
Python interface to GnuCash documents Documentation

Release 1.1.4

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CONTENTS

1	What's new	3
2	Documentation	13
3	Tutorial : using existing objects	21
4	Tutorial : creating new objects	33
5	Examples of programs written with piecash	39
6	piecash and the official python bindings	49
7	piecash on android	51
8	For developers	55
9	Indices and tables	109
	Python Module Index	111
	Index	113

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Project page <https://github.com/sdementen/piecash>

WHAT'S NEW

1.1 Version 1.1.4 (2021-01-29)

- allow tags with zero quantity by fixing unit price calculation (fix #153, tx @croth1)
- allow tags with zero quantity of value by fixing validation control (fix #154, tx @stoklund)
- use template0 when creating new books in postgres (vs template1 before) to fix encoding issues
- add examples for deleting an account and exporting transactions to a CSV file

1.2 Version 1.1.3 (2021-01-17)

- requires sqlalchemy < 1.4 (fix #149)
- fix example with wrong post_date type
- update currency_ISO
- update use of deprecated function in xml (fix #147, tx @bxbrenden)
- add example of program to modify an existing transaction

1.3 Version 1.1.2 (2020-10-24)

- import requests from functions using it to avoid making it a required dependency (fix #90)
- adapt setup.py to avoid depending on SQLAlchemy-Utils 0.36.8 (fix #91)
- updated gnucash projects page: https://piecash.readthedocs.io/en/latest/doc/github_links.html

1.4 Version 1.1.1 (2020-10-21)

- add a check_exists flag to allow bypassing check existence of DB on opening (fix #91, tx @williamjacksn)

1.5 Version 1.1.0 (2020-10-20)

- fix use of ISO date for ledger export (fix #115 by @MisterY)
- add field is_credit and is_debit to split (fix #105)
- fix get_balance sign when recursing + add natural_sign keyword to specify if sign should be reverse or not
- add support for GnuCash 4.1 (fix #136)
- fix table names not matching in case (fix #137)
- fix test suite to support 3.8
- deprecate python 3.5
- quandl will retrieve API KEY from environment variable QUANDL_API_KEY (if defined)
- yahoo will use exchangeTimezoneName for timezone (vs exchangeTimezoneShortName before), thanks @ge-offwright240
- add possibility to export accounts with their short name in ledger (fix #123)

1.6 Version 1.0.0 (2019-04-15)

- drop support of py27 and py34 (fix #53)
- support gnuCash 3.0.x format (code + test and book migration)
- set autoflush to False for open_book (was only done for create_book before) (fix #93)
- remove tz info when serialising DateTime to SQL (issue with postgresql doing some TZ conversion)
- add basic support for Jobs

1.7 Version 0.18.0 (2018-04-24)

Mostly refactoring: - refactor common parts of vendor, customer and employee into person - add 'on_book_add' protocol called when object is added to a book - set autoflush to False to prevent weird behavior when using slots (that retrigger a query in the middle of a flush) - refactor slots - align sql schema 100% with 2.6.21 (based on sqlite reference) - support business slots

1.8 Version 0.17.0 (2018-03-16)

- internal refactoring of setup.py
- add optional packages
- move to pipenv
- improve documentation
- fix missing extra blank between account name and amount in ledger export (fix #86)

1.9 Version 0.16.0 (2018-03-04)

- add a documentation section about piecash on android
- fix yahoo finance quote retrieval
- indicate correct reconcile state in ledger output (fix #77)

1.10 Version 0.15.0 (2018-02-21)

- add piecash CLI (refactor of scripts)
- add book.invoices to retrieve all invoices in a book
- expose gnuCash rationals as decimals in Entry and Invoice
- fix issue #65 about “template” (scheduled transactions) appearing in ledger export
- fix issue #64 about escaping in double quote mnemonic with non alpha characters
- fix issue #19 allowing to pass the check_same_thread flag for sqlite
- add argument recurse to get_balance (fix #73)
- handle currency conversion in get_balance
- add Commodity.currency_conversion to get a conversion factor between a commodity and a currency

1.11 Version 0.14.1 (2018-02-01)

- fix bug in pc-export

1.12 Version 0.14.0 (2018-02-01)

- fix definition of account get_balance to use quantities (and not values) (@sdementen)
- fix bug when providing a float instead of a Decimal to a numeric value (@gregorias)
- support new format for date for 2.7/2.8 (@MisterY, @sdementen)
- fix bug where transactions based on deleted scheduled transactions cause exceptions (@spookyluke)
- fix bug (#58) where large Decimals were raising an sql exception instead of a ValueError exception (@sdementen)
- add Recurrence to global imports + add documentation to Recurrence (@MisterY)
- add script pc-export to export customers and vendors from a gnuCash book (@sdementen)

1.13 Version 0.13.0 (2017-10-08)

- upgrade CI (appveyor and travis) to 2.7/3.4/3.5/3.6
- upgrade dependencies
- df_splits: allow user to specify additional fields to extract (@NigelCleland)
- improve documentation (@Brian-K-Smith)

1.14 Version 0.12.0 (2017-02-15)

- rely on yahoo-finance to retrieve share information and share prices
- use only ISO currency static data (remove support for looking on the web)
- normalise post_date to 11:00AM

1.15 Version 0.11.0 (2016-11-13)

- add support for python 3.5
- add preload method on book to allow preloading all objects at once

1.16 Version 0.10.2 (2015-12-06)

- add children argument to Account constructor
- add a new example (used as answer to <http://stackoverflow.com/questions/17055318/create-transaction-in-gnucash-in-response-to-an-email/>)
- add a new example showing how to export Split information to pandas DataFrames
- fix an error handling in retrieving currency exchanges in quandl
- fix py3 bugs in dataframe functions
- fix type and source of Pricers to be compatible with GnuCash
- add a Price when entering a commodity Split
- set microsecond to 0 for all datetime
- add pandas for requirements-dev
- add tests for deletion of transaction and for dataframe functions

1.17 Version 0.10.1 (2015-11-29)

- refactor the validation mechanism to work well with autoflush=True
- add support to GLIST in KVP
- add new matching rule for GUID slots
- rename slot 'default_currency' to 'default-currency'
- add tests for single_transaction factory
- update ipython example with pandas dataframes

1.18 Version 0.10.0 (2015-11-18)

- first draft of splits_df and prices_df methods that bring the book data into pandas DataFrames
- add an ipython notebook to show the new dataframes methods
- save default_currency of a book in a slot (when book created by piecash) or use locale to retrieve the default_currency
- improve error handling for quandl queries (currency exchange rates)

1.19 Version 0.9.1 (2015-11-15)

- fix bug with unicode on MySQL

1.20 Version 0.9.0 (2015-11-15)

- ported to SQLAlchemy-1.0
- set autoflush=true on the SA session
- improved coverage above 90% for all modules
- setup coveralls.io and requires.io
- fix bugs discovered by improved testing

1.21 Version 0.8.4 (2015-11-14)

- use AppVeyor for Windows continuous integration and for .exe freezing
- fix bugs in tests suite where files were not properly closed
- add Book.close function to close properly files
- depend on enum-compat instead of directly enum34
- add simple script to import/export prices from a gnuCash book

1.22 Version 0.8.3 (2015-11-01)

- fix issue #8 re enum34
- updated sqlalchemy dep to use latest 0.9 series

1.23 Version 0.8.2 (2015-05-09)

- implementing support for creating Customer, Vendor and Employee objects as well as taxtables

1.24 Version 0.8.1 (2015-05-03)

- get 100% coverage on transaction module (except for scheduled transactions)
- `account.full_name` returns now unicode string

1.25 Version 0.8.0 (2015-05-02)

- get 100% coverage on book and account module
- fix repr and str representations of all objects to be compatible py2 and py3

1.26 Version 0.7.6 (2015-05-01)

- fix version requirement for SA (<0.9.9) and SA-utils

1.27 Version 0.7.5 (2015-03-14)

- improve doc on installation on windows through conda
- add `.gitattributes` to exclude html from github language detection algorithm
- update github project list
- refactor sqlite isolation level code
- fix `setup.py` to avoid sqlalchemy 0.9.9 (buggy version)
- fix `requirements.txt` to avoid sqlalchemy 0.9.9 (buggy version)

1.28 Version 0.7.4 (2015-03-09)

- remove some remaining print in code

1.29 Version 0.7.3 (2015-03-09)

- fix requirements to include ipython==2.3.1

1.30 Version 0.7.2 (2015-03-09)

- fix bug in doc (was using ledger_str instead of ledger)

1.31 Version 0.7.1 (2015-03-09)

- refactor ledger functionalities
- bug fixing
- read backup functionality (ie backup when opening a book in RW)

1.32 Version 0.7.0 (2015-02-12)

- Merge the GncSession and Book objects
- extract factory function into a factories module

1.33 Version 0.6.2 (2015-02-02)

- add reference to google groups
- disable acquiring lock on file

1.34 Version 0.6.1 (2015-02-01)

- fix: qif scripts was not included in package

1.35 Version 0.6.0 (2015-02-01)

- add a basic QIF exporter script as piecash_toqif
- implemented “Trading accounts”
- improved documentation
- other small api enhancements/changes

1.36 Version 0.5.11 (2015-01-12)

- add a ledger_str method to transaction to output transaction in the ledger-cli format
- add label to Decimal field in sqlalchemy expr
- add backup option when opening sqlite file in RW (enabled by default)
- renamed tx_guid to transaction_guid in Split field
- fix technical bug in validation of transaction

1.37 Version 0.5.10 (2015-01-05)

- add keywords to setup.py

1.38 Version 0.5.8 (2015-01-05)

- add notes to Transaction (via slot)
- removed standalone exe from git/package (as too large)

1.39 Version 0.5.7 (2015-01-04)

- add sign property on account
- raise NotImplementedError when creating an object is not “safe” (ie not __init__ and validators)
- renamed slot_collection to slots in kvp handling
- renamed field of Version + add explicit __init__
- updated test to add explicit __init__ when needed

1.40 Version 0.5.6 (2015-01-04)

- reordering of field definitions to match gnucash order (finished)
- add autoincr

1.41 Version 0.5.5 (2015-01-04)

- reordering of field definitions to match gnucash order (to complete)

1.42 Version 0.5.4 (2015-01-04)

- added back the order table in the declarations

1.43 Version 0.5.3 (2015-01-03)

- add support for schedule_transactions and lots (in terms of access to data, not business logic)
- improved doc

1.44 Version 0.5.2 (2015-01-03)

- reworked documentation
- moved Lot and ScheduledTransaction to transaction module + improved them
- improve slots support
- fixed minor bugs

1.45 Version 0.5.1 (2014-12-30)

- fixed changelog/what's new documentation

1.46 Version 0.5.0 (2014-12-30)

- improve relationship in business model
- fix account.placeholder validation in transaction/splits
- made all relationships dual (with back_populates instead of backref)

1.47 Version 0.4.4 (2014-12-28)

- fix bug in piecash_ledger (remove testing code)
- improve documentation of core objects
- fix dependencies for developers (requests)
- regenerate the github list of projects

1.48 Version 0.4.0 (2014-12-28)

- improve bumpr integration

1.49 Version 0.3.1

- renamed modules in piecash packages
- updated doc

1.50 Version 0.3.0

- ported to python 3.4
- refactored lot of classes
- improved documentation
- added helper functions:
 - `Commodity.create_currency_from_ISO()`
 - `Commodity.create_stock_from_symbol()`
 - `Commodity.update_prices()`
 - `Commodity.create_stock_accounts()`

Contents:

DOCUMENTATION

This project provides a simple and pythonic interface to GnuCash files stored in SQL (sqlite3, Pandostgres and MySQL) for Linux and Windows (not tested on Mac OS).

piecash is a pure python package, tested on python 3.6/3.7/3.8, that can be used as an alternative to:

- the official python bindings (as long as no advanced book modifications and/or engine calculations are needed). This is specially useful on Windows where the official python bindings may be tricky to install or if you want to work with python 3.
- XML parsing/reading of XML GnuCash files if you prefer python over XML/XLST manipulations.

piecash is built on the excellent SQLAlchemy library and does not require the installation of GnuCash itself.

piecash allows you to:

- create a GnuCash book from scratch or edit an existing one
- create new accounts, transactions, etc or change (within some limits) existing objects.
- read/browse all objects through an intuitive interface

A simple example of a piecash script:

```
with open_book("example.gnucash") as book:
    # get default currency of book
    print( book.default_currency ) # ==> Commodity<CURRENCY:EUR>

    # iterating over all splits in all books and print the transaction description:
    for acc in book.accounts:
        for sp in acc.splits:
            print(sp.transaction.description)
```

As piecash is essentially a SQLAlchemy layer, it could be potentially reused by any web framework that has a SQLAlchemy interface to develop REST API or classical websites. It can also be used for reporting purposes.

The project has reached beta stage. Knowledge of SQLAlchemy is at this stage not anymore required to use it and/or to contribute to it. Some documentation for developers on the object model of GnuCash as understood by the author is available [here](#).

Warning:

- 1) Always do a backup of your gnucash file/DB before using piecash.
- 2) Test first your script by opening your file in readonly mode (which is the default mode)

2.1 Installation

To install with pip:

```
$ pip install piecash
```

or to upgrade if piecash is already installed:

```
$ pip install -U piecash
```

piecash comes with 6 extra options (each option depends on extra packages that will be installed only if the option is chosen):

- pandas: install also pandas to use `piecash.core.book.Book.splits_df()` and `piecash.core.book.Book.prices_df()`
- yahoo: to retrieve quotes/prices
- postgres: to support connecting to a book saved on a postgresql database
- mysql: to support connecting to a book saved on a mysql database
- qif: to support export to QIF

For developers, two extra options:

- test: to install what is needed for testing piecash
- dev: to install what is needed for developing piecash (docs, ...)

To install these options, simply specify them between brackets after the piecash package:

```
$ pip install piecash[pandas,qif,postgres]
```

To install with pipenv:

```
$ pipenv install piecash
```

Otherwise, you can install by unpacking the source distribution from PyPI and then:

```
$ python setup.py install
```

If you are on MS Windows and not so familiar with python, we would suggest you to install the miniconda python distribution from Continuum Analytics available at <http://conda.pydata.org/miniconda.html> (you can choose whatever version 3.X of python you would like) and then run the following command in the command prompt (cmd.exe):

```
$ conda create -n piecash_venv python=3 pip sqlalchemy
$ activate piecash_venv
$ pip install piecash
```

The first command create a new python environment named “piecash_venv” with python 3.7, pip and sqlalchemy installed.

The second command activates the newly created piecash_venv. Afterwards, you only need to execute this command before using python through the command line.

The third command installs piecash and its dependencies. piecash depends also on sqlalchemy but as the sqlalchemy package requires a compiler if it is installed through pip, we found it easier to install it through conda (this is done in the first command).

If you need to use directly the python interpreter in the newly created “piecash_env”, you can find it installed in your user folder under Miniconda3\envs\piecash_venv\python.exe (or Miniconda2\...).

On OS X, this option may also be valuable.

