverse (credits not matched by offsetting debits) indicates that returns were made but the original charge was not recorded in the Wash Account.

These differences can be cleared up by returning unreturned items or recording charges (debits) for items already returned. The mechanics of doing that likely will be finding the original expense account the item was charged to and making an entry like: debit Wash Account, credit original expense. It also could be as

described above where the original recording is adjusted by adding a charge to Wash/Suspense account and decreasing the amount charged to the original account.

Short or Long-term Assets

This section explains why some types of assets may be short or long-term and presents an example.

An example is deposits (e.g., utility, rental, security). If the deposit agreement contains a provision to recover the deposit at the end of a year, the treatment could be that of a short-term asset. However, when the agreement is that the deposit holder returns the funds only upon successful inspection at the end of the relationship, then at the start of the relationship or agreement, the person paying the deposit has to decide whether to write it off as a current expense or to track it for eventual recovery at the end of the agreement (not infrequently, moving to a new location).

Whichever decision is made, the accounting treatment is to debit (increase) expense (assuming the write-off decision) or debit (increase) Deposits Receivable (assuming the intent is to recover the deposit in the future) and credit (decrease) Bank for the amount of the deposit (if paid by cash) or credit (increase) credit card if paid using that payment method.

Long-term (Fixed) Assets

This section illustrates long-term assets (those whose useful lives exceed a year) and discusses these types: land, buildings, leasehold improvements, intangibles, vehicles and other equipment.

Land

Land is not a wasting asset. That is, it does not get used up over time and rarely suffers damage such that it loses value. For that reason, it usually is recorded at cost at the time of purchase. Appreciation in its value over decades is not recorded and is not recognized in any way on the books of the owner. It is only after land has been sold that sale price and purchase cost are compared to calculate gain or loss on sale.

Land is frequently sold/purchased in combination with structures upon it. That means that the cost has to become separated from the cost of structures on it. Land valuation is usually part of the transfer of ownership process and its value is shown on the purchase documents separately from that of any structures it supports.

Land values shown on purchase documents frequently arise from the process of value determination managed by assessors whose job it is to assign values to land for tax purposes. Local and regional areas of a state or province use the values determined by assessors in their tax formulas, which provide revenues for local and regional governing authorities to finance their required community services.

Should land be acquired in a situation not subject to a history of land valuation by a formal valuation system, then the purchaser can appeal to real estate agents and an examination of recent sale transactions for information that would allow calculating a reasonable amount to express the value of the land.

Buildings

Buildings are the man-made «caves» in which much of life's human interaction occurs. These structures are wasting assets, because in their use they or their components gradually wear. Over time they begin to lose some of their function and they can suffer damage due to planetary elements or human action.

Accepted accounting practice is to record the cost of the building determined at time of ownership transfer (purchase) or at conclusion of all costs of construction. Because buildings are frequently used for decades,

and due to the need to be able to calculate gain or loss on sale, accounting practice preserves the original cost by not recording declines in value in the account containing the original purchase or construction cost.

Instead, the depreciation technique is used to show (in the balance sheet) the structure's net book value (original cost reduced by accumulated depreciation). Depreciation is a separate topic treated elsewhere in this Guide.

Leasehold Improvements

When a business does not own the building where it operates, and instead has a long-term lease, it is not uncommon for the business tenant to make improvements to the premises so that the structure obtains both function and appearance that enhances conducting its business activities.

In these cases, the expenditures that the business incurs are recorded in a Leasehold Improvements account: increase (debit) Leasehold Improvements, decrease (credit) Bank or increase (credit) a suitable liability account (which could be a liability to a contractor or a bank or a credit card, etc.).

Vehicles or Equipment

Vehicles or Equipment of all kinds usually last for several years, but their useful lives are much shorter than that of assets that have little movement in their functioning. Because they do wear out over time, common accounting practice in business is to record depreciation using life spans and depreciation methods appropriate to the nature and use of the asset. Frequently, the life and depreciation methods chosen are influenced by what is permitted per national tax regulations for the kind of asset being depreciated.

Usually, businesses depreciate their assets. Individuals can do so as well to the degree that taxing authorities permit. Very wealthy persons employ accountants and attorneys to track and manage their investments and assets holdings to take advantage of all tax benefits permitted by law.

Intangibles

The mechanics of accounting (debiting and crediting appropriate accounts) for these assets are relatively simple, much the same as for any of the above assets. Where the difficulty lies is in their valuation, which is an advanced topic and not something that individual persons and small businesses would likely encounter. For that reason further discussion of items such as patents, copyrights, goodwill, etc. are left out of this Guide.

Глава 16. Depreciation

This chapter will introduce the concept of depreciation in accounting and give some real life examples for using it.

Basic Concepts

Depreciation is the accounting method for expensing capital purchases over time. There are two reasons that you may want to record depreciation; you are doing bookkeeping for your own personal finances and would like to keep track of your net worth, or you are doing bookkeeping for a small business and need to produce a financial statement from which you will prepare your tax return.

The method of recording depreciation is the same in either case, but the end goal is different. This section will discuss the differences between the two. But first, some terminology.

- *Accumulated depreciation* - the accumulated total of book depreciation taken over the life of the asset. This is accumulated in the depreciation account in the asset section.
- *Book depreciation* - this is the amount of depreciation that you record in your financial statements per accounting period.
- *Fair market value* - the amount for which an asset could be sold at a given time.
- *Net book value* - this is the difference between the original cost and the depreciation taken to date.
- *Original cost* - this is the amount that the asset cost you to purchase. It includes any cost to get the asset into a condition in which you can use it. For example - shipping, installation costs, special training.
- *Salvage value* - this is the value that you estimate the asset can be sold for at the end of its useful life (to you).
- *Tax depreciation* - this is the amount of depreciation that you take for income tax purposes.

Personal Finances

Depreciation is used in personal finances to periodically lower an asset's value to give you an accurate estimation of your current net worth. For example, if you owned a car you could keep track of its current value by recording depreciation every year. To accomplish this, you record the original purchase as an asset, and then record a depreciation expense each year (See «Example» for an example). This would result in the net book value being approximately equal to the fair market value of the asset at the end of the year.

Depreciation for personal finance has no tax implications, it is simply used to help you estimate your net worth. Because of this, there are no rules for how you estimate depreciation, use your best judgement.

For which assets should you estimate depreciation? Since the idea of depreciation for personal finances is to give you an estimate of your personal net worth, you need only track depreciation on assets of notable worth that you could potentially sell, such as a car or boat.

Business

As opposed to personal finance where the goal is tracking personal worth, business is concerned with matching the expense of purchasing capital assets with the revenue generated by them. This is done through book depreciation. Businesses must also be concerned with local tax laws covering depreciation of assets. This is known as tax depreciation. The business is free to choose whatever scheme it wants to record book

depreciation, but the scheme used for tax depreciation is fixed. More often than not this results in differences between book and tax depreciation, but steps can be taken to reduce these differences.

Now, what purchases should be capitalized? If you expect something that you purchase to help you earn income for more than just the current year, then it should be capitalized. This includes things like land, buildings, equipment, automobiles, and computers - as long as they are used for business purposes. It does not include items that would be considered inventory. So if you made a purchase with the intent to resell the item, it should not be capitalized.

In addition to the purchase of the asset itself, any costs associated with getting the asset into a condition so that you can use it should be capitalized. For example, if you buy a piece of equipment and it needs to be shipped from out of town, and then some electrical work needs to be done so you can plug the machine in, and some specialized training is needed so you know how to use the machine, all these costs would be included in the cost of the equipment.

You also need to know the estimated salvage value of the asset. Generally, this is assumed to be zero. The idea behind knowing the salvage value is that the asset will be depreciated until the net book value (cost less depreciation) equals the salvage value. Then, when the asset is written off, you will not have a gain or loss resulting from the disposal of the asset.

The last step is to determine the method of depreciation that you want to use. This will be discussed on the next few pages.

Предупреждение

Be aware that different countries can have substantially different tax policies for depreciation; all that this document can really provide is some of the underlying ideas to help you apply your «favorite» tax/depreciation policies.

Estimating Valuation

A central issue with depreciation is to determine how you will estimate the future value of the asset. Compared to the often uncertain estimates one has to do where appreciation of assets is concerned, we are on somewhat firmer ground here. Using sources listed below should make it fairly straight forward to estimate the future value of your depreciating assets.