2.2 Quickstart

The simplest workflow to use piecash starts by opening a GnuCash file

```
import piecash

# open a GnuCash Book
book = piecash.open_book("test.gnucash", readonly=True)
```

and then access GnuCash objects through the book, for example to query the stock prices

```
# example 1, print all stock prices in the Book
# display all prices
for price in book.prices:
    print(price)
```

```
<Price 2014-12-22 : 0.702755 EUR/CAD>
<Price 2014-12-19 : 0.695658 EUR/CAD>
<Price 2014-12-18 : 0.689026 EUR/CAD>
<Price 2014-12-17 : 0.69005 EUR/CAD>
<Price 2014-12-16 : 0.693247 EUR/CAD>
<Price 2014-12-22 : 51.15 USD/YHOO>
<Price 2014-12-19 : 50.88 USD/YHOO>
<Price 2014-12-18 : 50.91 USD/YHOO>
<Price 2014-12-17 : 50.12 USD/YHOO>
<Price 2014-12-16 : 48.85 USD/YHOO>
...
```

or to query the accounts:

```
for account in book.accounts:
    print(account)
```

```
Account<[EUR]>
Account<Assets[EUR]>
Account<Assets:Current Assets[EUR]>
Account<Assets:Current Assets:Checking Account[EUR]>
Account<Assets:Current Assets:Savings Account[EUR]>
Account<Assets:Current Assets:Cash in Wallet[EUR]>
Account<Income[EUR]>
Account<Income:Bonus[EUR]>
Account<Income:Gifts Received[EUR]>
...
Account<Expenses[EUR]>
Account<Expenses:Commissions[EUR]>
Account<Expenses:Adjustment[EUR]>
Account<Expenses:Auto[EUR]>
Account<Expenses:Auto:Fees[EUR]>
...
Account<Liabilities[EUR]>
```

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```
Account<Liabilities:Credit Card[EUR]>
Account<Equity[EUR]>
Account<Equity:Opening Balances[EUR]>
...
```

or to create a new expense account for utilities:

```
# retrieve currency
EUR = book.commodities.get(mnemonic='EUR')

# retrieve parent account
acc_exp = book.accounts.get(fullname="Expenses:Utilities")

# add a new subaccount to this account of type EXPENSE with currency EUR
new_acc = piecash.Account(name="Cable", type="EXPENSE", parent=acc_exp, commodity=EUR)

# save changes (it should raise an exception if we opened the book as readonly)
book.save()
```

Most basic objects used for personal finance are supported (Account, Split, Transaction, Price, ...).

2.3 The piecash command line interface

The *piecash* CLI offers the following features:

```
$ piecash -h
Usage: piecash [OPTIONS] COMMAND [ARGS]...

Options:
  -h, --help  Show this message and exit.

Commands:
  export      Exports GnuCash ENTITIES.
  ledger      Export to ledger-cli format.
  qif         Export to QIF format.
  sql-create  Create an empty book with gnucash
  sql-dump    Dump SQL schema of the gnucash sqlite book
```

To export specific entities out of a GnuCash book:

```
$ piecash export -h
Usage: piecash export [OPTIONS] BOOK [customers|vendors|prices]

Exports GnuCash ENTITIES.

This scripts export ENTITIES from the BOOK in a CSV format. When possible,
it exports in a format that can be used to import the data into GnuCash.

Remarks:
- for customers and vendors, the format does not include an header
- for prices, the format can be used with the `piecash import` command.

Options:
  --output FILENAME  File to which to export the data (default=stdout)
```

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<code>--inactive</code>	Include inactive entities (for vendors and customers)
<code>-h, --help</code>	Show this message and exit.

To export a GnuCash book to the ledger-cli format:

```
$ piecash ledger -h
Usage: piecash ledger [OPTIONS] BOOK

Export to ledger-cli format.

This scripts export a GnuCash BOOK to the ledger-cli format.

Options:
  --locale / --no-locale          Export currency amounts using locale for
                                  currencies format

  --commodity-notes / --no-commodity-notes
                                  Include the commodity_notes for the
                                  commodity (hledger does not support
                                  commodity commodity_notes

  --short-account-names / --no-short-account-names
                                  Use the short name for the accounts instead
                                  of the full hierarchical name.

  --output FILENAME              File to which to export the data
                                  (default=stdout)

  -h, --help                    Show this message and exit.
```

Or in python

```
In [1]: book = open_book(gnucash_books + "simple_sample.gnucash", open_if_lock=True)

In [2]: from piecash import ledger

# printing the ledger-cli (https://www.ledger-cli.org/) representation of the book
In [3]: print(ledger(book))
commodity EUR

account Asset
    check commodity == "EUR"

account Liability
    check commodity == "EUR"

account Income
    check commodity == "EUR"

account Expense
    check commodity == "EUR"

account Equity
    check commodity == "EUR"

account Equity:Opening Balances - EUR
    check commodity == "EUR"
```

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```

2014-11-30 Opening Balance
    Equity:Opening Balances - EUR      EUR -500.00
    Asset                               EUR 500.00

2014-12-24 initial load
    Liability                           EUR -1,000.00
    Asset                               EUR 1,000.00

2014-12-24 expense 1
    Asset                               EUR -200.00
    Expense                             EUR 200.00

2014-12-24 income 1
    Income                             EUR -150.00
    Asset                               EUR 150.00

2014-12-24 loan payment
    Asset                               EUR -130.00 ;   monthly payment
    Expense                             EUR 30.00 ;    interest
    Liability                           EUR 100.00 ;    capital

# printing the ledger-cli (https://www.ledger-cli.org/) representation of the book_
↳using regional settings (locale) for currency output
In [4]: print(ledger(book, locale=True))
commodity €

account Asset
    check commodity == "EUR"

account Liability
    check commodity == "EUR"

account Income
    check commodity == "EUR"

account Expense
    check commodity == "EUR"

account Equity
    check commodity == "EUR"

account Equity:Opening Balances - EUR
    check commodity == "EUR"

2014-11-30 Opening Balance
    Equity:Opening Balances - EUR      -€500.00
    Asset                               €500.00

2014-12-24 initial load
    Liability                           -€1,000.00
    Asset                               €1,000.00

```

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2014-12-24 expense 1	
Asset	-€200.00
Expense	€200.00
2014-12-24 income 1	
Income	-€150.00
Asset	€150.00
2014-12-24 loan payment	
Asset	-€130.00 ; monthly payment
Expense	€30.00 ; interest
Liability	€100.00 ; capital

For more information on how to use piecash, please refer to the Tutorials on *Using existing objects* and *Creating new objects*, the *Example scripts* or the *package documentation*.

TUTORIAL : USING EXISTING OBJECTS

3.1 Opening an existing Book

To open an existing GnuCash document (and get the related *Book*), use the `open_book()` function:

```
import piecash

# for a sqlite3 document
book = piecash.open_book("existing_file.gnucash")

# or through an URI connection string for sqlite3
book = piecash.open_book(uri_conn="sqlite:///existing_file.gnucash")
# or for postgres
book = piecash.open_book(uri_conn="postgres://user:passwd@localhost/existing_gnucash_
↪db")
```

The documents are open as readonly per default. To allow RW access, specify explicitly `readonly=False` as:

```
book = piecash.open_book("existing_file.gnucash", readonly=False)
```

When opening in full access (`readonly=False`), `piecash` will automatically create a backup file named `file-name.piecash_YYYYMMDD_HHMMSS` with the original file. To avoid creating the backup file, specify `do_backup=False` as:

```
book = piecash.open_book("existing_file.gnucash", readonly=False, do_backup=False)
```

To force opening the file even through there is a lock on it, use the `open_if_lock=True` argument:

```
book = piecash.open_book("existing_file.gnucash", open_if_lock=True)
```

3.2 Access to objects

Once a GnuCash book is opened through a `piecash.core.book.Book`, GnuCash objects can be accessed through two different patterns:

The object model

In this mode, we access elements through their natural relations, starting from the book and jumping from one object to the other:

```

In [1]: book = open_book(gnucash_books + "default_book.gnucash")

In [2]: book.root_account # accessing the root_account
Out[2]: Account<[EUR]>

In [3]: # looping through the children accounts of the root_account
...: for acc in book.root_account.children:
...:     print(acc)
...:
Account<Assets[EUR]>
Account<Liabilities[EUR]>
Account<Income[EUR]>
Account<Expenses[EUR]>
Account<Equity[EUR]>

# accessing children accounts
In [4]:
...: root = book.root_account # select the root_account
...: assets = root.children(name="Assets") # select child account by_
↳name
...: cur_assets = assets.children[0] # select child account by_
↳index
...: cash = cur_assets.children(type="CASH") # select child account by_
↳type
...: print(cash)
...:
Account<Assets:Current Assets:Cash in Wallet[EUR]>

In [5]: # get the commodity of an account
...: commo = cash.commodity
...: print(commo)
...:
Commodity<CURRENCY:EUR>

In [6]: # get first ten accounts linked to the commodity commo
...: for acc in commo.accounts[:10]:
...:     print(acc)
...:
Account<[EUR]>
Account<Assets[EUR]>
Account<Assets:Current Assets[EUR]>
Account<Assets:Current Assets:Checking Account[EUR]>
Account<Assets:Current Assets:Savings Account[EUR]>
Account<Assets:Current Assets:Cash in Wallet[EUR]>
Account<Liabilities[EUR]>
Account<Liabilities:Credit Card[EUR]>
Account<Income[EUR]>
Account<Income:Bonus[EUR]>

```

The “table” access

In this mode, we access elements through collections directly accessible from the book:

```

In [7]: book = open_book(gnucash_books + "default_book.gnucash")

# accessing all accounts
In [8]: book.accounts
Out[8]:

```

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```
[Account<Assets[EUR]>,
Account<Assets:Current Assets[EUR]>,
Account<Assets:Current Assets:Checking Account[EUR]>,
Account<Assets:Current Assets:Savings Account[EUR]>,
Account<Assets:Current Assets:Cash in Wallet[EUR]>,
Account<Liabilities[EUR]>,
Account<Liabilities:Credit Card[EUR]>,
Account<Income[EUR]>,
Account<Income:Bonus[EUR]>,
Account<Income:Gifts Received[EUR]>,
Account<Income:Interest Income[EUR]>,
Account<Income:Interest Income:Checking Interest[EUR]>,
Account<Income:Interest Income:Other Interest[EUR]>,
Account<Income:Interest Income:Savings Interest[EUR]>,
Account<Income:Other Income[EUR]>,
Account<Income:Salary[EUR]>,
Account<Expenses[EUR]>,
Account<Expenses:Adjustment[EUR]>,
Account<Expenses:Auto[EUR]>,
Account<Expenses:Auto:Fees[EUR]>,
Account<Expenses:Auto:Gas[EUR]>,
Account<Expenses:Auto:Parking[EUR]>,
Account<Expenses:Auto:Repair and Maintenance[EUR]>,
Account<Expenses:Bank Service Charge[EUR]>,
Account<Expenses:Books[EUR]>,
Account<Expenses:Cable[EUR]>,
Account<Expenses:Charity[EUR]>,
Account<Expenses:Clothes[EUR]>,
Account<Expenses:Computer[EUR]>,
Account<Expenses:Dining[EUR]>,
Account<Expenses:Education[EUR]>,
Account<Expenses:Entertainment[EUR]>,
Account<Expenses:Entertainment:Music/Movies[EUR]>,
Account<Expenses:Entertainment:Recreation[EUR]>,
Account<Expenses:Entertainment:Travel[EUR]>,
Account<Expenses:Gifts[EUR]>,
Account<Expenses:Groceries[EUR]>,
Account<Expenses:Hobbies[EUR]>,
Account<Expenses:Insurance[EUR]>,
Account<Expenses:Insurance:Auto Insurance[EUR]>,
Account<Expenses:Insurance:Health Insurance[EUR]>,
Account<Expenses:Insurance:Life Insurance[EUR]>,
Account<Expenses:Laundry/Dry Cleaning[EUR]>,
Account<Expenses:Medical Expenses[EUR]>,
Account<Expenses:Miscellaneous[EUR]>,
Account<Expenses:Online Services[EUR]>,
Account<Expenses:Phone[EUR]>,
Account<Expenses:Public Transportation[EUR]>,
Account<Expenses:Subscriptions[EUR]>,
Account<Expenses:Supplies[EUR]>,
Account<Expenses:Taxes[EUR]>,
Account<Expenses:Taxes:Federal[EUR]>,
Account<Expenses:Taxes:Medicare[EUR]>,
Account<Expenses:Taxes:Other Tax[EUR]>,
Account<Expenses:Taxes:Social Security[EUR]>,
Account<Expenses:Taxes:State/Province[EUR]>,
Account<Expenses:Utilities[EUR]>,
```

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```
Account<Expenses:Utilities:Electric[EUR]>,
Account<Expenses:Utilities:Garbage collection[EUR]>,
Account<Expenses:Utilities:Gas[EUR]>,
Account<Expenses:Utilities:Water[EUR]>,
Account<Equity[EUR]>,
Account<Equity:Opening Balances[EUR]>]

# accessing all commodities
In [9]: book.commodities
Out [9]: [Commodity<CURRENCY:EUR>]

# accessing all transactions
In [10]: book.transactions
Out [10]: []
```

Each of these collections can be either iterated or accessed through some indexation or filter mechanism (return first element of collection satisfying some criteria(s)):

```
# iteration
In [11]: for acc in book.accounts:
        ....:     if acc.type == "ASSET": print(acc)
        ....:
Account<Assets[EUR]>
Account<Assets:Current Assets[EUR]>

# indexation (not very meaningful)
In [12]: book.accounts[10]
Out [12]: Account<Income:Interest Income[EUR]>

# filter by name
In [13]: book.accounts(name="Garbage collection")
Out [13]: Account<Expenses:Utilities:Garbage collection[EUR]>

# filter by type
In [14]: book.accounts(type="EXPENSE")
Out [14]: Account<Expenses[EUR]>

# filter by fullname
In [15]: book.accounts(fullname="Expenses:Taxes:Social Security")
Out [15]: Account<Expenses:Taxes:Social Security[EUR]>

# filter by multiple criteria
In [16]: book.accounts(commodity=book.commodities[0], name="Gas")
Out [16]: Account<Expenses:Auto:Gas[EUR]>
```

The “SQLAlchemy” access (advanced users)

In this mode, we access elements through SQLAlchemy queries on the SQLAlchemy session:

```
# retrieve underlying SQLAlchemy session object
In [1]: session = book.session

# get all account with name >= "T"
In [2]: session.query(Account).filter(Account.name>="T").all()
Out [2]:
[Account<Expenses:Entertainment:Travel[EUR]>,
Account<Expenses:Taxes[EUR]>,
```

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```

Account<Expenses:Utilities[EUR]>,
Account<Expenses:Utilities:Water[EUR]>,
Account<>]

# display underlying query
In [3]: str(session.query(Account).filter(Account.name>="T"))
Out [3]: 'SELECT accounts.account_type AS accounts_account_type, accounts.
↪commodity_scu AS accounts_commodity_scu, accounts.non_std_scu AS accounts_
↪non_std_scu, accounts.placeholder AS accounts_placeholder, accounts.guid_
↪AS accounts_guid, accounts.name AS accounts_name, accounts.commodity_guid_
↪AS accounts_commodity_guid, accounts.parent_guid AS accounts_parent_guid,
↪accounts.code AS accounts_code, accounts.description AS accounts_
↪description, accounts.hidden AS accounts_hidden \nFROM accounts \nWHERE_
↪accounts.name >= ?'
```

3.3 Accounts

Accessing the accounts (*piecash.core.account.Account*):

```

In [1]: book = open_book(gnucash_books + "simple_sample.gnucash", open_if_lock=True)

# accessing the root_account
In [2]: root = book.root_account

In [3]: print(root)
Account<>

# accessing the first children account of a book
In [4]: acc = root.children[0]

In [5]: print(acc)
Account<Asset [EUR]>

# accessing attributes of an account
In [6]: print(f"Account name={acc.name}\n"
...:      f"      commodity={acc.commodity.namespace}/{acc.commodity.mnemonic}\n"
↪"
...:      f"      fullname={acc.fullname}\n"
...:      f"      type={acc.type}")
...:
Account name=Asset
      commodity=CURRENCY/EUR
      fullname=Asset
      type=ASSET

# calculating the balance of the accounts:
In [7]: for acc in root.children:
...:     print(f"Account balance for {acc.name}: {acc.get_balance()} (without sign_
↪reversal: {acc.get_balance(natural_sign=False)})")
...:
Account balance for Asset: 1320 (without sign reversal: 1320
Account balance for Liability: 900 (without sign reversal: -900
Account balance for Income: 150 (without sign reversal: -150
Account balance for Expense: 230 (without sign reversal: 230
```

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```

Account balance for Equity: 500 (without sign reversal: -500

# accessing all splits related to an account
In [8]: for sp in acc.splits:
...:     print(f"account <{acc.fullname}> is involved in transaction '{sp.
↳transaction.description}'")
...:

```

3.4 Commodities and Prices

The list of all commodities in the book can be retrieved via the `commodities` attribute:

```

In [1]: book = open_book(gnucash_books + "book_prices.gnucash", open_if_lock=True)

# all commodities
In [2]: print(book.commodities)
[Commodity<CURRENCY:EUR>, Commodity<NASDAQ:FB>, Commodity<template:template>,
↳Commodity<PAR:ENGI.PA>, Commodity<NYQ:KO>, Commodity<CURRENCY:USD>]

In [3]: cdy = book.commodities[0]

# accessing attributes of a commodity
In [4]: print("Commodity namespace={cdty.namespace}\n"
...:         "mnemonic={cdty.mnemonic}\n"
...:         "cusip={cdty.cusip}\n"
...:         "fraction={cdty.fraction}".format(cdy=cdy))
...:
Commodity namespace=CURRENCY
mnemonic=EUR
cusip=978
fraction=100

```

The prices (`piecash.core.commodity.Price`) of a commodity can be iterated through the `prices` attribute:

```

# loop on the prices
In [1]: for cdy in book.commodities:
...:     for pr in cdy.prices:
...:         print("Price date={pr.date}"
...:               "value={pr.value} {pr.currency.mnemonic}/{pr.commodity.
↳mnemonic}".format(pr=pr))
...:
Price date=2018-02-10      value=1.730120457024597578303288749E-7 EUR/FB
Price date=2018-02-11      value=54 EUR/FB
Price date=2018-02-13      value=3.808073 EUR/FB
Price date=2018-02-12      value=5 EUR/FB
Price date=2018-02-15      value=3.923077 EUR/FB

```

3.5 Transactions and Splits

The list of all transactions in the book can be retrieved via the `transactions` attribute:

```
In [1]: book = open_book(gnucash_books + "book_scht.gnucash", open_if_lock=True)

# all transactions (including transactions part of a scheduled transaction,
↳description)
In [2]: for tr in book.transactions:
...:     print(tr)
...:
Transaction<[EUR] 'Monthly utility bill' on 2015-01-02>
Transaction<[EUR] 'Insurance' on 2015-01-02>
Transaction<[EUR] 'Monthly utility bill' on 2013-12-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-02-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-03-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-03-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-04-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-06-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-06-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-07-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-08-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-09-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-11-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-11-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2014-12-31 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2013-05-31 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2014-05-29 (from sch tx)>
Transaction<[EUR] 'Opening balance' on 2013-01-02>
Transaction<[EUR] 'Monthly utility bill' on 2015-02-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-03-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-03-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-04-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-05-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-06-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-08-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-08-31 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-09-30 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2015-11-01 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2015-05-31 (from sch tx)>
Transaction<[EUR] 'test' on 2015-11-17>
Transaction<[EUR] 'salary' on 2013-12-31>
Transaction<[EUR] 'salary' on 2014-12-31>
Transaction<[EUR] 'Monthly utility bill' on 2015-12-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-01-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-02-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-03-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-04-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-05-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-06-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-07-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-08-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-09-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-10-03 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-11-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2016-12-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-01-02 (from sch tx)>
```

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```

Transaction<[EUR] 'Monthly utility bill' on 2017-02-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-03-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-04-03 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-05-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-06-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-07-03 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-08-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-09-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-10-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-11-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2017-12-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-01-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-02-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-03-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-04-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-05-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-06-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-07-02 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-08-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-09-03 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-10-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-11-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2018-12-03 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2019-01-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2019-02-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2019-03-01 (from sch tx)>
Transaction<[EUR] 'Monthly utility bill' on 2019-04-01 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2016-06-01 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2017-06-01 (from sch tx)>
Transaction<[EUR] 'Insurance' on 2018-06-01 (from sch tx)>

```

```

# selecting first transaction generated from a scheduled transaction
In [3]: tr = [ tr for tr in book.transactions if tr.scheduled_transaction ][0]

```

For a given transaction, the following attributes are accessible:

```

# accessing attributes of a transaction
In [1]: print("Transaction description='{tr.description}'\n"
...:         "          currency='{tr.currency}'\n"
...:         "          post_date='{tr.post_date}'\n"
...:         "          enter_date='{tr.enter_date}'".format(tr=tr))
...:
Transaction description='Monthly utility bill'
          currency=Commodity<CURRENCY:EUR>
          post_date=2013-12-31
          enter_date=2015-01-03 08:18:13+00:00

# accessing the splits of the transaction
In [2]: tr.splits
Out[2]:
[Split<Account<Assets:Current Assets:Checking Account[EUR]> -70 EUR>,
 Split<Account<Expenses:Utilities:Electric[EUR]> 30 EUR>,
 Split<Account<Expenses:Utilities:Gas[EUR]> 40 EUR>]

# identifying which split is a credit or a debit
In [3]: for sp in tr.splits:
...:     split_type = "credit" if sp.is_credit else "debit"

```

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```

...:     print(f"{sp} is a {split_type}")
...:
Split<Account<Assets:Current Assets:Checking Account[EUR]> -70 EUR> is a credit
Split<Account<Expenses:Utilities:Electric[EUR]> 30 EUR> is a debit
Split<Account<Expenses:Utilities:Gas[EUR]> 40 EUR> is a debit

# accessing the scheduled transaction
In [4]: [ sp for sp in tr.scheduled_transaction.template_account.splits]
Out[4]:
[SplitTemplate<Account<Assets:Current Assets:Checking Account[EUR]> credit=70 >,
 SplitTemplate<Account<Expenses:Utilities:Electric[EUR]> debit=30>,
 SplitTemplate<Account<Expenses:Utilities:Gas[EUR]> debit=40>]

# closing the book
In [5]: book.close()

```

3.6 Invoices

The list of all invoices in the book can be retrieved via the `invoices` attribute:

```

In [1]: book = open_book(gnucash_books + "invoices.gnucash", open_if_lock=True)

# all invoices
In [2]: for invoice in book.invoices:
...:     print(invoice)
...:
Invoice<000001>

```

3.7 Other objects

In fact, any object can be retrieved from the session through a generic `get (**kwargs)` method:

```

In [1]: book = open_book(gnucash_books + "invoices.gnucash", open_if_lock=True)

In [2]: from piecash import Account, Commodity, Budget, Vendor

# accessing specific objects through the get method
In [3]: book.get(Account, name="Assets", parent=book.root_account)
Out[3]: Account<Assets[EUR]>

In [4]: book.get(Commodity, namespace="CURRENCY", mnemonic="EUR")
Out[4]: Commodity<CURRENCY:EUR>

In [5]: book.get(Budget, name="my first budget")
Out[5]: Budget<my first budget() for 12 periods following pattern 'month*1 from 2019-
↪04-01 [none]' >

In [6]: book.get(Vendor, name="Looney")
Out[6]: Vendor<000001:Looney>

```

If you know SQLAlchemy, you can get access to the underlying `Session` as `book.session` and execute queries using the piecash classes:

```
In [7]: from piecash import Account, Commodity, Budget, Vendor

# get the SQLAlchemy session
In [8]: session = book.session

# loop through all invoices
In [9]: for invoice in session.query(Invoice).all():
...:     print(invoice.notes)
...:
```

Note: Easy access to objects from *piecash.business* and *piecash.budget* could be given directly from the session in future versions if deemed useful.

3.8 Working with slots

With regard to slots, GnuCash objects and Frames behave as dictionaries and all values are automatically converted back and forth to python objects:

```
In [1]: import datetime, decimal

In [2]: book = create_book()

# retrieve list of slots
In [3]: print(book.slots)
[]

# set slots
In [4]: book["myintkey"] = 3

In [5]: book["mystrkey"] = "hello"

In [6]: book["myboolkey"] = True

In [7]: book["mydatekey"] = datetime.datetime.today().date()

In [8]: book["mydatetimekey"] = datetime.datetime.today()

In [9]: book["mynumerickey"] = decimal.Decimal("12.34567")

In [10]: book["account"] = book.root_account

# iterate over all slots
In [11]: for k, v in book.iteritems():
...:     print("slot={v} has key={k} and value={v.value} of type {t}".format(k=k,
↪v=v, t=type(v.value)))
...:
slot=<SlotInt myintkey=3> has key=myintkey and value=3 of type <class 'int'>
slot=<SlotString mystrkey='hello'> has key=mystrkey and value=hello of type <class
↪'str'>
slot=<SlotInt myboolkey=True> has key=myboolkey and value=True of type <class 'bool'>
slot=<SlotDate mydatekey=datetime.date(2021, 1, 29)> has key=mydatekey and value=2021-
↪01-29 of type <class 'datetime.date'>
slot=<SlotTime mydatetimekey=datetime.datetime(2021, 1, 29, 5, 17, 8, 43682)> has_
↪key=mydatetimekey and value=2021-01-29 05:17:08.043682 of type <class 'datetime
↪datetime'>
```

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```

slot=<SlotNumeric mynumerickey=Decimal('12.34567')> has key=mynumerickey and value=12.
↳34567 of type <class 'decimal.Decimal'>
slot=<SlotGUID account=Account<[EUR]>> has key=account and value=Account<[EUR]> of
↳type <class 'piecash.core.account.Account'>

# delete a slot
In [12]: del book["myintkey"]

# delete all slots
In [13]: del book[:]

# create a key/value in a slot frames (and create them if they do not exist)
In [14]: book["options/Accounts/Use trading accounts"]="t"

# access a slot in frame in whatever notations
In [15]: s1=book["options/Accounts/Use trading accounts"]

In [16]: s2=book["options"]["Accounts/Use trading accounts"]

In [17]: s3=book["options/Accounts"]["Use trading accounts"]

In [18]: s4=book["options"]["Accounts"]["Use trading accounts"]

In [19]: assert s1==s2==s3==s4

```

Slots of type GUID use the name of the slot to do the conversion back and forth between an object and its guid. For these slots, there is an explicit mapping between slot names and object types.

TUTORIAL : CREATING NEW OBJECTS

4.1 Creating a new Book

piecash can create a new GnuCash document (a *Book*) from scratch through the `create_book()` function.

To create a in-memory sqlite3 document (useful to test piecash for instance), a simple call is enough:

```
In [1]: import piecash
In [2]: book = piecash.create_book()
```

To create a file-based sqlite3 document:

```
In [3]: book = piecash.create_book("example_file.gnucash")

# or equivalently (adding the overwrite=True argument to overwrite the file if it_
↳ already exists)
In [4]: book = piecash.create_book(sqlite_file="example_file.gnucash", overwrite=True)

# or equivalently
In [5]: book = piecash.create_book(uri_conn="sqlite:///example_file.gnucash", _
↳ overwrite=True)
```

and for a postgres document (needs the psycopg2 package installable via “pip install psycopg2”):

```
book = piecash.create_book(uri_conn="postgres://user:passwd@localhost/example_gnucash_
↳ db")
```

Note: Per default, the currency of the document is the euro (EUR) but you can specify any other ISO currency through its ISO symbol:

```
In [6]: book = piecash.create_book(sqlite_file="example_file.gnucash",
...:                               currency="USD",
...:                               overwrite=True)
...:
```

If the document already exists, piecash will raise an exception. You can force piecash to overwrite an existing file/database (i.e. delete it and then recreate it) by passing the `overwrite=True` argument:

```
In [1]: book = piecash.create_book(sqlite_file="example_file.gnucash", overwrite=True)
```

4.2 Creating a new Account

piecash can create new accounts (a `piecash.core.account.Account`):

```
In [1]: from piecash import create_book, Account

In [2]: book = create_book(currency="EUR")

# retrieve the default currency
In [3]: EUR = book.commodities.get(mnemonic="EUR")

# creating a placeholder account
In [4]: acc = Account(name="My account",
...:                  type="ASSET",
...:                  parent=book.root_account,
...:                  commodity=EUR,
...:                  placeholder=True,)
...:

# creating a detailed sub-account
In [5]: subacc = Account(name="My sub account",
...:                      type="BANK",
...:                      parent=acc,
...:                      commodity=EUR,
...:                      commodity_scu=1000,
...:                      description="my bank account",
...:                      code="FR013334...",)
...:

In [6]: book.save()

In [7]: book.accounts
Out[7]: [Account<My account [EUR]>, Account<My account:My sub account [EUR]>]
```

4.3 Creating a new Commodity

piecash can create new commodities (a `piecash.core.commodity.Commodity`):

```
In [1]: from piecash import create_book, Commodity, factories

# create a book (in memory) with some currency
In [2]: book = create_book(currency="EUR")

In [3]: print(book.commodities)
[Commodity<CURRENCY:EUR>]

# creating a new ISO currency (if not already available in s.commodities) (warning,
↳ object should be manually added to session)
In [4]: USD = factories.create_currency_from_ISO("USD")

In [5]: book.add(USD) # add to session

# create a commodity (lookup on yahoo! finance, need web access)
# (warning, object should be manually added to session if book kwarg is not included,
↳ in constructor)
```

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```
# DOES NOT WORK ANYMORE DUE TO CLOSING OF YAHOO!FINANCE
# apple = factories.create_stock_from_symbol("AAPL", book)
# creating commodities using the constructor
# (warning, object should be manually added to session if book kwarg is not included,
↳in constructor)
# create a special "reward miles" Commodity using the constructor without book kwarg
In [6]: miles = Commodity(namespace="LOYALTY", mnemonic="Miles", fullname="Reward",
↳miles", fraction=1000000)

In [7]: book.add(miles) # add to session

# create a special "unicorn hugs" Commodity using the constructor with book kwarg
In [8]: unhugs = Commodity(namespace="KINDNESS", mnemonic="Unhugs", fullname="Unicorn",
↳hugs", fraction=1, book=book)

In [9]: USD, miles, unhugs
Out [9]: (Commodity<CURRENCY:USD>, Commodity<LOYALTY:Miles>, Commodity<KINDNESS:Unhugs>
↳)
```

Warning: The following (creation of non ISO currencies) is explicitly forbidden by the GnuCash application.

```
# create a bitcoin currency (warning, max 6 digits after comma, current GnuCash
↳limitation)
In [1]: XBT = Commodity(namespace="CURRENCY", mnemonic="XBT", fullname="Bitcoin",
↳fraction=1000000)

In [2]: book.add(XBT) # add to session

In [3]: XBT
Out [3]: Commodity<CURRENCY:XBT>
```

4.4 Creating a new Transaction

piecash can create new transactions (a `piecash.core.transaction.Transaction`):

```
In [1]: from piecash import create_book, Account, Transaction, Split,
↳GncImbalanceError, factories, ledger

# create a book (in memory)
In [2]: book = create_book(currency="EUR")

# get the EUR and create the USD currencies
In [3]: c1 = book.default_currency

In [4]: c2 = factories.create_currency_from_ISO("USD")

# create two accounts
In [5]: a1 = Account("Acc 1", "ASSET", c1, parent=book.root_account)

In [6]: a2 = Account("Acc 2", "ASSET", c2, parent=book.root_account)
```

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```

# create a transaction from a1 to a2
In [7]: tr = Transaction(currency=c1,
....:                    description="transfer",
....:                    splits=[
....:                        Split(account=a1, value=-100),
....:                        Split(account=a2, value=100, quantity=30)
....:                    ])

In [8]: book.flush()

# ledger() returns a representation of the transaction in the ledger-cli format
In [9]: print(ledger(tr))
2021-01-29 transfer
    Acc 1                                EUR -100.00
    Acc 2                                USD 30.00 @@ EUR 100.00

# change the book to use the "trading accounts" options
In [10]: book.use_trading_accounts = True

# add a new transaction identical to the previous
In [11]: tr2 = Transaction(currency=c1,
....:                      description="transfer 2",
....:                      splits=[
....:                          Split(account=a1, value=-100),
....:                          Split(account=a2, value=100, quantity=30)
....:                      ])

In [12]: print(ledger(tr2))
2021-01-29 transfer 2
    Acc 1                                EUR -100.00
    Acc 2                                USD 30.00 @@ EUR 100.00

# when flushing, the trading accounts are created
In [13]: book.flush()

In [14]: print(ledger(tr2))
2021-01-29 transfer 2
    Acc 1                                EUR -100.00
    Acc 2                                USD 30.00 @@ EUR 100.00

# trying to create an unbalanced transaction trigger an exception
# (there is not automatic creation of an imbalance split)
In [15]: tr3 = Transaction(currency=c1,
....:                      description="transfer imb",
....:                      splits=[
....:                          Split(account=a1, value=-100),
....:                          Split(account=a2, value=90, quantity=30)
....:                      ])

In [16]: print(ledger(tr3))
2021-01-29 transfer imb

```

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```

Acc 1                                EUR -100.00
Acc 2                                USD 30.00 @@ EUR 90.00

```

```

In [17]: try:
...:     book.flush()
...: except GncImbalanceError:
...:     print("Indeed, there is an imbalance !")
...:

```

4.5 Creating new Business objects

piecash can create new ‘business’ objects (this is a work in progress).