- *Tax Codes*: For businesses that want to use depreciation for tax purposes, governments tend to set up precise rules as to how you are required to calculate depreciation. Consult your local tax codes, which should explicitly state how to estimate depreciation.
- *Car Blue Book*: For automobiles, it is easy to look up in references such as «Blue Books» estimates of what an automobile should be worth after some period of time in the future. From this you will be able to develop a model of the depreciation.

Depreciation Schemes

A *depreciation scheme* is a mathematical model of how an asset will be expensed over time. For every asset which undergoes depreciation, you will need to decide on a depreciation scheme. An important point to keep in mind is that, for tax purposes, you will need to depreciate your assets at a certain rate. This is called tax depreciation. For financial statement purposes you are free to choose whatever method you want. This is book depreciation. Most small businesses use the same rate for tax and book depreciation. This way there is less of a difference between your net income on the financial statements and your taxable income.

This section will present 3 of the more popular depreciation schemes: *linear*, *geometric*, and *sum of digits*. To simplify the examples, we will assume the salvage value of the asset being depreciated is zero. If you choose to use a salvage value, you would stop depreciating the asset once the net book value equals the salvage value.

1. *Linear depreciation* diminishes the value of an asset by a fixed amount each period until the net value is zero. This is the simplest calculation, as you estimate a useful lifetime, and simply divide the cost equally across that lifetime.

Example: You have bought a computer for \$1500 and wish to depreciate it over a period of 5 years. Each year the amount of depreciation is \$300, leading to the following calculations:

Таблица 16.1. Linear Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	300	1200
2	300	900
3	300	600
4	300	300
5	300	0

2. *Geometric depreciation* is depreciated by a fixed percentage of the asset value in the previous period. This is a front-weighted depreciation scheme, more depreciation being applied early in the period. In this scheme the value of an asset decreases exponentially leaving a value at the end that is larger than zero (i.e.: a resale value).

Example: We take the same example as above, with an annual depreciation of 30%.

Таблица 16.2. Geometric Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	450	1050
2	315	735
3	220.50	514.50
4	154.35	360.15
5	108.05	252.10

Примечание

Beware: Tax authorities may require (or allow) a larger percentage in the first period. On the other hand, in Canada, this is reversed, as they permit only a half share of «Capital Cost Allowance» in the first year. The result of this approach is that asset value decreases more rapidly at the beginning than at the end which is probably more realistic for most assets than a linear scheme. This is certainly true for automobiles.

3. *Sum of digits* is a front-weighted depreciation scheme similar to the geometric depreciation, except that the value of the asset reaches zero at the end of the period. This is a front-weighted depreciation scheme, more depreciation being applied early in the period. This method is most often employed in Anglo/Saxon countries. Here is an illustration:

Example: First you divide the asset value by the sum of the years of use, e.g. for our example from above with an asset worth \$1500 that is used over a period of five years you get $1500/(1+2+3+4+5)=100$. Depreciation and asset value are then calculated as follows:

Таблица 16.3. Sum of Digits Depreciation Scheme Example

<i>Year</i>	<i>Depreciation</i>	<i>Remaining Value</i>
0	-	1500
1	100*5=500	1000
2	100*4=400	600
3	100*3=300	300
4	100*2=200	100
5	100*1=100	0

Account Setup

As with most accounting practices, there are a number of different ways to setup depreciation accounts. We will present here a general method which should be flexible enough to handle most situations. The first account you will need is an *Asset Cost* account (GnuCash account type *Asset*), which is simply a place where you record the original purchase of the asset. Usually this purchase is accomplished by a transaction from your bank account.

In order to keep track of the depreciation of the asset, you will need two depreciation accounts. The first is an *Accumulated Depreciation* account in which to collect the sum of all of the depreciation amounts, and will contain negative values. In GnuCash, this is an account type *asset*. The *Accumulated Depreciation* account is balanced by a *Depreciation Expense* account, in which all periodic depreciation expenses are recorded. In GnuCash, this is an account type *expense*.

Below is a generic account hierarchy for tracking the depreciation of 2 assets, *ITEM1* and *ITEM2*. The *Asset Cost* accounts are balanced by the *Bank* account, the *Accumulated Depreciation* account is balanced by the *Expenses:Depreciation* account.

```

-Assets
  -Fixed Assets
    -ITEM1
      -Cost (Asset Cost account)
      -Depreciation (Accumulated Depreciation account)
    -ITEM2
      -Cost (Asset Cost account)
      -Depreciation (Accumulated Depreciation account)
  -Current Assets
    -Bank
-Expense
  -Depreciation (Depreciation Expense account)

```

One of the features of the account hierarchy shown above is that you can readily see some important summary values about your depreciating asset. The *Assets:Fixed Assets:ITEM1* account total shows you the current estimated value for item1, the *Assets:Fixed Assets:ITEM1:Cost* shows you what you originally paid for item1, *Assets:Fixed Assets:ITEM1:Depreciation* shows you your accrued depreciation for item1, and finally, *Expenses:Depreciation* demonstrates the total accrued depreciation of all your assets.

It is certainly possible to use a different account hierarchy. One popular account setup is to combine the *Asset Cost* and *Accrued Depreciation* asset accounts. This has the advantage of having fewer accounts cluttering your account hierarchy, but with the disadvantage that to determine some of the summary details mentioned

in the paragraph above you will have to open the account register windows. As with most things, there are many ways to do it, find a way that works best for you.

The actual input of the depreciation amounts is done by hand every accounting period. There is no way in GnuCash (as of yet) to perform the depreciation scheme calculations automatically, or to input the values automatically into the appropriate accounts. However, since an accounting period is typically one year, this really is not much work to do by hand.

Example

Let's go ahead and step through an example. Imagine you are a photographer and you use a car and an expensive camera for your personal business. You will want to track the depreciation on these items, because you can probably deduct the depreciation from your business taxes.

The first step is to build the account hierarchy (as shown in the previous section, replace *ITEM1* and *ITEM2* with «car» and «camera»). Now, record the purchase of your assets by transferring the money from your bank account to the appropriate *Asset Cost* accounts for each item (eg: the *Assets:Fixed Assets:Car:Cost* account for the car). In this example, you start with \$30k in the bank, the car cost \$20k and the camera cost \$10k and were both purchased on January 1, 2000.

The screenshot shows the 'gncash_depreciation - Accounts' window. The menu bar includes File, Edit, View, Actions, Business, Reports, Tools, Windows, and Help. The toolbar contains icons for Save, Close, Open, Edit, New, and Delete. The main area displays a tree view of accounts with a table below it. The table has columns for Account Name, Type, and Total. The hierarchy is as follows:

- Assets (USD 30,000.00)
 - Current Assets (USD 0.00)
 - Fixed Assets (USD 30,000.00)
 - Camera (USD 10,000.00)
 - Cost (USD 10,000.00)
 - Depreciation (USD 0.00)
 - Car (USD 20,000.00)
 - Cost (USD 20,000.00)
 - Depreciation (USD 0.00)
 - Equity (USD 30,000.00)
 - Expenses (USD 0.00)
 - Depreciation (USD 0.00)

At the bottom, a summary bar shows: USD, grand total: Assets: USD 0.00 Profits: USD 0.00