To create a new customer (a *piecash.business.person.Customer*):

```

In [1]: from piecash import create_book, Customer, Address

# create a book (in memory)
In [2]: b = create_book(currency="EUR")

# get the currency
In [3]: eur = b.default_currency

# create a customer
In [4]: c1 = Customer(name="Mickey", currency=eur, address=Address(addr1="Sesame_
↳street 1", email="mickey@example.com"))

# the customer has not yet an ID
In [5]: c1
Out[5]: Customer<None:Mickey>

# we add it to the book
In [6]: b.add(c1)

# flush the book
In [7]: b.flush()

# the customer gets its ID
In [8]: print(c1)
Customer<000001:Mickey>

# or create a customer directly in a book (by specifying the book argument)
In [9]: c2 = Customer(name="Mickey", currency=eur, address=Address(addr1="Sesame_
↳street 1", email="mickey@example.com"),
...:                  book=b)
...:

# the customer gets immediately its ID
In [10]: c2
Out[10]: Customer<000002:Mickey>

# the counter of the ID is accessible as
In [11]: b.counter_customer

```

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```
Out[11]: 2
```

```
In [12]: b.save()
```

Similar functions are available to create new vendors (*piecash.business.person.Vendor*) or employees (*piecash.business.person.Employee*).

There is also the possibility to set taxtables for customers or vendors as:

```
In [1]: from piecash import Taxtable, TaxtableEntry

In [2]: from decimal import Decimal

# let us first create an account to which link a tax table entry
In [3]: acc = Account(name="MyTaxAcc", parent=b.root_account, commodity=b.
↳ currencies(mnemonic="EUR"), type="ASSET")

# then create a table with on entry (6.5% on previous account)
In [4]: tt = Taxtable(name="local taxes", entries=[
...:     TaxtableEntry(type="percentage",
...:                    amount=Decimal("6.5"),
...:                    account=acc),
...: ])

# and finally attach it to a customer
In [5]: c2.taxtable = tt

In [6]: b.save()

In [7]: print(b.taxtables)
[TaxTable<local taxes:['TaxEntry<6.5 percentage in MyTaxAcc>']>]
```

EXAMPLES OF PROGRAMS WRITTEN WITH PIECASH

You can find examples of programs/scripts (loosely based on the scripts for the official python bindings for gnucash or on questions posted on the mailing list) in the examples subfolder.

5.1 Creating and opening gnucash files

```
from __future__ import print_function
import os
import tempfile

from piecash import open_book, create_book, GnucashException

FILE_1 = os.path.join(tempfile.gettempdir(), "not_there.gnucash")
FILE_2 = os.path.join(tempfile.gettempdir(), "example_file.gnucash")

if os.path.exists(FILE_2):
    os.remove(FILE_2)

# open a file that isn't there, detect the error
try:
    book = open_book(FILE_1)
except GnucashException as backend_exception:
    print("OK", backend_exception)

# create a new file, this requires a file type specification
with create_book(FILE_2) as book:
    pass

# open the new file, try to open it a second time, detect the lock
# using the session as context manager automatically release the lock and close the_
↪ session
with open_book(FILE_2) as book:
    try:
        with open_book(FILE_2) as book_2:
            pass
    except GnucashException as backend_exception:
        print("OK", backend_exception)

os.remove(FILE_2)
```

5.2 Creating an account

```
#!/usr/bin/env python
## @file
# @brief Example Script simple sqlite create
# @ingroup python_bindings_examples

from __future__ import print_function
import os

from piecash import create_book, Account, Commodity, open_book
from piecash.core.factories import create_currency_from_ISO

filename = os.path.abspath('test.blob')
if os.path.exists(filename):
    os.remove(filename)

with create_book(filename) as book:
    a = Account(parent=book.root_account,
                name="wow",
                type="ASSET",
                commodity=create_currency_from_ISO("CAD"))

    book.save()

with open_book(filename) as book:
    print(book.root_account.children)
    print(book.commodities.get(mnemonic="CAD"))

os.remove(filename)
```

5.3 Creating a transaction

```
#!/usr/bin/env python
# # @file
# @brief Creates a basic set of accounts and a couple of transactions
# @ingroup python_bindings_examples
from decimal import Decimal
import os
import tempfile

from piecash import create_book, Account, Transaction, Split, Commodity
from piecash.core.factories import create_currency_from_ISO

FILE_1 = os.path.join(tempfile.gettempdir(), "example.gnucash")

with create_book(FILE_1, overwrite=True) as book:
    root_acct = book.root_account
    cad = create_currency_from_ISO("CAD")
    expenses_acct = Account(parent=root_acct,
                            name="Expenses",
                            type="EXPENSE",
                            commodity=cad)
    savings_acct = Account(parent=root_acct,
```

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```

        name="Savings",
        type="BANK",
        commodity=cad)
opening_acct = Account(parent=root_acct,
        name="Opening Balance",
        type="EQUITY",
        commodity=cad)

num1 = Decimal("4")
num2 = Decimal("100")
num3 = Decimal("15")

# create transaction with core objects in one step
trans1 = Transaction(currency=cad,
        description="Groceries",
        splits=[
            Split(value=num1, account=expenses_acct),
            Split(value=-num1, account=savings_acct),
        ])

# create transaction with core object in multiple steps
trans2 = Transaction(currency=cad,
        description="Opening Savings Balance")

split3 = Split(value=num2,
        account=savings_acct,
        transaction=trans2)

split4 = Split(value=-num2,
        account=opening_acct,
        transaction=trans2)

# create transaction with factory function
from piecash.core.factories import single_transaction
trans3 = single_transaction(None, None, "Pharmacy", num3, savings_acct, expenses_
→acct)

book.save()

```

5.4 Modifying existing transactions/splits

```

from piecash import open_book, ledger, Split

# open a book
with open_book(
    "../gnucash_books/simple_sample.gnucash", readonly=True, open_if_lock=True
) as mybook:
    # iterate on all the transactions in the book
    for transaction in mybook.transactions:
        # add some extra text to the transaction description
        transaction.description = (
            transaction.description + " (some extra info added to the description)"
        )

```

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```

    # iterate over all the splits of the transaction
    # as we will modify the transaction splits in the loop,
    # we need to use list(...) to take a copy of the splits at the start of the
↪loop
    for split in list(transaction.splits):
        # create the new split (here a copy of the each existing split
        # in the transaction with value/quantity divided by 10)
        new_split = Split(
            account=split.account,
            value=split.value / 10,
            quantity=split.quantity / 10,
            memo="my new split",
            transaction=transaction, # attach the split to the current
↪transaction
        )
        # register the changes (but not save)
        mybook.flush()

        # print the book in ledger format to view the changes
        print(ledger(mybook))

        # save the book
        # this will raise an error as readonly=True (change to readonly=False to
↪successfully save the book)
        mybook.save()

```

5.5 Delete an account in a book

```

import csv
from pathlib import Path

from piecash import open_book, Account

GNUCASH_BOOK = "../gnucash_books/simple_sample.gnucash"

# open the book and the export file
with open_book(GNUCASH_BOOK, readonly=True, open_if_lock=True) as book:
    # show accounts
    print(book.accounts)
    print("Number of splits in the book:", len(book.splits))
    # select the 3rd account
    account = book.accounts[2]
    print(account, " has splits: ", account.splits)

    # delete the account from the book
    book.delete(account)
    # flush the change
    book.flush()
    # check the account has disappeared from the book and its related split too
    print(book.accounts)
    print("Number of splits in the book:", len(book.splits))

    # even if the account object and its related object still exists
    print(account, " has splits: ", account.splits)

```

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```
# do not forget to save the book if you want
# your changes to be saved in the database
```

5.6 Save/cancel changes in a book

```
from __future__ import print_function
from piecash import create_book

# create by default an in memory sqlite version
with create_book(echo=False) as book:

    print("Book is saved:", book.is_saved, end=' ')
    print(" ==> book description:", book.root_account.description)

    print("changing description...")
    book.root_account.description = "hello, book"
    print("Book is saved:", book.is_saved, end=' ')
    print(" ==> book description:", book.root_account.description)

    print("saving...")
    book.save()

    print("Book is saved:", book.is_saved, end=' ')
    print(" ==> book description:", book.root_account.description)

    print("changing description...")
    book.root_account.description = "nevermind, book"
    print("Book is saved:", book.is_saved, end=' ')
    print(" ==> book description:", book.root_account.description)

    print("cancel...")
    book.cancel()

    print("Book is saved:", book.is_saved, end=' ')
    print(" ==> book description:", book.root_account.description)
```

5.7 Create a book with some accounts and add a transaction

```
from piecash import create_book, Account

# create a book with some account tree structure
with create_book("../gnucash_books/simple_book_transaction_creation.gnucash",
    ↪overwrite=True) as mybook:
    mybook.root_account.children = [
        Account(name="Expenses",
            type="EXPENSE",
            commodity=mybook.currencies(mnemonic="USD"),
            placeholder=True,
            children=[
                Account(name="Some Expense Account",
```

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```

        type="EXPENSE",
        commodity=mybook.currencies(mnemonic="USD")),
    ]),
    Account(name="Assets",
            type="ASSET",
            commodity=mybook.currencies(mnemonic="USD"),
            placeholder=True,
            children=[
                Account(name="Current Assets",
                        type="BANK",
                        commodity=mybook.currencies(mnemonic="USD"),
                        placeholder=True,
                        children=[
                            Account(name="Checking",
                                    type="BANK",
                                    commodity=mybook.currencies(mnemonic="USD"))
                        ]),
            ]),
    ]
    # save the book
    mybook.save()

from piecash import open_book, Transaction, Split
from datetime import datetime
from decimal import Decimal

# reopen the book and add a transaction
with open_book("../gnucash_books/simple_book_transaction_creation.gnucash",
               open_if_lock=True,
               readonly=False) as mybook:
    today = datetime.now()
    # retrieve the currency from the book
    USD = mybook.currencies(mnemonic="USD")
    # define the amount as Decimal
    amount = Decimal("25.35")
    # retrieve accounts
    to_account = mybook.accounts(fullname="Expenses:Some Expense Account")
    from_account = mybook.accounts(fullname="Assets:Current Assets:Checking")
    # create the transaction with its two splits
    Transaction(
        post_date=today.date(),
        enter_date=today,
        currency=USD,
        description="Transaction Description!",
        splits=[
            Split(account=to_account,
                  value=amount,
                  memo="Split Memo!"),
            Split(account=from_account,
                  value=-amount,
                  memo="Other Split Memo!"),
        ]
    )
    # save the book
    mybook.save()

from piecash import ledger

```

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```
# check the book by exporting to ledger format
with open_book("../gnucash_books/simple_book_transaction_creation.gnucash",
               open_if_lock=True) as mybook:
    print(ledger(mybook))
```

5.8 Export transactions to a CSV file

```
import csv
from pathlib import Path

from piecash import open_book

fields = [
    "DATE",
    "TRANSACTION VALUE",
    "DEBIT/CREDIT INDICATOR",
    "ACCOUNT",
    "ACCOUNT CODE",
    "CONTRA ACCOUNT",
    "CONTRA ACCOUNT CODE",
    "ENTRY TEXT",
]

GNUCASH_BOOK = "../gnucash_books/simple_sample.gnucash"
CSV_EXPORT = "export.csv"
REPORTING_YEAR = 2019

# open the book and the export file
with open_book(GNUCASH_BOOK, readonly=True, open_if_lock=True) as mybook, Path(CSV_
↪EXPORT).open(
    "w", newline="")
) as f:
    # initialise the CSV writer
    csv_writer = csv.DictWriter(f, fieldnames=fields)
    csv_writer.writeheader()

    # iterate on all the transactions in the book
    for transaction in mybook.transactions:
        # filter transactions not in REPORTING_YEAR
        if transaction.post_date.year != REPORTING_YEAR:
            continue

        # handle only transactions with 2 splits
        if len(transaction.splits) != 2:
            print(
                f"skipping transaction {transaction} as it has more"
                f" than 2 splits in the transaction, dunno what to export to CSV"
            )
            continue

        # assign the two splits of the transaction
        split_one, split_two = transaction.splits
        # build the dictionary with the data of the transaction
```

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```

data = dict(
    zip(
        fields,
        [
            transaction.post_date,
            split_one.value,
            split_one.is_debit,
            split_one.account.name,
            split_one.account.code,
            split_two.account.name,
            split_two.account.code,
            transaction.description,
        ],
    )
)
# write the transaction to the CSV
csv_writer.writerow(data)

```

5.9 Extract Split information as pandas DataFrame

```

from piecash import open_book

# open a book
with open_book("../gnucash_books/simple_sample.gnucash", open_if_lock=True) as mybook:
    # print all splits in account "Asset"
    asset = mybook.accounts(fullname="Asset")
    for split in asset.splits:
        print(split)

    # extract all split information to a pandas DataFrame
    df = mybook.splits_df()

    # print for account "Asset" some information on the splits
    print(df.loc[df["account.fullname"] == "Asset", ["transaction.post_date", "value"]])

```

5.10 Filtered transaction reports

```

from __future__ import print_function
import datetime
import re
import os.path

from piecash import open_book

if __name__ == '__main__':
    this_folder = os.path.dirname(os.path.realpath(__file__))
    s = open_book(os.path.join(this_folder, "..", "gnucash_books", "simple_sample.
gnucash"), open_if_lock=True)
else:

```

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```

s = open_book(os.path.join("gnucash_books", "simple_sample.gnucash"), open_if_
↳lock=True)

# get default currency
print(s.default_currency)

regex_filter = re.compile("^/Rental/")

# retrieve relevant transactions
transactions = [tr for tr in s.transactions # query all transactions in the book/
↳session and filter them on
                if (regex_filter.search(tr.description) # description field matching_
↳regex
                    or any(regex_filter.search(spl.memo) for spl in tr.splits)) # or_
↳memo field of any split of transaction
                    and tr.post_date.date() >= datetime.date(2014, 11, 1)] # and with_
↳post_date no later than begin nov.

# output report with simple 'print'
print("Here are the transactions for the search criteria '{}':".format(regex_filter.
↳pattern))
for tr in transactions:
    print("- {:Y/%m/%d} : {}".format(tr.post_date, tr.description))
    for spl in tr.splits:
        print("\t{amount} {direction} {account} : {memo}".format(amount=abs(spl.
↳value),
                                                                    direction="-->" if_
↳spl.value > 0 else "<--",
                                                                    account=spl.
↳account.fullname,
                                                                    memo=spl.memo))

# same with jinja2 templates
try:
    import jinja2
except ImportError:
    print("\n\t*** Install jinja2 ('pip install jinja2') to test the jinja2 template_
↳version ***\n")
    jinja2 = None

if jinja2:
    env = jinja2.Environment(trim_blocks=True, lstrip_blocks=True)
    print(env.from_string("""
Here are the transactions for the search criteria '{{regex.pattern}}':
{% for tr in transactions %}
- {{ tr.post_date.strftime("%Y/%m/%d") }} : {{ tr.description }}
  {% for spl in tr.splits %}
    {{ spl.value.__abs__() }} {% if spl.value < 0 %} --> {% else %} <-- {% endif
↳%} {{ spl.account.fullname }} : {{ spl.memo }}
  {% endfor %}
{% endfor %}
""").render(transactions=transactions,
            regex=regex_filter))

```


PIECASH AND THE OFFICIAL PYTHON BINDINGS

piecash is an alternative to the python bindings that may be bundled with gnucash (http://wiki.gnucash.org/wiki/Python_Bindings).

This page aims to give some elements of comparison between both python interfaces to better understand their relevancy to your needs. Information on the official python bindings may be incomplete (information gathered from mailing lists and wiki).

6.1 Gnucash 3.0.x series

	piecash (>=1.0.0)	official python bindings (gnucash 3.0.n)
book format	gnucash 3.0.n	gnucash 3.0.n
environment	Python 3.6/3.7/3.8/3.9	Python 3
installation	pure python package 'pip install piecash'	compilation (difficult on windows) binaries (available on Linux)
requires GnuCash	no	yes
runs on Android	yes	no
gnucash files	SQL backend only	SQL backend and XML
documentation	yes (read the docs) actively developed	partial
functionalities	creation of new books read/browse objects create objects (basic) update online prices	all functionalities provided by the GnuCash C/C++ engine

6.2 Gnucash 2.6.x series

	piecash (<=0.18.0)	official python bindings (gnucash 2.6.n)
book format	gnucash 2.6.n	gnucash 2.6.n
environment	Python 2.7 & 3.3/3.4/3.5/3.6	Python 2.7
installation	pure python package ‘pip install piecash’	compilation (difficult on windows) binaries (available on Linux)
requires GnuCash	no	yes
runs on Android	yes	no
gnucash files	SQL backend only	SQL backend and XML
documentation	yes (read the docs) actively developed	partial
functionalities	creation of new books read/browse objects create objects (basic) update online prices	all functionalities provided by the GnuCash C/C++ engine

PIECASH ON ANDROID

piecash can successfully run on android which opens interesting opportunities!

7.1 Installing termux

First, you have to install Termux from the Play Store.

You start Termux and:

1. edit your `.bash_profile` with:

```
export TZ=$(getprop persist.sys.timezone)
export SHELL=$(which bash)
```

2. add the folder `~/storage` with access to your android folders (also accessible via USB sync):

```
termux-setup-storage
```

7.2 Installing python and piecash

You start Termux on your android and then:

1. Install python and pipenv:

```
pkg install python
pip install pipenv
```

2. Install piecash for your project:

```
mkdir my-project
cd my-project
pipenv install piecash
```

3. Test piecash:

```
pipenv shell
python
>>> import piecash
```

7.3 Use SSH with your android

You can ssh easily in your android thanks to Termux. For this, on Termux on your android:

1. install openssh:

```
pkg install openssh
```

2. add your public key (id_rsa.pub) in the file `~/.ssh/authorized_keys` on Termux
3. run the sshd server:

```
sshd
```

On your machine (laptop, ...):

1. configure your machine to access your android device:

```
Host android
  HostName 192.168.1.4 # <== put the IP address of your android
  User termux
  Port 8022
```

2. log in your android from your machine:

```
ssh android
```

7.4 Use the USB Debugging with your android

To be investigated...:

```
# on laptop
adb forward tcp:8022 tcp:8022 && ssh localhost -p 8022

# on android
# On Android 4.2 and higher, the Developer options screen is hidden by default. To
↪make it visible, go to Settings > About phone and tap Build number seven times.↪
↪Return to the previous screen to find Developer options at the bottom.
change USB Configuration to "charge only" or "PTP"

# downloading https://developer.android.com/studio/run/win-usb.html
# Click here to download the Google USB Driver ZIP file (Z
# install legacy hardware (in device manager)
# choose the folder of the zip drive and choose ADB interface
```


7.5 References

- <https://glow.li/technology/2015/11/06/run-an-ssh-server-on-your-android-with-termux/>
- <https://termux.com/storage.html>
- <https://developer.android.com/studio/releases/platform-tools.html>
- <https://glow.li/technology/2016/9/20/access-termux-via-usb/>
- <https://github.com/termux/termux-packages/issues/352>

FOR DEVELOPERS

The complete api documentation (apidoc) :

8.1 piecash package

8.1.1 Subpackages

piecash.business package

Submodules

piecash.business.invoice module

piecash.business.person module

```
class piecash.business.person.Address (name="", addr1="", addr2="", addr3="", addr4="",  
                                     email="", fax="", phone="")
```

Bases: `object`

An Address object encapsulates information regarding an address in GnuCash.

name

self explanatory

Type `str`

addr1

self explanatory

Type `str`

addr2

self explanatory

Type `str`

addr3

self explanatory

Type `str`

addr4

self explanatory

Type `str`

email
self explanatory

Type `str`

fax
self explanatory

Type `str`

phone
self explanatory

Type `str`

class `piecash.business.person.Person`

Bases: `object`

A mixin declaring common field for Customer, Vendor and Employee

class `piecash.business.person.Customer`(*name*, *currency*, *id*=None, *notes*="", *active*=1, *tax_override*=0, *credit*=`Decimal('0')`, *discount*=`Decimal('0')`, *taxtable*=None, *address*=None, *shipping_address*=None, *tax_included*='USEGLOBAL', *book*=None)

Bases: `piecash.business.person.Person`, `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Customer

name
name of the Customer

Type `str`

id
autonumber id with 5 digits (initialised to `book.counter_customer + 1`)

Type `str`

notes
notes

Type `str`

active
1 if the customer is active, 0 otherwise

Type `int`

discount
see GnuCash documentation

Type `decimal.Decimal`

credit
see GnuCash documentation

Type `decimal.Decimal`

currency
the currency of the customer

Type `piecash.core.commodity.Commodity`

tax_override
1 if tax override, 0 otherwise

Type `int`

address
the address of the customer

Type `Address`

shipping_address
the shipping address of the customer

Type `Address`

tax_included
'yes', 'no', 'use global'

Type `str`

taxtable
tax table of the customer

Type `piecash.business.tax.TaxTable`

term
bill term of the customer

Type `piecash.business.invoice.Billterm`

class `piecash.business.person.Employee` (*name*, *currency*, *creditcard_account=None*,
id=None, *active=1*, *acl=""*, *language=""*, *work-*
day=Decimal('0'), *rate=Decimal('0')*, *ad-*
dress=None, *book=None*)

Bases: `piecash.business.person.Person`, `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Employee

name
name of the Employee

Type `str`

id
autonumber id with 5 digits (initialised to `book.counter_employee + 1`)

Type `str`

language
language

Type `str`

active
1 if the employee is active, 0 otherwise

Type `int`

workday
see Gnucash documentation

Type `decimal.Decimal`

rate
see Gnucash documentation

Type `decimal.Decimal`

currency
the currency of the employee

Type `piecash.core.commodity.Commodity`

address

the address of the employee

Type `Address`

creditcard_account

credit card account for the employee

Type `piecash.core.account.Account`

on_book_add()

Call when the object is added to a book

```
class piecash.business.person.Vendor(name, currency, id=None, notes="", ac-
                                     tive=1, tax_override=0, taxable=None,
                                     credit=Decimal('0'), discount=Decimal('0'),
                                     address=None, tax_included='USEGLOBAL',
                                     book=None)
```

Bases: `piecash.business.person.Person`, `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Vendor

name

name of the Vendor

Type `str`

id

autonumber id with 5 digits (initialised to `book.counter_vendor + 1`)

Type `str`

notes

notes

Type `str`

active

1 if the vendor is active, 0 otherwise

Type `int`

currency

the currency of the vendor

Type `piecash.core.commodity.Commodity`

tax_override

1 if tax override, 0 otherwise

Type `int`

address

the address of the vendor

Type `Address`

tax_included

'YES', 'NO', 'USEGLOBAL'

Type `str`

taxtable

tax table of the vendor

Type `piecash.business.tax.TaxTable`

term
bill term of the vendor

Type `piecash.business.invoice.Billterm`

piecash.business.tax module

Module contents

piecash.core package

Submodules

piecash.core._commodity_helper module

`piecash.core._commodity_helper.quandl_fx` (*fx_mnemonic, base_mnemonic, start_date*)

Retrieve exchange rate of commodity fx in function of base.

API KEY will be retrieved from the environment variable QUANDL_API_KEY

piecash.core.account module

class `piecash.core.account.AccountType` (*value*)

Bases: `enum.Enum`

An enumeration.

class `piecash.core.account.Account` (*name, type, commodity, parent=None, description="", commodity_scu=None, hidden=0, placeholder=0, code="", book=None, children=None*)

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Account which is specified by its name, type and commodity.

type
type of the Account

Type `str`

sign
1 for accounts with positive balances, -1 for accounts with negative balances

Type `int`

code
code of the Account

Type `str`

commodity
the commodity of the account

Type `piecash.core.commodity.Commodity`

commodity_scu
smallest currency unit for the account

Type `int`

non_std_scu
1 if the scu of the account is NOT the same as the commodity

Type `int`

description
description of the account

Type `str`

name
name of the account

Type `str`

fullname
full name of the account (including name of parent accounts separated by ':')

Type `str`

placeholder
1 if the account is a placeholder (should not be involved in transactions)

Type `int`

hidden
1 if the account is hidden

Type `int`

is_template
True if the account is a template account (ie commodity=template/template)

Type `bool`

parent
the parent account of the account (None for the root account of a book)

Type `Account`

children
the list of the children accounts

Type list of `Account`

splits
the list of the splits linked to the account

Type list of `piecash.core.transaction.Split`

lots
the list of lots to which the account is linked

Type list of `piecash.business.Lot`

book
the book if the account is the root account (else None)

Type `piecash.core.book.Book`

budget_amounts
list of budget amounts of the account

Type list of `piecash.budget.BudgetAmount`

scheduled_transaction

scheduled transaction linked to the account

Type `piecash.core.transaction.ScheduledTransaction`

object_to_validate (*change*)

yield the objects to validate when the object is modified (*change*="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). `split.object_to_validate` should yeild both `split.transaction` and `split.lot`

validate ()

This must be reimplemented for object requiring validation

observe_commodity (*key*, *value*)

Ensure update of commodity_scu when commodity is changed

get_balance (*recurse=True*, *commodity=None*, *natural_sign=True*)

Returns the balance of the account (including its children accounts if *recurse=True*) expressed in account's commodity/currency. If this is a stock/fund account, it will return the number of shares held. If this is a currency account, it will be in account's currency. In case of recursion, the commodity of children accounts will be transformed to the commodity of the father account using the latest price (if no price is available to convert , it is considered as 0). If *natural_sign* is True, the sign of the balance is reverted for the account with type {'LIABILITY', 'PAYABLE', 'CREDIT', 'INCOME', 'EQUITY'}

recurse

True if the balance should include children accounts (default to True)

Type `bool`, optional

commodity

the currency into which to get the balance (default to None, i.e. the currency of the account)

Type `piecash.core.commodity.Commodity`

natural_sign

True if the balance sign is reversed for accounts of type {'LIABILITY', 'PAYABLE', 'CREDIT', 'INCOME', 'EQUITY'} (default to True)

Type `bool`, optional

Returns the balance of the account

piecash.core.book module

class `piecash.core.book.Book` (*root_account=None*, *root_template=None*)

Bases: `piecash._declbase.DeclarativeBaseGuid`

A Book represents a GnuCash document. It is created through one of the two factory functions `create_book()` and `open_book()`.

Canonical use is as a context manager like (the book is automatically closed at the end of the with block):

```
with create_book() as book:
    ...
```

Note: If you do not use the context manager, do not forget to close the session explicitly (`book.close()`) to release any lock on the file/DB.

The book puts at disposal several attributes to access the main objects of the GnuCash document:

```
# to get the book and the root_account
ra = book.root_account

# to get the list of accounts, commodities or transactions
for acc in book.accounts: # or book.commodities or book.transactions
    # do something with acc

# to get a specific element of these lists
EUR = book.commodities(namespace="CURRENCY", mnemonic="EUR")

# to get a list of all objects of some class (even non core classes)
budgets = book.get(Budget)
# or a specific object
budget = book.get(Budget, name="my first budget")
```

You can check a session has changes (new, deleted, changed objects) by getting the `book.is_saved` property. To save or cancel changes, use `book.save()` or `book.cancel()`:

```
# save a session if it is no saved (saving a unchanged session is a no-op)
if not book.is_saved:
    book.save()
```

root_account

the root account of the book

Type `piecash.core.account.Account`

root_template

the root template of the book (usage not yet clear...)

Type `piecash.core.account.Account`

default_currency

the currency of the root account (=default currency of the book)

Type `piecash.core.commodity.Commodity`

uri

connection string of the book (set by the GncSession when accessing the book)

Type `str`

session

the sqlalchemy session encapsulating the book

Type `sqlalchemy.orm.session.Session`

use_trading_accounts

true if option “Use trading accounts” is enabled

Type `bool`

use_split_action_field

true if option “Use Split Action Field for Number” is enabled

Type `bool`

RO_threshold_day

value of Day Threshold for Read-Only Transactions (red line)

Type `int`

control_mode

list of allowed non-standard operations like : “allow-root-subaccounts”

Type `list(str)`

counter_customer

counter for *piecash.business.person.Customer* id (link to slot “counters/gncCustomer”)

Type `int`

counter_vendor

counter for *piecash.business.person.Vendor* id (link to slot “counters/gncVendor”)

Type `int`

counter_employee

counter for *piecash.business.person.Employee* id (link to slot “counters/gncEmployee”)

Type `int`

counter_invoice

counter for *piecash.business.invoice.Invoice* id (link to slot “counters/gncInvoice”)

Type `int`

counter_job

counter for *piecash.business.invoice.Job* id (link to slot “counters/gncJob”)

Type `int`

counter_bill

counter for *piecash.business.invoice.Bill* id (link to slot “counters/gncBill”)

Type `int`

counter_exp_voucher

counter for *piecash.business.invoice.Invoice* id (link to slot “counters/gncExpVoucher”)

Type `int`

counter_order

counter for *piecash.business.invoice.Order* id (link to slot “counters/gncOrder”)

Type `int`

business_company_phone

phone number of book company (link to slit “options/Business/Company Phone Number”)

Type `str`

business_company_email

email of book company (link to slit “options/Business/Company Email Address”)

Type `str`

business_company_contact

contact person of book company (link to slit “options/Business/Company Contact Person”)

Type `str`

business_company_ID

ID of book company (link to slit “options/Business/Company ID”)

Type `str`

business_company_name

name of book company (link to slit “options/Business/Company Name”)

Type `str`

business_company_address

address of book company (link to slit “options/Business/Company Address”)

Type `str`

business_company_website

website URL of book company (link to slit “options/Business/Company Website URL”)

Type `str`

property book

Return the gnc book holding the object

validate()

This must be reimplemented for object requiring validation

static track_dirty (*session, flush_context, instances*)

Record in `session._all_changes` the objects that have been modified before each flush

trading_account (*cdty*)

Return the trading account related to the commodity. If it does not exist and the option “Use Trading Accounts” is enabled, create it on the fly

add (*obj*)

Add an object to the book (to be used if object not linked in any way to the book)

delete (*obj*)

Delete an object from the book (to remove permanently an object)

save()

Save the changes to the file/DB (=commit transaction)

flush()

Flush the book

cancel()

Cancel all the changes that have not been saved (=rollback transaction)

property is_saved

Are all the changes saved to the file/DB?