The asset depreciation example main window, before depreciation

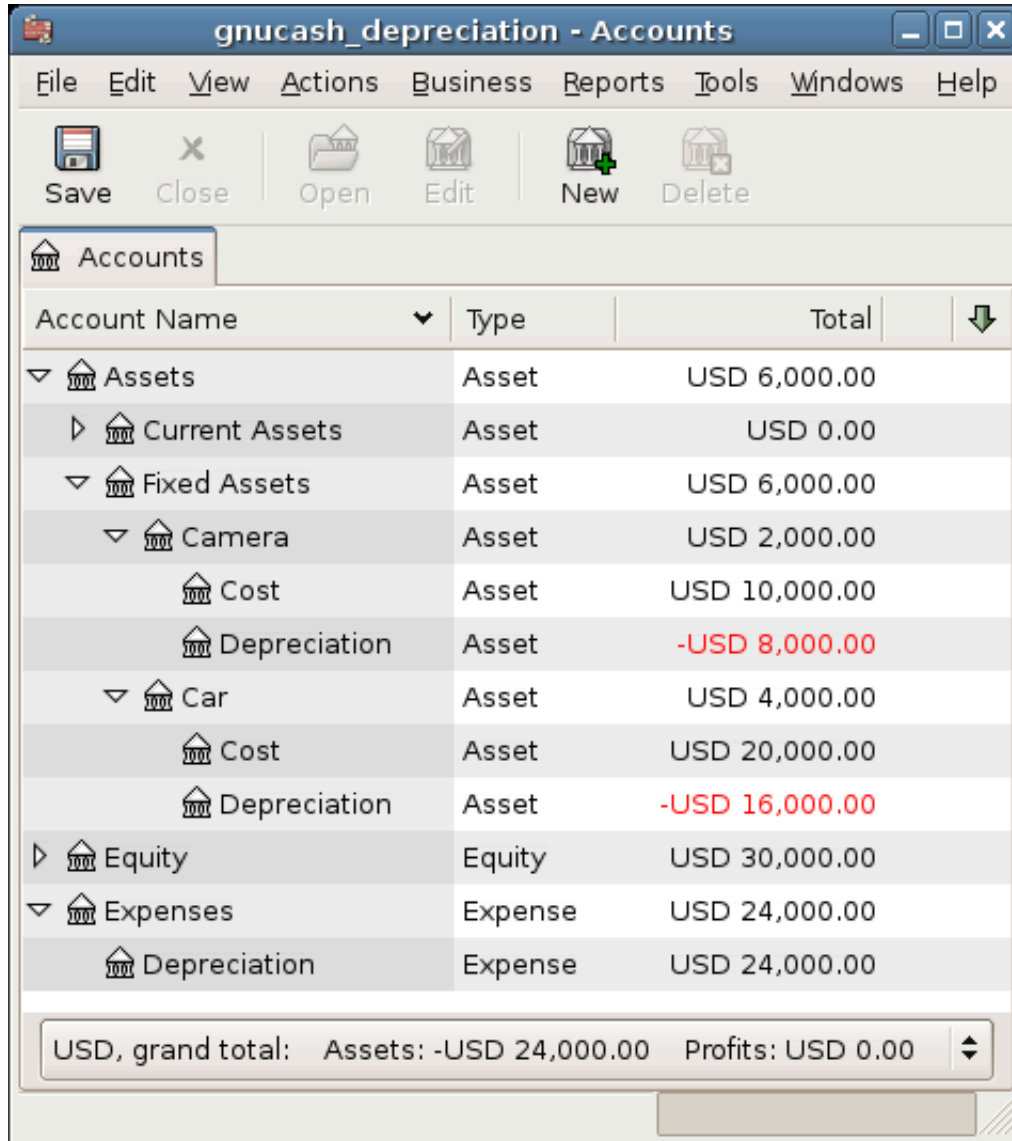
Looking at the tax codes, we realize that we must report depreciation on these items using the «sum of digits» scheme, over a 5 year period. So, the yearly depreciation amounts for the car come to \$6667, \$5333, \$4000, \$2667, \$1333 for years 1 to 5 respectively, rounded to the nearest dollar. The yearly depreciation amounts for the camera are \$3333, \$2667, \$2000, \$1333, \$667. Consult the previous section on Depreciation Schemes for the formula for calculating these values.

For each accounting period (IE: fiscal year) you record the depreciation as an expense in the appropriate *Accrued Depreciation* account (eg: the *Assets:Fixed Assets:Car:Depreciation* account for the car). The two windows below show your car's accrued depreciation account and the main window after the third year (IE: three periods) of depreciation using this sum of digits scheme.

Date	Description	Transfer	R	Increase	Decrease	Balance
2001-01-01	Depreciation	Expenses:Depreciation	n	6,666.67		-6,666.67
2002-01-01	Depreciation	Expenses:Depreciation	n	5,333.33		-12,000.00
2003-01-01	Depreciation	Expenses:Depreciation	n	4,000.00		-16,000.00
2020-01-01		Transfer	n	Increase	Decrease	Balance

Present: -USD 16,000.00 Future: -USD 16,000.00 Cleared: USD 0.00 Reconciled: USD 0.00 Projected Minimum: -USD 16,000.00

The asset depreciation register window



The asset depreciation main window

Примечание

A Word of Caution: Since depreciation and tax issues are closely related, you may not always be free in choosing your preferred method. Fixing wrong calculations will cost a whole lot more time and trouble than getting the calculations right the first time, so if you plan to depreciate assets, it is wise to make sure of the schemes you will be permitted or required to use.

Глава 17. Python Bindings

GnuCash historically has always been a traditional application in the sense that you open it, use it to manipulate your financial data via the windows it presents, save your data and close the windows again. This has the inherent limitation that you can only do whatever the windows, menus and toolbars allow you to do.

Sometimes you might need a little more flexibility. For example, you need a report with just a little different information than what the built-in reports provide, or you want to automate a frequently recurring action. Such custom manipulations are ideal candidates to write in one or the other scripting language.

Starting with GnuCash version 2.4 you can write Python [[https://en.wikipedia.org/wiki/Python_\(programming_language\)](https://en.wikipedia.org/wiki/Python_(programming_language))] scripts to manipulate your financial data.

Важно

The Python extensions are an optional feature which creates additional dependencies. To be able to use Python scripts, GnuCash must have been built with the `cmake -DWITH_PYTHON=ON ...` option enabled, otherwise all what follows won't work. At present this option is not enabled by default, so if you need this, you may have to compile GnuCash from source yourself. But some distributions offer it also as a separate package with a name like `python[version]-GnuCash`

The Python extensions come with a couple of ready to use scripts. This chapter will show you how to *use* some of them.

Подсказка

This chapter is not about how to write your own Python scripts. Refer to the developer documentation [https://code.gnucash.org/docs/MAINT/python_bindings_page.html] for that instead.

Глава 18. Importing Business Data

Importing Bills and Invoices

General

This functionality creates invoices or bills from a csv import file containing rows of invoice entry data. The import file may contain rows for new and/or existing invoices. If an invoice already exists, GnuCash adds the imported entries to the invoice (unless the invoice is already posted). If the import file contains posting data for an invoice, then GnuCash will also attempt to post the invoice. If any row of an invoice contains an error, GnuCash will ignore all rows of the same invoice.

The field separator in the csv file must be either a comma or a semicolon; field values may be enclosed in double quotes.

For the sake of readability, in this chapter the term «invoice» by itself is used to refer to both customer invoices and vendor bills.

The format of the import file

The import file should contain rows of invoice entry data, each row marked by an invoice ID. The file should be sorted on invoice ID. Each row contains header and entry fields, but GnuCash takes the invoice header data from the first row of an invoice ID. For informational purposes, the header data may be repeated for each subsequent row of the same invoice.

There is no information in the file to indicate whether it concerns customer invoice or vendor bill data. Instead, a user option in the import dialog makes that distinction.

Each row should contain the fields listed below, in the same sequence, separated by a comma or a semicolon. The fields are listed here by their technical name, which GnuCash uses in the preview of the import data.

- *id* - The invoice ID. Mandatory. Any row without an invoice ID will be ignored. If the invoice ID already exists, GnuCash will add the entries to the existing invoice (unless it is already posted).
- *date_opened* - Use the same date format as defined in Preferences. Defaulted to today's date if left blank, or if the date provided is not valid.
- *owner_id* - Customer or vendor number. Mandatory in the first data row of an invoice. If not provided, all rows of the same invoice will be ignored.
- *billingid* - Billing ID. Optional
- *notes* - Invoice notes. Optional.
- *date* - The date of the entry. Defaulted to date opened if left blank, or if the date provided is not valid.
- *desc* - Description. Optional
- *action* - Action. Optional
- *account* - Account for the entry. Mandatory in each row. If not provided or invalid, all rows of the same invoice will be ignored.
- *quantity* - Quantity. Defaulted to 1 if left blank.

- *price* - Price. Mandatory for each row. If not provided, all rows of the same invoice will be ignored.
- *disc_type* - Type of discount. Optional. Only relevant for invoices, not for bills. Use «%» or blank for percentage value, anything else for monetary value.
- *disc_how* - Discount how. Optional. Only relevant for invoices, not for bills. Use «>» for discount applied after tax, «=» for discount and tax applied before tax, and «<», blank or anything else for discount applied before tax.
- *discount* - Amount or percentage of discount. Optional. Only relevant for invoices, not for bills
- *taxable* - Is this entry taxable? Optional. Use «Y» or «X» for yes, «N» or blank for no.
- *taxincluded* - Is tax included in the item price? Optional. Use «Y» or «X» for yes, «N» or blank for no.
- *tax_table* - Tax table. Optional. If the tax table provided does not exist, it will be blank in the invoice.
- *date_posted* - Date posted. Optional. Use the same date format as defined in Preferences. If you provide a date posted for the first row of an invoice, GnuCash will attempt to also post the invoice (as opposed to only saving or updating it).
- *due_date* - Due date. Optional. Use the same date format as defined in Preferences. Defaulted to date posted, if left blank. Only relevant in the first row of an invoice, if the invoice is posted.
- *account_posted* - Post to account, for vendor or customer posting. Only mandatory in the first row of an invoice, if the invoice is posted.
- *memo_posted* - Memo. Optional. Only relevant in the first row of an invoice, if the invoice is posted.
- *accu_splits* - Accumulate splits? Optional. Use «Y» or «X» for yes, «N» or blank for no. Only relevant in the first row of an invoice, if the invoice is posted. If you use a spreadsheet program to create the import file, it is advised not to use blank for no, because a final column with only blanks may not be recognized as relevant data when the spreadsheet program creates the csv file.

Note on double quotes

If you use the field separator character within a field, the field value should be enclosed in double quotes. Only for the fields description (desc) and notes, can you also include a double quote within a quoted field value, by doubling the double quote. E.g. "This field value uses the separator, and a "quoted" word", would be imported as This field value uses the separator, and a "quoted" word.

Example content for two bills; one of 2 entries, and one of 3 entries. The first is saved and posted, the second only saved. Using comma field separator, decimal point and dd/mm/yyyy date format.

```
1204;15/12/2018;2001;PO 210220;Special delivery;16/12/2018;Pride and Prejudice;pc;
1204;15/12/2018;2001;PO 210220;Special delivery;16/12/2018;Electronic principles;p
1205;15/12/2018;2044;PO 21099;;16/12/2018;Ultimate Guide;pc;Expenses:Books;1;10.01
1205;15/12/2018;2044;PO 21099;;16/12/2018;Dinner & drinks;pc;Expenses:Dining;1;10.
1205;15/12/2018;2044;PO 21099;;16/12/2018;UG course;pc;Expenses:Education;1;10.01;
```

Example content for one customer invoice, with one entry, including tax and discount. Using comma fields separator, decimal point and dd/mm/yyyy date format. The the value of the description field contains the separator character.

20221;16/12/2018;1001;Order 3378;Discount as agreed;4/12/2018;"Accounting part 1,

Import your data

To import your invoice data, navigate to File → Import → Import Bills & Invoices... to open a new import dialog, and provide the necessary information.

- 1. Choose the file to import - Select your import file, or manually type the path and file name.
- 2. Select import type - Select the import type, either Bill or Invoice.
- 3. Select import options - Select your csv format. Use the with quotes options if your file contains fields enclosed in double quotes. These options also match fields not enclosed in quotes; except for the fields for description and notes, fields should not contain the quote character itself. See Note on double quotes above. Use one of the other options if your file does not have fields enclosed in quotes; any quote characters in the file will be imported as is.
- 4. Preview - Once you have selected your import file and csv format, GnuCash shows you a preview of the data. You can verify if your data is listed in the correct columns. If you do not see any rows in the preview, then GnuCash was not able to match your import data rows to the selected csv format. See «What could go wrong?» below.
- 5. Afterwards - You can choose if GnuCash should open tabs for the invoices after the import. Either for all invoices, or for the invoices that are saved but not posted, or for none of the invoices. Opening tabs slows down the import process considerably.
- *Start the import* - If you are satisfied with your selections, hit the OK button to start the import.

If your data file contains invoice IDs that already exist, then GnuCash will ask you (once per import session) to confirm that you want to update existing invoices. If not confirmed, all rows for existing invoices will be ignored.

Примечание

Internally, GnuCash uses so called regular expressions to match the import rows to the data fields. The import option Custom regular expression offers the option to use your own regular expression for this matching process. Obviously, this option requires that you are well versed in regular expressions. When you choose the option Custom regular expression, GnuCash opens a window in which you can edit the GnuCash regular expression, or replace it with your own. Your regular expression should contain a named subpattern for each of the fields of the csv file (using the technical names). A custom regular expression could be useful if the rows of your source data file contain all required fields, but in a different order or format. E.g. if the format of your source data file starts with customer number, followed by invoice ID, followed by the due date, and uses | as separator, your regular expression would start with something like this:

```
^(?<owner_id>[^|]*)\|(?<id>[^|]*)\|(?<due_date>[^|]*)
```

With a custom regular expression, GnuCash could import your source data files, without the need to convert them to the GnuCash import format.

Feedback and statistics

GnuCash executes the import process in three steps:

- *Import* - Imports the data file and attempts to match each row to the data fields.
- *Validation and adjustment* - Validates the data fields and replaces data with defaults if applicable.
- *Processing* - Handles the currency related validations, and creates, updates and posts the invoices.

After all steps have finished, GnuCash issues information about the result of the process. The initial dialog shows the informational or error messages from the validation and processing steps. The second dialog shows the statistics of the process:

- Import - rows ignored: the number of rows that could not be matched to the data fields.
- Import - rows imported: the number of rows that were successfully matched to the data fields.
- Processing and validation - rows fixed: the number of rows for which a default value was used for a field.
- Processing and validation - rows ignored: the number of rows for that were not processed because of a validation error.
- Processing and validation - invoices created: the number of invoices created.
- Processing and validation - invoices updated: the number of invoices that were updated.

If there were unmatched rows in the import step, a final dialog shows the actual rows that could not be matched.

What could go wrong?

Errors in the import step

If the statistics show unmatched rows under «Import - rows ignored», then there is some issue with the format of your import file. Verify that you use and select the correct separator. Verify that your data rows have exactly 21 separator characters (1 for each field, except for the last). Verify whether you use the separator character within a data field; if so, enclose the field in double quotes.

If you use one of the with quotes import options, verify if you use the double quote character in any of the data field values; if within the description or notes fields, make sure that the field value is quoted, and precede each double quote within the field with an extra double quote; if within any other field, remove the double quote character.

Errors in the validation step

The following errors can occur in the validation step. Any error in a data row will cause all rows of the same invoice to be ignored.

Примечание

In versions 3.4 and earlier, an error in a data row would cause just that row to be ignored, as opposed all rows of the same invoice.

- The field `ID` is blank. Every row should have an invoice ID.
- The field `owner_id` is blank. Every first row of an invoice should have an `owner_id`.

- The customer or vendor number in field `owner_id` does not exist. The `owner_id` in the first row of an invoice should be an existing customer (for invoices) or vendor (for bills).
- The date in field `date_posted` is not a valid date. If you provide a value for `date_posted` in the first row of an invoice, it should be a valid date. Did you use the date format as set in Preferences?
- The account in the field `account_posted` does not exist. If you provide a value for the field `date_posted` in the first row of an invoice, the field `account_posted` should be an existing account.
- The account in the field `account_posted` is not of type Accounts Receivable (for invoices) or Accounts Payable (for bills). If you provide a value for the field `date_posted` in the first row of an invoice, the field `account_posted` should be an account of the correct type.
- The field `price` is blank. Every row should have a value for the field `price`.
- The account in the field `account` does not exist. Every row should have an existing account in the field `account`.

Any error in the validation step is listed after the overall import process completes. Correct your data file accordingly.

Errors in the processing step

The following errors can occur in the processing step.

- The invoice cannot be updated because it is already posted. All rows of the same invoice will be ignored. If you want to update the existing invoice, unpost it first in GnuCash.
- The currency of the invoice differs from the currency of the account posted («Invoice x NOT posted because currencies don't match»). GnuCash determines the currency of the invoice either from the customer or vendor master data (for a new invoice) or from the invoice itself (for an existing invoice). The currency of the invoice must agree with the currency of the post to account in the field `account_posted`. GnuCash creates the invoice but cannot post it. Manually correct the invoice in GnuCash.
- The invoice requires currency conversion. («Invoice x NOT posted because it requires currency conversion»). The invoice contains entries on accounts with different currencies, or the currency of the entries differs from the currency of the post to account. For such an invoice, GnuCash needs exchange rates to translate the currency amounts. GnuCash creates the invoice but cannot post it. Post the invoice manually in GnuCash, and provide the requested exchange rates.

Not supported invoice functionality

Currently the invoice import function does not support (at least) the following:

- Import of billing terms and job.
- Import of customer and job in default chargeback project for bills.
- Application of billing terms from customer or vendor master data.
- Automatic numbering of invoices.
- Credit notes.

Importing Customers and Vendors

General

This functionality creates and updates customers and vendors from a csv import file containing rows of vendor/customer master data. The import file may contain rows for new and/or existing customers/vendors. If a customer/vendor already exists, GnuCash updates the existing customer/vendor.