You can check a session has changes (new, deleted, changed objects) by getting the `book.is_saved` property.

close()

Close a session. Any changes not yet saved are rolled back. Any lock on the file/DB is released.

get (*cls, **kwargs*)

Generic getter for a GnuCash object in the *GncSession*. If no *kwargs* is given, it returns the list of all objects of type *cls* (uses the sqlalchemy `session.query(cls).all()`). Otherwise, it gets the unique object which attributes match the *kwargs* (uses the sqlalchemy `session.query(cls).filter_by(**kwargs).one()` underneath):

```
# to get the first account with name="Income"
inc_account = session.get(Account, name="Income")

# to get all accounts
accs = session.get(Account)
```

Parameters

- **cls** (*class*) – the class of the object to retrieve (Account, Price, Budget,...)

- **kwargs** (*dict*) – the attributes to filter on

Returns the unique object if it exists, raises exceptions otherwise

Return type *object*

property transactions

gives easy access to all transactions in the book through a `piecash.model_common.CallableList` of `piecash.core.transaction.Transaction`

property splits

gives easy access to all splits in the book through a `piecash.model_common.CallableList` of `piecash.core.transaction.Split`

property accounts

gives easy access to all accounts in the book through a `piecash.model_common.CallableList` of `piecash.core.account.Account`

property commodities

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.core.commodity.Commodity`

property invoices

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.core.commodity.Commodity`

property currencies

gives easy access to all currencies in the book through a `piecash.model_common.CallableList` of `piecash.core.commodity.Commodity`

property prices

gives easy access to all prices in the book through a `piecash.model_common.CallableList` of `piecash.core.commodity.Price`

property customers

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.business.people.Customer`

property vendors

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.business.people.Vendor`

property employees

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.business.people.Employee`

property taxtables

gives easy access to all commodities in the book through a `piecash.model_common.CallableList` of `piecash.business.tax.Taxtable`

property query

proxy for the query function of the underlying sqlalchemy session

splits_df (*additional_fields=None*)

Return a pandas DataFrame with all splits (`piecash.core.commodity.Split`) from the book

Parameters *list*

Returns `pandas.DataFrame`

prices_df ()

Return a pandas DataFrame with all prices (`piecash.core.commodity.Price`) from the book

Returns `pandas.DataFrame`

piecash.core.commodity module

exception `piecash.core.commodity.GncCommodityError`

Bases: `piecash._common.GnucashException`

exception `piecash.core.commodity.GncPriceError`

Bases: `piecash._common.GnucashException`

class `piecash.core.commodity.Price`(*commodity, currency, date, value, type='unknown', source='user:price'*)

Bases: `piecash._declbase.DeclarativeBaseGuid`

A single Price for a commodity.

commodity

commodity to which the Price relates

Type `Commodity`

currency

currency in which the Price is expressed

Type `Commodity`

date

date object representing the day at which the price is relevant

Type `datetime.date`

source

source of the price

Type `str`

type

last, ask, bid, unknown, nav

Type `str`

value

the price itself

Type `decimal.Decimal`

object_to_validate (*change*)

yield the objects to validate when the object is modified (change="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). `split.object_to_validate` should yeild both `split.transaction` and `split.lot`

validate ()

This must be reimplemented for object requiring validation

class `piecash.core.commodity.Commodity`(*namespace, mnemonic, fullname, fraction=100, cusip="", quote_flag=0, quote_source=None, quote_tz="", book=None*)

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Commodity.

cusip

cusip code

Type `str`

fraction

minimal unit of the commodity (e.g. 100 for 1/100)

Type `int`

namespace

CURRENCY for currencies, otherwise any string to group multiple commodities together

Type `str`

mnemonic

the ISO symbol for a currency or the stock symbol for stocks (used for online quotes)

Type `str`

quote_flag

1 if piecash/GnuCash quotes will retrieve online quotes for the commodity

Type `int`

quote_source

the quote source for GnuCash (piecash always use yahoo for stock and quandl for currencies)

Type `str`

quote_tz

the timezone to assign on the online quotes

Type `str`

base_currency

The base_currency for a commodity:

- if the commodity is a currency, returns the “default currency” of the book (ie the one of the root_account)
- if the commodity is not a currency, returns the currency encoded in the quoted_currency slot

Type `Commodity`

accounts

list of accounts which have the commodity as commodity

Type list of `piecash.core.account.Account`

transactions

list of transactions which have the commodity as currency

Type list of `piecash.core.transaction.Transaction`

prices

iterator on prices related to the commodity (it is a sqlalchemy query underneath)

Type iterator of `Price`

currency_conversion (`currency`)

Return the latest conversion factor to convert self to currency

currency

the currency to which the Price need to be converted

Type `piecash.core.commodity.Commodity`

Returns a Decimal that can be multiplied by an amount expressed in self.commodity to get an amount expressed in currency

Raises *GncConversionError* – not possible to convert self to the currency

update_prices (*start_date=None*)

Retrieve online prices for the commodity:

- for currencies, it will get from quandl the exchange rates between the currency and its base_currency
- for stocks, it will get from yahoo the daily closing prices expressed in its base_currency

Parameters

- **start_date** (*datetime.date*) – prices will be updated as of the start_date. If None, start_date is today
- **7 days.** (-) –

Note: if prices are already available in the GnuCash file, the function will only retrieve prices as of the max(start_date, last quoted price date)

Todo: add some frequency to retrieve prices only every X (week, month, ...)

object_to_validate (*change*)

yield the objects to validate when the object is modified (change="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). split.object_to_validate should yeild both split.transaction and split.lot

validate ()

This must be reimplemented for object requiring validation

piecash.core.currency_ISO module

class piecash.core.currency_ISO.**ISO_type** (*country, currency, mnemonic, cusip, fraction*)

Bases: *tuple*

property **country**

Alias for field number 0

property **currency**

Alias for field number 1

property **cusip**

Alias for field number 3

property **fraction**

Alias for field number 4

property **mnemonic**

Alias for field number 2

piecash.core.factories module

`piecash.core.factories.create_stock_accounts` (*cdty*, *broker_account*, *income_account*, *income_account_types*)

Create the multiple accounts used to track a single stock, ie:

- `broker_account/stock.mnemonic`

and the following accounts depending on the `income_account_types` argument

- `D = Income/Dividend Income/stock.mnemonic`
- `CL = Income/Cap Gain (Long)/stock.mnemonic`
- `CS = Income/Cap Gain (Short)/stock.mnemonic`
- `I = Income/Interest Income/stock.mnemonic`

Parameters

- **broker_account** (*piecash.core.account.Account*) – the broker account where the account holding
- **stock is to be created** (*the*) –
- **income_account** (*piecash.core.account.Account*) – the income account where the accounts holding
- **income related to the stock are to be created** (*the*) –
- **income_account_types** (*str*) – “/” separated codes to drive the creation of income accounts

Returns a tuple with the account under the `broker_account` where the stock is held and the list of income accounts.

Return type *piecash.core.account.Account*

`piecash.core.factories.create_currency_from_ISO` (*isocode*)

Factory function to create a new currency from its ISO code

Parameters **isocode** (*str*) – the ISO code of the currency (e.g. EUR for the euro)

Returns the currency as a commodity object

Return type *Commodity*

`piecash.core.factories.create_stock_from_symbol` (*symbol*, *book=None*)

Factory function to create a new stock from its symbol. The ISO code of the quoted currency of the stock is stored in the slot “quoted_currency”.

Parameters **symbol** (*str*) – the symbol for the stock (e.g. YHOO for the Yahoo! stock)

Returns the stock as a commodity object

Return type *Commodity*

Note: The information is gathered from the yahoo-finance package The default currency in which the quote is traded is stored in a slot ‘quoted_currency’

Todo: use ‘select * from yahoo.finance.sectors’ and ‘select * from yahoo.finance.industry where id =’sector_id’’ to retrieve name of stocks and allow therefore the creation of a stock by giving its “stock name” (or part of it). This could also be used to retrieve all symbols related to the same company

piecash.core.session module

class piecash.core.session.**Version** (*table_name*, *table_version*)
Bases: sqlalchemy.ext.declarative.api.DeclarativeBase

The declarative class for the ‘versions’ table.

table_version
The version for the table

piecash.core.session.**build_uri** (*sqlite_file=None*, *uri_conn=None*, *db_type=None*,
db_user=None, *db_password=None*, *db_name=None*,
db_host=None, *db_port=None*, *check_same_thread=True*)

Create the connection string in function of some choices.

Parameters

- **sqlite_file** (*str*) – a path to an sqlite3 file (only used if uri_conn is None)
- **uri_conn** (*str*) – a sqlalchemy connection string
- **db_type** (*str*) – type of database in [“postgres”, “mysql”]
- **db_user** (*str*) – username of database
- **db_password** (*str*) – password for the use of database
- **db_name** (*str*) – name of database
- **db_host** (*str*) – host of database
- **db_port** (*int*) – port of database
- **check_same_thread** (*bool*) – sqlite flag that restricts connection use to the thread that created (see False for use in ipython/flask/... but read first <https://docs.python.org/3/library/sqlite3.html>)

Returns the connection string

Return type *str*

piecash.core.session.**create_book** (*sqlite_file=None*, *uri_conn=None*, *currency='EUR'*, *over-*
write=False, *keep_foreign_keys=False*, *db_type=None*,
db_user=None, *db_password=None*, *db_name=None*,
db_host=None, *db_port=None*, *check_same_thread=True*,
pg_template='template0', ***kwargs*)

Create a new empty GnuCash book. If both sqlite_file and uri_conn are None, then an “in memory” sqlite book is created.

Parameters

- **sqlite_file** (*str*) – a path to an sqlite3 file (only used if uri_conn is None)
- **uri_conn** (*str*) – a sqlalchemy connection string
- **currency** (*str*) – the ISO symbol of the default currency of the book
- **overwrite** (*bool*) – True if book should be deleted and recreated if it exists already

- **keep_foreign_keys** (*bool*) – True if the foreign keys should be kept (may not work at all with GnuCash)
- **db_type** (*str*) – type of database in ["postgres","mysql"]
- **db_user** (*str*) – username of database
- **db_password** (*str*) – password for the use of database
- **db_name** (*str*) – name of database
- **db_host** (*str*) – host of database
- **db_port** (*int*) – port of database
- **check_same_thread** (*bool*) – sqlite flag that restricts connection use to the thread that created (see False for use in ipython/flask/... but read first <https://docs.python.org/3/library/sqlite3.html>)
- **pg_template** (*str*) – the postgres template to use when creating the database. One of template1 or template0 (default template0). Irrelevant for other databases than postgres.

Returns the document as a gnuCash session

Return type GncSession

Raises *GnucashException* – if document already exists and overwrite is False

```
piecash.core.session.open_book (sqlite_file=None,      uri_conn=None,      readonly=True,
                                open_if_lock=False,    do_backup=True,      db_type=None,
                                db_user=None,          db_password=None,    db_name=None,
                                db_host=None,          db_port=None,        check_same_thread=True,
                                check_exists=True, **kwargs)
```

Open an existing GnuCash book

Parameters

- **sqlite_file** (*str*) – a path to an sqlite3 file (only used if uri_conn is None)
- **uri_conn** (*str*) – a sqlalchemy connection string
- **readonly** (*bool*) – open the file as readonly (useful to play with and avoid any unwanted save)
- **open_if_lock** (*bool*) – open the file even if it is locked by another user (using open_if_lock=True with readonly=False is not recommended)
- **do_backup** (*bool*) – do a backup if the file written in RW (i.e. readonly=False) (this only works with the sqlite backend and copy the file with `.{:%Y%m%d%H%M%S}.gnucash` appended to it)
- **db_type** (*str*) – type of database in ["postgres","mysql"]
- **db_user** (*str*) – username of database
- **db_password** (*str*) – password for the use of database
- **db_name** (*str*) – name of database
- **db_host** (*str*) – host of database
- **db_port** (*str*) – port of database
- **check_same_thread** (*bool*) – sqlite flag that restricts connection use to the thread that created (see False for use in ipython/flask/... but read first <https://docs.python.org/3/library/sqlite3.html>)

- **check_exists** (*bool*) – check if the database exists before connecting

Returns the document as a gnuCash session

Return type `GncSession`

Raises

- *GnuCashException* – if the document does not exist
- *GnuCashException* – if there is a lock on the file and `open_if_lock` is `False`

`piecash.core.session.adapt_session(session, book, readonly)`

Change the SA session object to add some features.

Parameters

- **session** – the SA session object that will be modified in place
- **book** – the gnuCash singleton book linked to the SA session
- **readonly** – True if the session should not allow commits.

Returns

piecash.core.transaction module

```
class piecash.core.transaction.Split(account, value, quantity=None, transaction=None,
                                     memo="", action="", reconcile_date=None, reconcile_state='n', lot=None)
```

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Split.

Note: A split used in a scheduled transaction has its main attributes in form of slots.

transaction

transaction of the split

Type `piecash.core.transaction.Transaction`

account

account of the split

Type `piecash.core.account.Account`

lot

lot to which the split pertains

Type `piecash.business.Lot`

memo

memo of the split

Type `str`

value

amount express in the currency of the transaction of the split

Type `decimal.Decimal`

quantity

amount express in the commodity of the account of the split

Type `decimal.Decimal`

reconcile_state
'n', 'c' or 'y'

Type `str`

reconcile_date
time

Type `datetime.datetime`

action
describe the type of action behind the split (free form string but with dropdown in the GUI)

Type `str`

object_to_validate (*change*)
yield the objects to validate when the object is modified (change="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). split.object_to_validate should yeild both split.transaction and split.lot

validate ()
This must be reimplemented for object requiring validation

class `piecash.core.transaction.Transaction` (*currency*, *description*=", *notes*=None, *splits*=None, *enter_date*=None, *post_date*=None, *num*="")

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Transaction.

currency
currency of the transaction. This attribute is write-once (i.e. one cannot change it after being set)

Type `piecash.core.commodity.Commodity`

description
description of the transaction

Type `str`

enter_date
datetime at which transaction is entered

Type `datetime.datetime`

post_date
day on which transaction is posted

Type `datetime.date`

num
user provided transaction number

Type `str`

splits
list of the splits of the transaction

Type list of *Split*

scheduled_transaction
scheduled transaction behind the transaction

Type *ScheduledTransaction*

notes

notes on the transaction (provided via a slot)

Type `str`

object_to_validate (*change*)

yield the objects to validate when the object is modified (change="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). `split.object_to_validate` should yeild both `split.transaction` and `split.lot`

validate ()

This must be reimplemented for object requiring validation

calculate_imbalances ()

Calculate value and quantity imbalances of a transaction

```
class piecash.core.transaction.ScheduledTransaction (*args, **kwargs)
```

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Scheduled Transaction.