The format of the import file

The import file should contain rows of customer/vendor data, one row for each customer/vendor. The customer/vendor is identified by the customer/vendor number in the field `id` of the data rows. If the field is blank, GnuCash will use the next number from the relevant counter (set in the Counters tab under File → Properties).

There is no data in the file to indicate whether it concerns customer or vendor master data. Instead, a user option in the import dialog makes that distinction.

Each row should contain the fields listed below, in the same sequence, separated by a comma or a semicolon. The fields are listed here by their technical name, which GnuCash uses in the preview of the import data.

- `id` - The customer/vendor number. If it is for an existing customer/vendor, GnuCash will update the customer/vendor. Note that in GnuCash e.g. '000010' is a different customer number than '10'. If the `id` field is empty, GnuCash will use the next number from the relevant counter.
- `company` - The company name. If it is left blank, it is defaulted to the value of field `name`. If that is also blank, then the row is ignored.
- `name` - Billing address - Name. Optional.
- `addr1` - Billing address - Address line 1. At least one of the four address lines of the billing address must be filled. If not, then the row is ignored.
- `addr2` - Billing address - Address line 2.
- `addr3` - Billing address - Address line 3.
- `addr4` - Billing address - Address line 4.
- `phone` - Billing address - Phone. Optional
- `fax` - Billing address - Fax. Optional
- `email` - Billing address - Email. Optional
- `notes` - Notes. Optional
- `shipname` - Shipping information - Name. Optional. Not relevant for vendors.
- `shipaddr1` - Shipping information - Address line 1. Optional. Not relevant for vendors.
- `shipaddr2` - Shipping information - Address line 2. Optional. Not relevant for vendors.
- `shipaddr3` - Shipping information - Address line 3. Optional. Not relevant for vendors.

- *shipaddr4* - Shipping information - Address line 4. Optional. Not relevant for vendors.
- *shipphone* - Shipping information - Phone. Optional. Not relevant for vendors.
- *shipfax* - Shipping information - Fax. Optional. Not relevant for vendors.
- *shipmail* - Shipping information - Email. Optional. Not relevant for vendors.

Example content for a customer with a separate shipping address. Using a semicolon for separator.

```
2201;All Star Company;All Star Company;Union Avenue
776;San Juan;CA;;0482938838;;contact@allstar.com;Last contacted on
4/4/2018.;All Star Company; John Alderman, Office 456;Union Avenue
777;San Juan;CA;78998766;;alderman@allstar.com
```

Example content for a vendor; no ID given, so GnuCash will take the next number from the counter. Using a comma for separator.

```
, Johnson Supplies, Johnson Supplies, Electric Park
56, Plains, VA, , 0482986538, , jack@johnson.com, Discount negotiated, , , , , , , ,
```

All fields by technical name in the required sequence.

```
id, company, name, addr1, addr2, addr3, addr4, phone, fax, email, notes,
shipname, shipaddr1, shipaddr2, shipaddr3, shipaddr4, shipphone, shipfax,
shipmail
```

Import your data

To import your customer or vendor data, navigate to File → Import → Import Customer & Vendors... to open a new import dialog, and provide the necessary information.

1. Choose the file to import - Select your import file, or manually type the path and file name.
 2. Select import type - Select the import type, either Customer or Vendor.
 3. Select import options - Select your csv format. Use the with quotes options if your file contains fields enclosed in double quotes. These options also match fields not enclosed in double quotes, but fields should not contain the double quote character itself. Use one of the other options if your file does not have fields enclosed in quotes; any double quote characters in the file will then be imported as is.
 4. Preview - Once you have selected your import file and csv format, GnuCash shows you a preview of the data. You can verify if your data is listed in the correct columns. If you do not see any rows in the preview, then GnuCash was not able to match your import data rows to the selected csv format. See «What could go wrong?» below.
- *Start the import* - If you are satisfied with your selections, hit the OK button to start the import.

Примечание

Internally, GnuCash uses so called regular expressions to match the import rows to the data fields. The import option Custom regular expression offers the option to use your own regular expression for this matching process. Obviously, this option requires that you are well versed in regular expressions. When you choose the option Custom regular expression, GnuCash opens a window in which you can edit the GnuCash regular expression, or replace it with your own. Your regular expression should contain a named subpattern for each of the fields of the csv file (using the technical

names). A custom regular expression could be useful if the rows of your source data file contain all necessary fields, but in a different order or format. E.g. if the format of your source data file starts with customer number, followed by company name, name, and one address field, and that is all you want to import, then your custom regular expression would be something like this (using comma as a separator):

```
^(?<company>[^,]*),(?<id>[^,]*),(?<name>[^,]*),(?<addr1>[^,]*),(?<addr2>[^,]*),
```

With a custom regular expression, GnuCash could import your source data files, without the need to convert them to the GnuCash import format.

Feedback and statistics

GnuCash executes the import process in three steps:

- *Import* - Imports the data file and attempts to match each row to the data fields.
- *Validation and adjustment* - Validates the data fields and replaces data with defaults if applicable.
- *Processing* - Creates or updates the vendor or customer master data.

After all steps have finished, GnuCash issues information about the result of the process. The initial dialog shows the statistics of the process:

- Import results - lines ignored: the number of rows that could not be matched to the data fields.
- Import results - lines imported: the number of rows that were successfully matched to the data fields.
- Import results - customers/vendors fixed: the number of rows for which a default value was used for a field.
- Import results - customers/vendors ignored: the number of rows for that were not processed because of a validation error.
- Import results - customers/vendors created: the number of customers/vendors created.
- Import results - customers/vendors updated: the number of customers/vendors that were updated.

If there were unmatched rows in the import step, a final dialog shows the actual rows that could not be matched.

What could go wrong?

Errors in the import step

If the statistics show unmatched rows under «Import results - lines ignored», then there is some issue with the format of your import file. Verify that you use and select the correct separator. Verify that your data rows have exactly 18 separator characters (1 for each field, except for the last). Verify whether you use the separator character within a data field; if so, enclose the field in double quotes.

If you use one of the with quotes import options, verify if you use the double quote character in any of the data field values. If so, remove them; importing double quotes as is, is not supported when using the with quotes import options.

Errors in the validation step

If the statistics show rows under «Import results - customers/vendors ignored», then data rows were ignored because of one of the errors below:

- The field `company` and the field `name` are both blank. The field `company` is mandatory; if it is blank, then it is defaulted to the value of the field `name`, but if both are blank, then the data row cannot be processed.
- The fields `addr1`, `addr2`, `addr3` and `addr4` are all blank. At least one of these fields must have a value, otherwise the data row cannot be processed.

Not supported customer/vendor functionality

Currently the customer/vendor import function does not support (at least) the following:

- Import of any of the fields in the customer tab for billing information: currency, terms, discount, credit limit, tax included and tax table.
- Import of any of the fields in the vendor tab for payment information: currency, terms, tax included and tax table.

Часть IV. Приложения

Содержание

GnuCash Glossary	256
A. Migration Guide	260
Using Accounts vs. Categories	260
Importing Data	260
Import of Financial Data by QIF Files	260
Import of Business Data by CSV Files	260
Converting XML GnuCash File	260
B. Auxiliary File Formats	263
Check Format Files (*.chk)	263
Overview	263
Example file	263
Field Descriptions	264
Creating Check Format Files	272
C. GNU Free Documentation License	274
0. PREAMBLE	274
1. APPLICABILITY AND DEFINITIONS	274
2. VERBATIM COPYING	275
3. COPYING IN QUANTITY	275
4. MODIFICATIONS	276
5. COMBINING DOCUMENTS	277
6. COLLECTIONS OF DOCUMENTS	277
7. AGGREGATION WITH INDEPENDENT WORKS	277
8. TRANSLATION	278
9. TERMINATION	278
10. FUTURE REVISIONS OF THIS LICENSE	278
Addendum	278

GnuCash Glossary

This is a glossary of common terms used in GnuCash. Some entries here are taken from Wikipedia [https://en.wikipedia.org/wiki/Main_Page].

Account	An account keeps track of what you own, owe, spend or receive.
Accounting Period	An accounting period is the period with reference to which accounting books of an entity are prepared. Common accounting periods include month, quarter, and year.
AqBanking	A library which implements the German Home Banking Computer Interface (HBCI) and Electronic Banking Internet Communication Standard (EBICS), OFX Direct Connect and Paypal. It is the successor of openHBCI.
Asset	An asset is something you own. Anything tangible or intangible that can be owned or controlled to produce value and that is held to have positive economic value is considered an asset.
Balance Sheet	A Balance Sheet is a summary of the financial balances of an individual or organization. It summarizes a company's assets, liabilities and ownership equity at a specific point in time.
Book	A book is a record of all transactions for an individual or organization. In GnuCash, each file contains a book.
Capital Gain/Loss	The difference between the purchase and selling prices of an investment at the time the investment is sold. Also known as <i>Realized Gain/Loss</i> . Before an investment is sold, the difference in value is referred to as <i>Unrealized Gain/Loss</i> . См. также Realized Gain/Loss, Unrealized Gain/Loss.
Capital stock	См. Stock.
Chart of Accounts	A listing of all the accounts available in the data file. The chart of accounts consists of balance sheet accounts (assets, liabilities, stockholders' equity) and income statement accounts (revenues, expenses, gains, losses).
Commission	The fee paid to a broker to buy or sell securities.
Commodity	A commodity is something of value that is easily tradeable or sellable; for example, currencies, stocks, bonds, grain, copper, and oil are all commodities.
Common stock	См. Stock.
Compounding	The concept that the reinvested interest can later earn interest of its own (interest on interest). This is often referred to as <i>compound interest</i> .
Cost Basis	Cost basis is the original cost of property, adjusted for various factors. Its primary use is for tax purposes. Factors that affect the cost basis include: stock splits, dividends, depreciation and return of capital distributions. Cost basis is used to determine the <i>capital gain</i> .
CSV	Stands for Comma Separated Values. CSV files are used to store data in plain text. Each line of the file is a record and each record can be comprised of multiple fields separated by commas. CSV is one import format that GnuCash supports.

Dividends	Dividends are cash payments a company makes to shareholders. The amount of this payment is usually determined as some amount of the profits of the company. Not all common stocks give dividends.
Equities	Equities are investments in which the investor becomes part (or whole) owner in something.
Financial Transaction Services (FinTS)	A banking protocol used by German banks. Developed by the German Central Banking Committee ZKA (Zentraler Kredit-Ausschuss). The standard is used only by German banks. Prior 2002, it was called Home Banking Computer Interface (HBCI). FinTS is one import format that GnuCash supports. См. также Home Computer Banking Interface (HBCI).
GSettings	Since version 2.5 the tool that stores user configuration data. It uses the native data store of the operating system: Linux DConf since Gnome 3.0 dropped GConf macOS Defaults. Use the command-line defaults(1) to modify prefs when GnuCash isn't running. Windows Registry.
Home Computer Banking Interface (HBCI)	A bank-independent online banking protocol used by German banks. Home Banking Computer Interface (HBCI) was developed by the German Central Banking Committee ZKA (Zentraler Kredit-Ausschuss). Since 2002, it has been called Financial Transaction Services (FinTS). HBCI is one import format that GnuCash supports. См. также Financial Transaction Services (FinTS).
Interest	What a borrower pays a lender for the use of their money. Normally, this is expressed in terms of a percentage of the principal per year. For example, a savings account with 1% interest will pay you \$1 for every \$100 you keep deposited per year.
Liability	A liability is a debt or obligation that an individual or organization owes.
LibOFX	An open source library for <i>OFX</i> . It was created by one of the GnuCash developers, originally to be the OFX interface for GnuCash. См. также OFX.
Liquidity	A measure of how easily convertible an investment is to cash. Money in a savings account is very liquid, while money invested in a house has low liquidity because it takes time to sell a house.
Lot	A lot is a means of grouping a commodity so that you later identify that the item bought in one transaction is the same as one sold in a different transaction. Lots are often implemented with stocks, where capital gain can depend on which item is being sold at a given time.
MT940	A financial information standard defined by SWIFT and used by several European banks. It is also used internally in HBCI. Unfortunately, you can't download the MT940 standard, but some banks publish it on their websites. MT940 is one import format that GnuCash supports.
OFX	The Open Financial eXchange format. This is a financial information exchange standard used by many institutions. OFX is one import format that GnuCash supports.

Price Database	The price database contains a store of price quotes for stocks, mutual funds, and currencies.
Principal	The original amount of money invested or borrowed.
QFX	The Quicken Financial eXchange format is a proprietary financial information exchange standard promoted by Quicken and used by many institutions. QFX is one import format that GnuCash supports.
QIF	The Quicken Interchange Format (QIF) is an open specification for reading and writing financial data to files. This is an older format that is still used by many institutions. QIF is one import format that GnuCash supports.
Realized Gain/Loss	The difference between the purchase and selling prices of an investment at the time the investment is sold. Also known as <i>Capital Gain/Loss</i> . Before an investment is sold, the difference in value is referred to as <i>Unrealized Gain/Loss</i> . См. также Capital Gain/Loss, Unrealized Gain/Loss.
Reconciliation	Reconciliation is a verification process in which the user compares their records with those of the financial institution to ensure that the records in each system agree at some particular point in time. During reconciliation, the user checks individual transactions in their file against the institution's statement; upon completion, the reported balances of the institution and the reconciled account will match at that point in the register.
Return	The total income plus capital gains or losses of an investment. См. также Yield.
Reversing Transaction	In formal accounting, a transaction is never deleted. Therefore, when a mistake is made, the original transaction remains in the ledger, and a transaction is added to the ledger that reverses the original. This <i>reversing transaction</i> duplicates the original transaction, but with debit and credit amounts reversed. This removes the effect of the erroneous transaction from the books. After entering the reversing transaction, a corrected transaction can then be entered. Reversing transactions are not commonly used in personal accounting.
Risk	The probability that the return on investment is different from what was expected. Investments are often grouped on a scale from low risk (e.g., savings accounts or government bonds) to high risk (e.g., common stocks or junk bonds). As a general rule of thumb, the higher the risk, the higher the possible return.
Scheduled Transaction	Scheduled transactions provide a framework for remembering information about transactions that are set to occur in the future, either once or periodically. См. также Yield.
Scheme	Scheme is a functional programming language based on a dialect of LISP. Reports in GnuCash use the Scheme programming language; thus, users wishing to customize reports must write Scheme.
Shareholder	A shareholder is a person who holds common stock in a company.
Split	A split, or Ledger Entry, is the fundamental accounting unit. Each split consists of an amount, the value of that amount expressed in a (possibly) different currency, a Memo, a pointer to the parent Transaction, a pointer to the debited Account, a reconciled flag and timestamp, an action field, and a key-value frame which can store arbitrary data.

Stock	A security that represents a certain fractional ownership of a company. This is what you buy when you «buy stock» in a company on the open market. This is also sometimes known as <i>capital stock</i> , or <i>common stock</i> .
Stock split	Occurs when a company offers to issue some additional multiple of shares for each existing stock. For example, a «2 for 1» stock split means that if you own 100 shares of a stock, you will receive an additional 100 shares at no cost to you. The unit price of the shares will usually be adjusted so there is no net change in the value, so in this example the price per share will be halved. Note that such transactions affect the cost basis per share owned.
Transaction	A transaction consists of a date, a description, an ID number, a list of two or more splits, and a key-value frame. Transactions embody the notion of "double entry" accounting.
Unrealized Gain/Loss	Unrealized gain or loss is the difference in value between a purchase price and the current value of a given asset. These gains remain unrealized until the asset is sold, at which point they become <i>Realized gains or losses</i> . См. также Capital Gain/Loss, Realized Gain/Loss.
Valuation	The process of determining the market value or the price the investment would sell at in a «reasonable time frame».
XML	The eXtensible Markup Language is an international markup standard. GnuCash stores its data by default in an XML data structure.
Yield	A measure of the amount of money you earn from an investment (i.e., how much income you receive from the investment). Typically, this is reported as a percentage of the principal amount. Yield does not include capital gains or losses (see Return). For example, a stock that sells for \$100 and gives \$2 in dividends per year has a yield of 2%.

Приложение А. Migration Guide

This appendix is to help current users of other financial software packages in their migration to GnuCash. We address the conceptual differences between the layout of GnuCash accounts versus other software packages.

Using Accounts vs. Categories

If you are familiar with other personal finance programs, you are already accustomed to tracking your income and expenses as categories. Since GnuCash is a double-entry system (see «ОСНОВНЫЕ ПОНЯТИЯ ОТЧЕТНОСТИ»), income and expenses are tracked in accounts. The basic concept is the same, but the account structure allows more consistency with accepted business practices. So, if you are a business user as well as a home user, GnuCash makes it easy to keep track of your business as well as your personal accounts.