Attributes `adv_creation` (int) : days to create in advance (0 if disabled) `adv_notify` (int) : days to notify in advance (0 if disabled) `auto_create` (bool) : `auto_notify` (bool) : `enabled` (bool) : `start_date` (`datetime.datetime`) : date to start the scheduled transaction `last_occur` (`datetime.datetime`) : date of last occurence of the schedule transaction `end_date` (`datetime.datetime`) : date to end the scheduled transaction (num/rem_occur should be 0) `instance_count` (int) : `name` (str) : name of the scheduled transaction `num_occur` (int) : number of occurences in total (end_date should be null) `rem_occur` (int) : number of remaining occurences (end_date should be null) `template_account` (`piecash.core.account.Account`): template account of the transaction

```
class piecash.core.transaction.Lot (title, account, notes="", splits=None, is_closed=0)
```

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Lot. Each lot is linked to an account. Splits in this account can be associated to a Lot. Whenever the balance of the splits goes to 0, the Lot is closed (otherwise it is opened)

is_closed

1 if lot is closed, 0 otherwise

Type `int`

account

account of the Lot

Type `piecash.core.account.Account`

splits

splits associated to the Lot

Type `piecash.core.transaction.Split`

object_to_validate (*change*)

yield the objects to validate when the object is modified (change="new" "deleted" or "dirty").

For instance, if the object is a Split, if it changes, we want to revalidate not the split but its transaction and its lot (if any). `split.object_to_validate` should yeild both `split.transaction` and `split.lot`

validate ()

This must be reimplemented for object requiring validation

Module contents

8.1.2 Submodules

piecash._common module

exception piecash._common.GnucashException

Bases: *Exception*

exception piecash._common.GncNoActiveSession

Bases: *piecash._common.GnucashException*

exception piecash._common.GncValidationError

Bases: *piecash._common.GnucashException*

exception piecash._common.GncImbalanceError

Bases: *piecash._common.GncValidationError*

exception piecash._common.GncConversionError

Bases: *piecash._common.GnucashException*

class piecash._common.Recurrence(*args, **kwargs)

Bases: *sqlalchemy.ext.declarative.api.DeclarativeBase*

Recurrence information for scheduled transactions

obj_guid

link to the parent ScheduledTransaction record.

Type *str*

recurrence_mult

Multiplier for the period type. Describes how many times the period repeats for the next occurrence.

Type *int*

recurrence_period_type

type or recurrence (monthly, daily).

Type *str*

recurrence_period_start

the date the recurrence starts.

Type *date*

recurrence_weekend_adjust

adjustment to be made if the next occurrence falls on weekend / non-working day.

Type *str*

piecash._common.hybrid_property_gncnumeric(*num_col*, *denom_col*)

Return an hybrid_property handling a Decimal represented by a numerator and a denominator column. It assumes the python field related to the sqlcolumn is named as _sqlcolumn.

Returns *sqlalchemy.ext.hybrid.hybrid_property*

class piecash._common.CallableList(*args)

Bases: *list*

A simple class (inherited from list) allowing to retrieve a given list element with a filter on an attribute.

It can be used as the collection_class of a sqlalchemy relationship or to wrap any list (see examples in `piecash.core.session.GncSession`)

get (***kwargs*)

Return the first element of the list that has attributes matching the kwargs dict. The *get* method is an alias for this method.

To be used as:

```
l(mnemonic="EUR", namespace="CURRENCY")
```

`piecash._common.get_system_currency_mnemonic()`

Returns the mnemonic of the locale currency (and EUR if not defined).

At the target, it could also look in GnuCash configuration/registry to see if the user has chosen another default currency.

piecash._declbase module

piecash.budget module

class `piecash.budget.Budget` (**args, **kwargs*)

Bases: `piecash._declbase.DeclarativeBaseGuid`

A GnuCash Budget

name

name of the budget

Type `str`

description

description of the budget

Type `str`

amounts

list of amounts per account

Type list of `piecash.budget.BudgetAmount`

class `piecash.budget.BudgetAmount` (**args, **kwargs*)

Bases: `sqlalchemy.ext.declarative.api.DeclarativeBase`

A GnuCash BudgetAmount

amount

the budgeted amount

Type `decimal.Decimal`

account

the budgeted account

Type `piecash.core.account.Account`

budget

the budget of the amount

Type `Budget`

piecash.kvp module

class piecash.kvp.KVP_Type(*value*)

Bases: `enum.Enum`

An enumeration.

class piecash.kvp.SlotType(*args, **kwargs)

Bases: `sqlalchemy.sql.type_api.TypeDecorator`

Used to customise the DateTime type for sqlite (ie without the separators as in gnuCash

impl

alias of `sqlalchemy.sql.sqltypes.INTEGER`

process_bind_param(*value, dialect*)

Receive a bound parameter value to be converted.

Subclasses override this method to return the value that should be passed along to the underlying TypeEngine object, and from there to the DBAPI `execute()` method.

The operation could be anything desired to perform custom behavior, such as transforming or serializing data. This could also be used as a hook for validating logic.

This operation should be designed with the reverse operation in mind, which would be the `process_result_value` method of this class.

Parameters

- **value** – Data to operate upon, of any type expected by this method in the subclass. Can be `None`.
- **dialect** – the `Dialect` in use.

process_result_value(*value, dialect*)

Receive a result-row column value to be converted.

Subclasses should implement this method to operate on data fetched from the database.

Subclasses override this method to return the value that should be passed back to the application, given a value that is already processed by the underlying TypeEngine object, originally from the DBAPI cursor method `fetchone()` or similar.

The operation could be anything desired to perform custom behavior, such as transforming or serializing data. This could also be used as a hook for validating logic.

Parameters

- **value** – Data to operate upon, of any type expected by this method in the subclass. Can be `None`.
- **dialect** – the `Dialect` in use.

This operation should be designed to be reversible by the “`process_bind_param`” method of this class.

piecash.ledger module

piecash.metadata module

Project metadata

Information describing the project.

piecash.sa_extra module

`piecash.sa_extra.compile_datetime` (*element, compiler, **kw*)
 data type for the date field

note: it went from TEXT(14) in 2.6 to TEXT(19) in 2.8 to accommodate for the new ISO format of date in sqlite

`piecash.sa_extra.mapped_to_slot_property` (*col, slot_name, slot_transform=<function <lambda>>>*)

Assume the attribute in the class as the same name as the table column with “_” prepended

`piecash.sa_extra.pure_slot_property` (*slot_name, slot_transform=<function <lambda>>>, ignore_invalid_slot=False*)

Create a property (class must have slots) that maps to a slot

Parameters

- **slot_name** – name of the slot
- **slot_transform** – transformation to operate before assigning value
- **ignore_invalid_slot** – True if incorrect values (usually due to deleted data) should be converted to None

Returns

`piecash.sa_extra.get_foreign_keys` (*metadata, engine*)

Retrieve all foreign keys from metadata bound to an engine :param metadata: :param engine: :return:

class `piecash.sa_extra.ChoiceType` (*choices, **kw*)
 Bases: `sqlalchemy.sql.type_api.TypeDecorator`

process_bind_param (*value, dialect*)

Receive a bound parameter value to be converted.

Subclasses override this method to return the value that should be passed along to the underlying `TypeEngine` object, and from there to the DBAPI `execute()` method.

The operation could be anything desired to perform custom behavior, such as transforming or serializing data. This could also be used as a hook for validating logic.

This operation should be designed with the reverse operation in mind, which would be the `process_result_value` method of this class.

Parameters

- **value** – Data to operate upon, of any type expected by this method in the subclass. Can be None.
- **dialect** – the `Dialect` in use.

process_result_value (*value, dialect*)

Receive a result-row column value to be converted.

Subclasses should implement this method to operate on data fetched from the database.

Subclasses override this method to return the value that should be passed back to the application, given a value that is already processed by the underlying `TypeEngine` object, originally from the DBAPI cursor method `fetchone()` or similar.

The operation could be anything desired to perform custom behavior, such as transforming or serializing data. This could also be used as a hook for validating logic.

Parameters

- **value** – Data to operate upon, of any type expected by this method in the subclass. Can be `None`.
- **dialect** – the `Dialect` in use.

This operation should be designed to be reversible by the “`process_bind_param`” method of this class.

8.1.3 Module contents

Python interface to GnuCash documents

An overall view on the core objects in GnuCash:

8.2 GnuCash SQL Object model and schema

A clear documentation of the SQL schema (tables, columns, relationships) and the implicit semantic (invariants that should be always satisfied, logic to apply in ambiguous/corner cases) is critical for piecash to

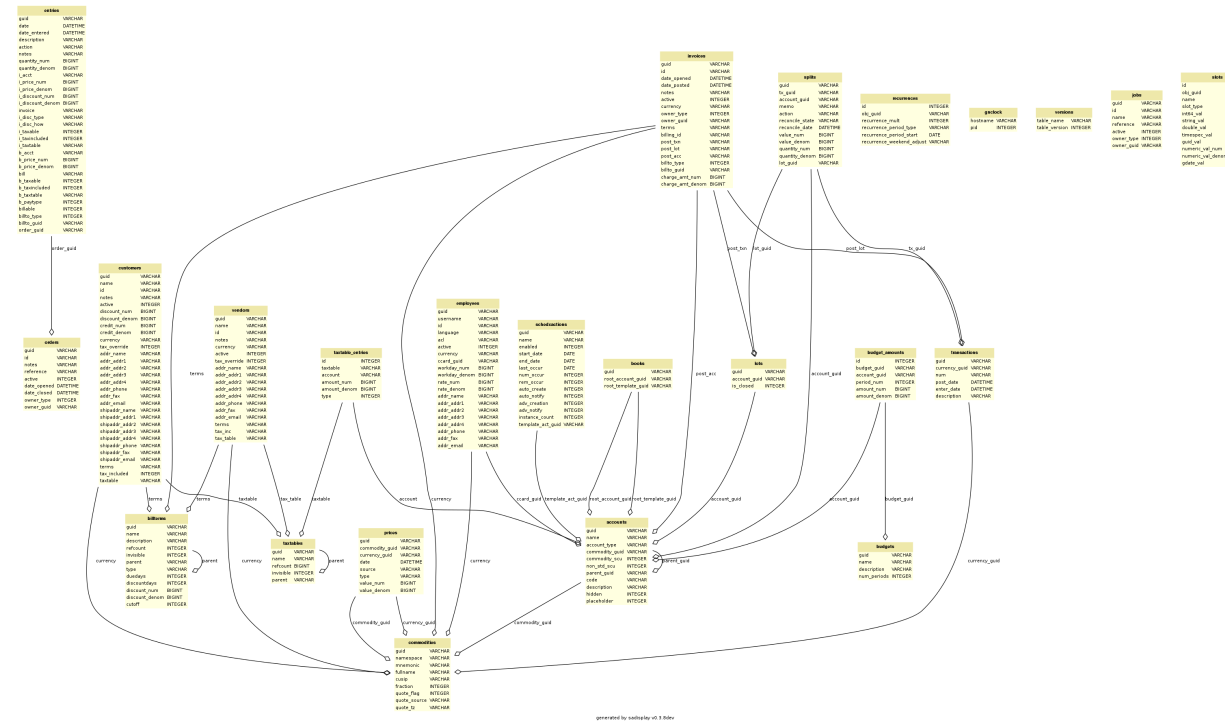
- a) ensure data integrity (when creating new objects and/or modifying/deleting existing objects)
- b) ensure compatibility in semantic with the official GnuCash application

Warning: This document explains what the author understands in these domains. It is not the reference documentation, please refer to the official GnuCash documentation for this.

Warning: Disclaimer : piecash primary focus is on reading GnuCash books and creating new *Core objects*. Creating other objects than the core objects, modifying existing objects attributes or relationships and deleting objects can be done through piecash but at the user’s own risk (backup your books before doing any of such modifications)

8.2.1 Schema

The following SQL schema has been generated by `sadisplay` (<https://pypi.python.org/pypi/sadisplay>) on a GnuCash book generated by piecash on the MySQL backend with the option `keep_foreign_keys` (the official GnuCash schema does not define foreign keys):



8.2.2 Days, times, dates & datetimes

The use of date and time in GnuCash is somewhat complicated (mainly due to legacy reasons). This chapter described how days and time are encoded in the different tables. For each table.field, the DB type and the PIECASH type are given (DATE = day, DATETIME = day + time) as well as the representation in SQL. All examples are based on a local time in CET (central european time) and for the 11 feb 2018.

prices.date

DATETIME -> DAY = YYYY-MM-DD 00:00:00 LT expressed as UTC (e.g. 20180210230000) if price entered via the price editor

DATETIME -> DAY = YYYY-MM-DD 10:59:00 UTC (e.g. 20180211105900) if price generated via a transaction

DATETIME -> DAY = ??? (To be completed)) if price retrieved via Finance:Quote

transactions.post_date DATETIME -> DAY = YYYY-MM-DD 10:59:00 UTC (e.g. 20180211105900) In the slots, the date-posted stores the post_date as a day (e.g. 20180211)

transactions.enter_date DATETIME -> DATETIME = YYYY-MM-DD hh:mm:ss UTC (e.g. 20180211123036)

splits.reconcile_date DATETIME -> DAY = 1970-01-01 00:00:00 UTC if not applicable (19700101000000) DATE-TIME -> DAY = YYYY-MM-DD 23:59:59 LT expressed as UTC (e.g. 20180211225959) In the slots, the reconcile-info/last-date stored and int64 representing the timestamp of the last post_date (e.g. 1518389999 ~ 20180211105900)

schedxactions.start_date, schedxactions.end_date, schedxactions.last_occur DAY -> DAY = YYYY-MM-DD

8.2.3 Core objects

There are 5 core objects in GnuCash : *Book*, *Commodity*, *Account*, *Transaction*, *Split*. An additional object, the *Price*, is strongly linked to the Commodity and is used in reports and for display (for instance, to convert all accounts balance in the default currency). While not as core as the others, it is an essential piece of functionality for anyone using GnuCash to track a stock portfolio value or multi-currency book.

Note: A priori, all these objects are all “create once, never change” objects. Changing some fields of an object may lead to complex renormalisation procedures. Deleting some objects may lead to complex cascade changes/renormalisation procedures. In this respect, it is important to either avoid changes/deletions or to have clear invariants that should stay true at any time.

Book

The Book is the object model representing a GnuCash document. It has a link to the root account, the account at the root of the tree structure.

Fields

root_account (mandatory) The account at the root of the tree structure

root_template (mandatory) Use to attach split from template/scheduled transactions

Invariant

- one (and only one) Book per GnuCash document

Commodity

A Commodity is either a currency (€, \$, ...) or a commodity/stock that can be stored in/traded through an Account.

The Commodity object is used in two different (but related) contexts.

- a) each Account should specify the Commodity it handles/stores. For usual accounts (Savings, Expenses, etc), the Commodity is a currency. For trading accounts, the Commodity is usually a stock (AMZN, etc). In this role, each commodity (be it a stock or a currency) can have Prices attached to it that give the value of the commodity expressed in a given currency.
- b) each Transaction should specify the Currency which is used to balance itself.

Fields

namespace (mandatory) A string representing the group/class of the commodity. All commodities that are currencies should have ‘CURRENCY’ as namespace. Non currency commodities should have other groups.

mnemonic (mandatory) The symbol/stock sticker of the commodity (relevant for online download of quotes)

fullname The full name for the commodity. Besides the fullname, there is a “calculated property” `unique_name` equal to “`namespace::mnemonic`”

cusip unique code for the commodity

fraction The smallest unit that can be accounted for (for a currency, this is equivalent to the scu, the smallest currency unit) This is essentially used for a) display and b) roundings

quote_flag True if Prices for the commodity should be retrieved for the given stock. This is used by the “quote download” functionality.

quote_source The source for online download of quotes

Invariant

- a currency commodity has namespace=='CURRENCY'
- only currencies referenced by accounts or commodities are stored in the table 'commodities' (the complete list of currencies is available within the GnuCash application)
- a stock commodity has namespace!='CURRENCY'

Account

An account tracks some commodity for some business purpose. Changes in the commodity amounts are modelled through Splits (see Transaction & Splits).