Income and expense accounts give you the same information you would get with categories, but they also give you more flexibility in entering your transactions. In GnuCash, you have the option to enter transactions directly into income and expense accounts through their account registers. Other programs that use categories do not offer this option, because there is no «account register» for a category.

You also have the option in GnuCash to treat income and expense accounts exactly as you would treat categories, if you are more comfortable with that method. In Quicken® and similar programs, transactions require an account and a category. Substitute an income or expense account name in GnuCash where you would normally enter a category name in the other programs, and the result should be the same. We will discuss transaction entry in «Транзакции» in greater detail.

Importing Data

If you want to import data from your previous application, you should distinguish between financial data and other data. Probably the best way to import financial data is the «Quicken Interchange Format» QIF . It is a specific format for financial data, which most financial applications for the private sector know and can use for export.

For other data we suggest the use of the «Comma Separated Value» CSV format.

Import of Financial Data by QIF Files

See https://en.wikipedia.org/wiki/Quicken_Interchange_Format for it's details.

Some GnuCash users collected their knowledge about the best use in our https://wiki.gnucash.org/wiki/Quicken_Migration.

Import of Business Data by CSV Files

If you want to import customers and vendors or bills and invoices see Глава 18, *Importing Business Data*.

Converting XML GnuCash File

The GnuCash XML data file can be transformed to almost any other data format (e.g., QIF, CSV...) quite easily if one is familiar with the «Extensible Stylesheet Language Transformations» XSLT [<https://en.wikipedia.org/wiki/XSLT>]. The GnuCash data file is well-formed XML, and it can therefore be run through an XSLT parser with an associated stylesheet. This allows one to transform the file to just about any format that can be designed, given a properly written stylesheet.

A few steps need to be followed. The writing of a stylesheet is a task for a different time, but if you can get one written, here's what you need to do:

1. Copy the GnuCash XML data file to a working file.

Важно

If the file was last modified by a version of GnuCash older than 2.0, then before you continue to the next step you will need to modify the working file's `<gnc-v2>` tag to read something like this:

```
<gnc-v2 xmlns:cd="http://www.gnucash.org/XML/cd"
  xmlns:book="http://www.gnucash.org/XML/book"
  xmlns:gnc="http://www.gnucash.org/XML/gnc"
  xmlns:cmdty="http://www.gnucash.org/XML/cmdty"
  xmlns:trn="http://www.gnucash.org/XML/trn"
  xmlns:split="http://www.gnucash.org/XML/split"
  xmlns:act="http://www.gnucash.org/XML/act"
  xmlns:price="http://www.gnucash.org/XML/price"
  xmlns:ts="http://www.gnucash.org/XML/ts"
  xmlns:slot="http://www.gnucash.org/XML/kvpslot"
  xmlns:cust="http://www.gnucash.org/XML/cust"
  xmlns:entry="http://www.gnucash.org/XML/entry"
  xmlns:lot="http://www.gnucash.org/XML/lot"
  xmlns:invoice="http://www.gnucash.org/XML/invoice"
  xmlns:owner="http://www.gnucash.org/XML/owner"
  xmlns:job="http://www.gnucash.org/XML/job"
  xmlns:billterm="http://www.gnucash.org/XML/billterm"
  xmlns:bt-days="http://www.gnucash.org/XML/bt-days"
  xmlns:sx="http://www.gnucash.org/XML/sx"
  xmlns:fs="http://www.gnucash.org/XML/fs"
  xmlns:addr="http://www.gnucash.org/XML/custaddr">
```

Примечание

You can put pretty much anything you want behind the equal signs, but a unique URL is what is typically used.

2. Create an XSLT stylesheet containing the transformation your desire, or obtain one that's already written.

User Contributed XSLT Stylesheets

- in our repository: <https://github.com/Gnucash/gnucash/tree/maint/contrib/xslt>
 - in our wiki: https://wiki.gnucash.org/wiki/De/export_to_excel_xls_transform
3. Install an XSLT processor such as Saxon (https://en.wikipedia.org/wiki/Saxon_XSLT) or Xalan (https://en.wikipedia.org/wiki/Apache_Xalan). Any conforming processor [https://en.wikipedia.org/wiki/Category:XSLT_processors] will do, really...
 4. Run the work file and the stylesheet through the processor according to the processor's instructions.
 5. You will now have a file in the desired output format. An enterprising individual could go so far as to write a stylesheet to transform the GnuCash data file to an OpenOffice spreadsheet (or vice-versa, for that matter). Such things as QIF ought to be a little less work.

Benefits are that you don't need to write a Scheme module or a new C routine to do this transformation. Anyone who knows or can learn XML and XSLT can perform this task. Not much harder, really, than writing a Web page....

Anyhow, I just wanted this tidbit to be captured somewhere permanently. The process works on 4.6 datafiles, and ought to work on earlier versions, too.

Приложение B. Auxiliary File Formats

These are the formats of some auxiliary files used by GnuCash.

Check Format Files (* .chk)

Overview

The check format file is used to tell GnuCash how to print a check or checks onto a page of paper. This file first describes the overall layout of a page (number of checks, orientation, etc) and then describes the layout of the specific items on a single check. The file is organized as a typical Key/Value file used by many Linux applications. Keys/values pairs are grouped into sections that begin with the group name enclosed in square brackets.

GnuCash looks for check format files in two different locations when you bring up the check printing dialog. The first location is typically `/usr/share/gnucash/checks`, where check files distributed with the application can be found. The second location is the user private `~/.local/share/gnucash/checks`¹ directory. Users may add check formats at any time (even while GnuCash is running) simply by dropping a new `*.chk` file in this directory. The next time the check printing dialog is opened the new check format will appear in the list of available check formats.

Примечание

Printing functions differently depending on the version of GTK that is installed on your system. When GnuCash is using a version of GTK prior to 2.10 all offsets are measured from the lower left corner of the page or check. When using GTK 2.10 or later, all offsets are measured from the upper left corner of the page or check.

Example file

A typical GnuCash check file is presented below. The contents of this file will be described in the next sections.

```
[Top]
Guid = 67b144d1-96a5-48d5-9337-0e1083bbf229
Title = Quicken/QuickBooks (tm) US-Letter
Rotation = 0.0
Translation = 0.0;4.0
Show_Grid = false
Show_Boxes = false

[Check Positions]
Height = 252.0
Names = Top;Middle;Bottom

[Check Items]
Type_1 = PAYEE
Coords_1 = 90.0;102.0;400.0;20.0

Type_2 = AMOUNT_WORDS
Coords_2 = 90.0;132.0
```

¹Up to GnuCash 2.6.21 it was `~/.gnucash/checks`

```
Type_3 = AMOUNT_NUMBER
Blocking_Chars_3 = true
Coords_3 = 500.0;102.0
```

```
Type_4 = DATE
Coords_4 = 500.0;67.0
```

```
Type_5 = NOTES
Coords_5 = 50.0;212.0
```

Field Descriptions

Top Group

This section of the check file describes the overall layout of a page of checks (or check) that goes into the printer.

Таблица B.1. Overall Page Description Fields

Name	Type	Required	Description
Guid	string	mandatory	The guid is used to uniquely identify a check format to GnuCash. It must be unique across the entire set of application supplied and user supplied check formats. If you copy an application check file as the basis of your own check format, you must change this value. The <i>uuidgen</i> program may be used to generate these identifiers.
Title	string	mandatory	The title is used to uniquely identify a check format to the user. This value is presented verbatim in the check format list of the check printing dialog. If you copy an application check file as the basis of your own check format, you should change this value. The title may be any utf-8 string.
Font	string	optional	If supplied, this is the default font used to print all text items on this check. This field can

Name	Type	Required	Description
			contain any string that is acceptable by gtk as a font specifier. If this field is omitted, the default font is the font specified in the GnuCash preferences dialog. A typical string would be «sans 12».
Blocking_Chars	boolean	optional	If supplied, this is the default used when printing all <i>TEXT</i> items on this check. When set to true, will print *** before and after each text field on the check. Blocking characters are printed to protect check fields from alteration. For example, the amount field may be printed as ***100.00***
DateFormat	boolean	optional	If supplied, this is the default used when printing all <i>DATE</i> items on this check. When set to true, will print the format of the DATE in 8 point type, centered and below the actual DATE. For example DDMMYYYY.
Rotation	double	optional	This value specified the rotation of the entire page (in degrees) around the origin point. For gtk versions prior to 2.10, the origin point is in the lower left corner of the page and rotation values increase in the counter-clockwise direction. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and rotation values increase in the clockwise direction. Rotation of the page is applied before translation.
Translation	list of 2 doubles	optional	These values specify the x and y translation of the entire page (in points) relative to the origin point. For gtk versions

Name	Type	Required	Description
			prior to 2.10, the origin point is in the lower left corner of the page and translation values increase moving up and to the right. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and translation values increase moving down and to the right. Rotation of the page is applied before translation.
Show_Grid	boolean	optional	If this value is set to <i>true</i> then GnuCash will draw a grid on the page, starting at the origin with the lines spaced every 50 points. This can be helpful when creating a check format file.
Show_Boxes	boolean	optional	If this value is set to <i>true</i> then for each item where the width and height have been specified, GnuCash will draw a box showing location and maximum size of that item . This can be helpful when creating a check format file.

Примечание

The Blocking_Chars and DateFormat options are defined for all check formats in Edit->Preferences->Printing. It is recommended that these global options be set to false (the default), and that the options be set for individual Check Items as described below.

Check Positions Group

This group of items specifies how multiple checks are laid out on the same sheet of paper, and gives names to each of these check locations so that a user can specify which check location that GnuCash should print. This entire group of key/value pairs is optional, and should be omitted if the format file only specifies a single check per page of paper.

Таблица B.2. Multiple Checks Per Page Fields

Name	Type	Required	Description
Height	double	mandatory	This field specifies the height of a single check on the page. If there

Name	Type	Required	Description
			are multiple checks per page then this item is mandatory. If there is only a single check per page, this entire section should be omitted.
Names	list of strings	mandatory	This field specifies the names of the check locations that can be printed on each page. These names represent the check positions starting from the top of the page and moving downward. The names are presented verbatim in the check position list of the check printing dialog. A typical value for this field is "Top;Middle;Bottom", but it could also be "First;Second;Third" or any other set of strings that clearly identify the check locations. If there are multiple checks per page then this item is mandatory. If there is only a single check per page, this entire section should be omitted.

Check Items Group

This section specifies the individual items that are printed on the check. There is no limit to the number of items that may be present in this section, and any given type of item can be repeated multiple times. This allows for the printing of checks that have a side stub, or for the one-per-page business checks that have both the check and multiple check stubs on the same page. For example, to print the payee name on a business check and on both stubs, simply specify three payee items with differing print coordinates.

Each key names in this section explicitly includes the item number to which it applies. E.G. The key named Type_1 applies to the first item to be printed, and the key Coords_3 applies to the third item to be printed. Item numbers start at one and increase sequentially. Any gap in the numbering sequence is interpreted by GnuCash as the end of the item list. Items are printed in the order of their item numbers, not in the order in which they appear in the file.

Each item specified must include a type declaration. The rest of the parameters for that item depend upon the particular type of that item. See Таблица В.4, «Individual Check Item Types» for a list of valid item types and their required parameters.

Таблица В.3. Individual Check Item Fields

Name	Type	Required	Description
Type_н	string	mandatory	This field specifies the type of a single item to be printed on a check. See Таблица В.4, «Individual Check Item Types» for a list of valid item types.
Coords_н	list of 2 or 4 doubles	mandatory	<p>This field specifies the coordinates where the item should be placed on a check, and optionally also specifies the width and height of the item. The numbers in order are the X and Y offset of the lower left corner of the item, and optionally the width and height of the item. If the width is supplied then the height must also be supplied, so this field will always contain two or four numbers. For gtk versions prior to 2.10, the origin point is in the lower left corner of the page and translation values increase moving up and to the right. For gtk version 2.10 and later, the origin point is in the upper left corner of the page and translation values increase moving down and to the right.</p> <p>Примечание</p> <p>Regardless of whether the origin is at the top or the bottom of the page, the coordinates always specify the lower left point of the item.</p>

Name	Type	Required	Description
Font_ <i>n</i>	string	optional	If supplied, this is the font used to print this specific text item. This field can contain any string that is acceptable by gtk as a font specifier. If this field is omitted, the default font is the font specified in the <i>Top</i> section of the check description file, or if that was omitted the font specified in the GnuCash preferences dialog. This field is only recognized when using gtk version 2.10 or later.
Align_ <i>n</i>	string	optional	If supplied, this is the alignment used to print this specific text item. This field must contain one of the strings «left», «center» or «right». If this field is omitted, the text will be left aligned. This field is only recognized when using gtk version 2.10 or later.
Text_ <i>n</i>	string	optional	This field is only used when the item type is <i>TEXT</i> . It specifies the utf-8 text that should be printed on the check.
Filename_ <i>n</i>	string	optional	This field is only used when the item type is <i>PICTURE</i> . It specifies the filename of the image that should be printed on the check. The string may specify either an absolute path name or as a relative path name. If a relative path name is specified, GnuCash first looks in in the application check format folder (typically <code>/usr/share/gnucash/checks</code>) for the image file, and if it is not found there then it looks in the user private <code>~/ .local/</code>

Name	Type	Required	Description
			share/gnucash/checks ¹ directory for the image. This field is only recognized when using gtk version 2.10 or later.
Blocking_Chars_n	boolean	optional	If supplied, this will set the print <i>Blocking_Chars</i> option for this item.
DateFormat_n	boolean	optional	If supplied, this will set the print <i>DateFormat</i> option for this item.

These are the individual items that can be printed on a check. All items require the coordinates on the page where the item should be printed. The majority of these items result in text being printed on the page, and these items may have individual font and alignments specified. For example, the numerical amount of a check could be printed right justified while everything else is printed left justified. Other types may have unique parameters.

Таблица В.4. Individual Check Item Types

Name	Required Fields	Optional Fields	Description
PAYEE	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check payee name at the specified coordinates.
DATE	Coords	Font Align Blocking_Chars DateFormat	This type value tells GnuCash to print the check date at the specified coordinates.
NOTES	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the transaction notes field at the specified coordinates.
CHECK_NUMBER	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check number at the specified coordinates. The check number reflects the book option selection under File → Properties for number source (transaction number or anchor-split action - see Use Split Action Field for Number [ghelp:gnucash-help?num-action-book-option] in the Book

Name	Required Fields	Optional Fields	Description
			Options section of the GnuCash Help Manual).
MEMO	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the split memo field at the specified coordinates.
ACTION	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the split action field at the specified coordinates. However, the printed field reflects the book option selection under File → Properties for number source (transaction number or anchor-split action - see Use Split Action Field for Number [ghelp:gnucash-help?num-action-book-option] in the Book Options section of the GnuCash Help Manual). If number source for the book is specified as anchor-split action, this field will instead print the transaction number field.
AMOUNT_WORDS	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check amount in words at the specified coordinates. The amount will appear similar to the string "One thousand, two hundred thirty four and 56/100".
AMOUNT_NUMBER	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the check amount in numbers at the specified coordinates. The amount will appear similar to the number "\$1,234.56".
ADDRESS	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the address at the specified coordinates.
SPLITS_ACCOUNT	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the account names for each

Name	Required Fields	Optional Fields	Description
			split entry stating at the specified coordinates. See the note on splits printing.
SPLITS_AMOUNT	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the amount for each split entry stating at the specified coordinates. Amounts are printed with currency symbols. See the note on splits printing.
SPLITS_MEMO	Coords	Font Align Blocking_Chars	This type value tells GnuCash to print the memo text for each split entry stating at the specified coordinates. See the note on splits printing.
TEXT	Coords, Text	Font Align Blocking_Chars	This type value tells GnuCash to print an arbitrary string at the specified coordinates. The string to be printed is specified with the <i>Text_n</i> key.
PICTURE	Coords, Filename	(none)	This type value tells GnuCash to print an image at the specified coordinates. The image to be printed is specified with the <i>Filename_n</i> key. This type is only recognized when using gtk version 2.10 or later.

Примечание

SPLIT items include all split entries for the transaction except for the split that applies to the current account register (referred to as the anchor-split). This is usually the last split listed when splits are displayed in the register. The coordinate location defines the lower left location for the split information.

Creating Check Format Files

Creating your own check format file is a fairly simple task. The easiest way to start is to copy an existing check format file from the application directory (typically `/usr/share/gnucash/checks`) to the directory `~/.local/share/gnucash/checks`¹. Make sure to change the guid so the new file will be accepted by gnucash, and change the title to something descriptive. Then change or add individual item fields as necessary. You can also create a new check file by clicking the Save Format button on the Custom format page of the check printing dialog.

Примечание

Key names are case sensitive. If you are having problems with a check format file, ensure that all key names have capital letters as documented above.

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