Fields

type (mandatory) the type of the account as string

commodity (mandatory) The commodity that is handled by the account

parent (almost mandatory) the parent account to which the account is attached. All accounts but the root_account should have a parent account.

commodity_scu (mandatory) The smallest currency/commodity unit is similar to the fraction of a commodity. It is the smallest amount of the commodity that is tracked in the account. If it is different than the fraction of the commodity to which the account is linked, the field non_std_scu is set to 1 (otherwise the latter is set to 0).

name self-explanatory

description self-explanatory

placeholder if True/1, the account cannot be involved in transactions through splits (ie it can only be the parent of other accounts). if False/0, the account can have Splits referring to it (as well as be the parent of other accounts). This field, if True, is also stored as a Slot under the key “placeholder” as a string “true”.

hidden if True/1, the account will not be displayed in the GnuCash GUI Accounts tab and can be easily excluded from GnuCash GUI Reports. if False/0, the account will be displayed in the GnuCash GUI Accounts tab.

Invariant

- if placeholder, no new splits can be created/changed (like a “freeze”)
- only two accounts can have type ROOT (the root_account and the root_template of the book).
- the type of an account is constrained by the type of the parent account
- trading account are used when the option “use trading accounts” is enabled

Transaction & Splits

The transaction represents movement of money between accounts expressed in a given currency (the currency of the transaction). The transaction is modelled through a set of Splits (2 or more). Each Split is linked to an Account and gives the increase/decrease in units of the account commodity (quantity) related to the transaction as well as the equivalent amount in currency (value). For a given transaction, the sum of the split expressed in the currency (value) should be balanced.

Fields for Transaction

currency (mandatory) The currency of the transaction

num (optional) A transaction number (only used for information)

post_date (mandatory) self-explanatory. This field is also stored as a slot under the date-posted key (as a date instead of a time)

enter_date (mandatory) self-explanatory

description (mandatory) self-explanatory

Fields for Split

tx (mandatory) the transaction of the split

account (mandatory) the account to which the split refers to

value (mandatory) the value of the split expressed in the currency of the transaction

quantity (mandatory) the change in quantity of the account expressed in the commodity of the account

reconcile information (Descriptions from official help manual.)

- n - Default status when a transaction is created
- c - Cleared. Status may be assigned either manually or by an import process.
- y - Status assigned solely by the reconciliation process. Places limits optionally requiring confirmation on editing fields in that line of a transaction.
- f - Frozen. Not implemented at this time
- v - Voided. Status is assigned or released manually and applies to every line in the transaction. It hides most of the transaction details but does not delete them. When a transaction is voided a reason entry is required that appears to the right of the description. (Note: There appears to be no way to actually view the reason in the GnuCash GUI at the moment.)

lot reference to the lot (to be investigated)

Invariant

- the sum of the value on all splits in a transaction should = 0 (transaction is balanced). If it is not the case, the GnuCash application create automatically an extra Split entry towards the Account Imbalance-XXX (with XXX the currency of the transaction)
- the value and quantity fields are expressed as numerator / denominator. The denominator of the value should be the same as the fraction of the currency. The denominator of the quantity should be the same as the commodity_scu of the account.
- the currency of a transaction is the currency of the account into which it is created in the GUI
- if “use trading accounts” is enabled then the sum of quantities per commodity should also be balanced. This is done thanks to the automatic creation of splits with trading accounts (of type TRADING)
- the reconcile field in all splits in a transaction that is voided are set to v
- a voided transaction has 4 associated slots with obj_guid equal to the transaction’s guid and slot_type 4:
 - name: notes, string_val: Voided transaction
 - name: trans-read-only, string_val: Transaction Voided
 - name: void-reason, string_val: <user-supplied reason string>
 - name: void-time, string_val: date as string in format YYYY-MM-DD HH:mm:ss.nnnnnn pZZZZ where n represents milliseconds, p is an optionally present minus sign, and ZZZZ is GMT offset in HHmm format.
- a voided split has 2 nearly identical associated slots with obj_guid equal to the split’s guid and slot_type 3:
 - name: void-former-amount, numeric_val_num/numeric_val_denom: the value of the voided split
 - name: void-former-value, numeric_val_num/numeric_val_denom: the value of the voided split

Price

The Price represent the value of a commodity in a given currency at some time.

It is used for exchange rates and stock valuation.

Fields

commodity (mandatory) the commodity related to the Price

currency (mandatory) The currency of the Price

date (mandatory) self-explanatory (expressed in UTC)

value (mandatory) the value in currency of the commodity

Invariant

- the value is expressed as numerator / denominator. The denominator of the value should be the same as the fraction of the currency.

A list of resources used for the project:

8.3 Resources

This page lists resources related to GnuCash, and more specifically, to the use of Python for GnuCash.

8.3.1 GnuCash links

- The official GnuCash page : <http://www.gnucash.org/>
- The official python bindings : http://wiki.gnucash.org/wiki/Python_Bindings (wiki) and http://svn.gnucash.org/docs/head/python_bindings_page.html (svn)

8.3.2 Web resources

- List (XML) of currencies with their ISO code : http://www.currency-iso.org/dam/downloads/table_a1.xml
- Quandl (for exchange rates) : <http://www.quandl.com>
- Yahoo! query language : <https://developer.yahoo.com/yql/console/>

8.3.3 Blogs & discussions

- blog with GnuCash/python links (not 100% correct): <http://wideopenstudy.blogspot.be/search/label/GnuCash>
- on timezone in GnuCash: <http://do-the-right-things.blogspot.be/2013/11/caveats-in-using-gnucash-time-zone.html>
- Google search on python in user mailing list: `python site:http://lists.gnucash.org/pipermail/gnucash-user"`
`python`
- Google search on python in devel mailing list: `python site:http://lists.gnucash.org/pipermail/gnucash-devel"`
`python`

8.3.4 Github projects related to GnuCash

Projects per language

This page lists all projects found by searching ‘gnucash’ on github (generated on 2020-10-24 20:47:08) excluding mirrors of the gnucash repository. Projects with a ‘*’ are projects that have not been updated since 12 months.

Language	# of projects	# of projects updated in last 12 months
<i>Python</i>	171	50
<i>Unknown</i>	61	16
<i>Java</i>	42	13

continues on next page

Table 1 – continued from previous page

Language	# of projects	# of projects updated in last 12 months
<i>JavaScript</i>	25	9
<i>Shell</i>	26	6
<i>Dockerfile</i>	11	5
<i>Go</i>	10	4
<i>TypeScript</i>	6	4
<i>C#</i>	11	3
<i>Perl</i>	25	3
<i>Ruby</i>	17	3
<i>Dart</i>	3	2
<i>Jupyter Notebook</i>	5	2
<i>PHP</i>	16	2
<i>Scheme</i>	15	2
<i>Awk</i>	2	1
<i>C++</i>	6	1
<i>CSS</i>	1	1
<i>HTML</i>	4	1
<i>Inno Setup</i>	1	1
<i>PLSQL</i>	1	1
<i>R</i>	2	1
<i>Rust</i>	1	1
<i>Scala</i>	3	1
<i>TSQL</i>	2	1
<i>XSLT</i>	4	1
<i>C</i>	8	0
<i>Diff</i>	1	0
<i>F#</i>	1	0
<i>Gettext Catalog</i>	1	0
<i>Groovy</i>	1	0
<i>Haskell</i>	2	0
<i>Perl6</i>	1	0
<i>Roff</i>	1	0
<i>SQLPL</i>	1	0
<i>Swift</i>	1	0
<i>Tcl</i>	1	0
<i>Visual Basic</i>	1	0

Python

* **accounting-reports** by ebridges (last commit on 2019-04-04) Accounting reports for GnuCash.

* **AceMoney-to-GnuCash** by lowvoltage (last commit on 2015-01-11) A quick and dirty script to convert an Ace-Money .XML into a GnuCash .XML

alchemy by zmoog (last commit on 2020-06-05) A very simple GnuCash-inspired web application

* **asset-allocation** by MisterY (last commit on 2019-06-03) Asset Allocation implementation in Python

* **bank_to_qif** by engdan77 (last commit on 2019-01-27) Program for processing XML/XLS bank account exports into QIF-format supported by e.g. GnuCash developed in Python

* **BankCSVtoQif** by niknow (last commit on 2019-08-05) Converts csv files from a bank to qif and replaces descriptions and target accounts according to predefined customizable rules along the way. Intended to work as a

tool for gnuCash.

- * **beancount2gnucash** by wolfm89 (last commit on 2018-12-23) Convert Beancount ledger files to GnuCash compatible files
- * **cookthebooks** by colemannugent (last commit on 2017-11-13) A python3 based, gnuCash to ledger converter
- * **CSV-pre-processor-for-GnuCash** by hughgliderpilot (last commit on 2019-08-16) Takes transaction CSV download from bank and adds Transfer Account column based on Description
- csv2cash** by jrwrigh (last commit on 2020-07-13) Python package for importing CSV files to GNUCash
- * **csv2mt940** by selva-di (last commit on 2019-09-20) convert Sparda-West-csv to mt940 for gnuCash import
- * **django-openbudget** by evandavey (last commit on 2012-09-18) Simple django-based personal budgeting app that sources data from GNUCash sqlite data files
- dkb2qif** by mzur (last commit on 2020-04-05) Convert a DKB CSV export to QIF
- DKB_to_GnuCash** by ch3fk0mm7 (last commit on 2019-12-22) Die CSV die man aus dem DKB Online Banking exportiert kann enthält in mehreren Spalten Informationen, die in GnuCash in die Spalte “Beschreibung” sollen, damit die Kategorie der Buchung automatisch erkannt werden kann.
- dkcash** by quazgar (last commit on 2020-01-24) Direktkreditverwaltung mit gnuCash-Backend
- * **DnbNor2qif** by djiti (last commit on 2011-09-19) Turning DnbNor CSV files into GNUCash-compatible QIF files
- * **dollar** by marcotmarcot (last commit on 2018-04-21) Check if the dollar exchange rate is the same on my GnuCash transactions and UOL
- * **dropcopy** by juniorbl (last commit on 2019-02-21) A simple tool for GNOME to copy a given GnuCash file to a local dropbox directory whenever it is saved.
- exporterVolksbank_GNUCash** by vspaceone (last commit on 2020-01-10) (No description available)
- * **finance_convert** by RincewindWizzard (last commit on 2017-12-01) Convert from Paypal and Volksbank to gnuCash using csv
- * **financial_forecast** by skullspace (last commit on 2016-09-06) A script to take in our GnuCash books and output a CSV with some historical and forecasted data
- flux** by marcotmarcot (last commit on 2020-07-31) Create a monthly flux report from a gnuCash file
- * **gcmport** by nblock (last commit on 2014-01-12) Convert various input files (csv, txt) to csv files that can be easily parsed with GnuCash.
- * **gcinvoice** by ngiger (last commit on 2019-06-04) GnuCash to Lates (see <http://www.smoerz.org/gcinvoice/>) + my personal templates
- * **generate_prices** by barrettTom (last commit on 2019-05-20) gnuCash price database generator script
- gnc-fq-helper** by yegord (last commit on 2019-10-27) A drop-in replacement for GnuCash’s Finance::Quote helper
- * **gnc2QuickBooks** by jfishe (last commit on 2018-09-28) Python 2 convert GnuCash to QuickBooks tab delimited import format
- * **gnc_budget_scroll** by mateuszz88 (last commit on 2016-09-18) This is a converter for gnuCash budget report. It will create html with the same content, but table will be scrollable in such way, that headers (date, account name) are visible
- * **gnc_privat24** by gentoo90 (last commit on 2018-11-05) Imports Privat24 statements to GnuCash book
- gnc_tools** by armanschwarz (last commit on 2020-08-29) Python tools for validating GnuCash files

gncxml by LiosK (last commit on 2020-06-20) gncxml - extract entries from GnuCash data file to pandas.DataFrame

* **gncash-account2template** by EvansMike (last commit on 2015-09-03) Make a GnuCash account template from an exported account

* **gncash-bridge** by dbelletini (last commit on 2017-02-18) Expose GnuCash as a microservice

* **gncash-budgerow-** by dlex (last commit on 2016-02-05) Predictive budgeter for GnuCash

* **gncash-budget** by chrisbrasington (last commit on 2018-05-11) Minimalist budget reporting.

* **gncash-categorizer** by seddonym (last commit on 2017-05-22) (No description available)

* **gncash-cfdi** by sebastianavina (last commit on 2014-02-16) Proyecto que timbra facturas de gncash por medio de facturacion moderna.

* **gncash-cli** by loftx (last commit on 2019-06-30) (No description available)

* **GnuCash-CSV2CSV-for-PowerBi** by aidancrane (last commit on 2019-01-01) I use this to convert my GnuCash csv exports for analysis in MS Power BI

* **gncash-csv2html** by m13253 (last commit on 2019-08-08) Convert CSV files exported by GnuCash to HTML format

gncash-docs-rst by codesmythe (last commit on 2020-05-03) GnuCash documentation in RestructuredText as Sphinx project

* **gncash-expense-report** by QuLogic (last commit on 2015-01-29) (No description available)

GnuCash-Expenses-Vis by maciek3000 (last commit on 2020-04-29) Visualizations of Expenses created in GnuCash Accounting Software

gncash-fiximports by sandeepmukherjee (last commit on 2020-03-14) Change target accounts of imported gnu-cash transactions

gncash-fiximports by jamessherring (last commit on 2020-08-01) (No description available)

* **gncash-fiximports** by HappyPeng2x (last commit on 2017-09-24) Additional developments on the original gncash-fiximports

* **gncash-gource-viz** by C7C8 (last commit on 2019-03-11) Script to convert GnuCash transaction histories into logs that can be visualized by Gource (because why not?)

* **gncash-import** by manzato (last commit on 2014-07-15) Imports transactions from a CSV file and places them to the appropriate account depending on a set of rules

gncash-import-stock by senooken (last commit on 2020-10-24) (No description available)

gncash-importer by shaform (last commit on 2020-08-29) Utilities to import transactions into GnuCash

* **gncash-importer** by gunny26 (last commit on 2017-12-30) import some csv data, categorize bookings automatically with help of some neuronal network categorizer

gncash-importer by drjeep (last commit on 2020-08-13) (No description available)

* **gncash-importers** by rtucker (last commit on 2018-03-02) gncash importer scripts for Interlock Rochester financial foo

gncash-imports by dpslwk (last commit on 2020-06-19) Import scripts for Nottingham Hackspace GnuCash

gncash-input by elChapoSing (last commit on 2020-10-06) personal process for DBS input into gncash compatible file format

* **gncash-inteligo** by lukasszz (last commit on 2018-04-15) Importowanie wyciągów z Inteligo do GnuCash,

- * **gnucash-latex** by mwellnitz (last commit on 2017-04-28) Create good looking invoices for gnuCash using latex and python
- * **gnucash-latex-koma** by jappeace (last commit on 2017-04-24) Create good looking invoices for gnuCash using latex/koma and python
- * **gnucash-mail-sync** by omelkova (last commit on 2018-05-06) (No description available)
- * **gnucash-ofx-brokerage** by 7max (last commit on 2012-02-18) GnuCash OFX importer that handles brokerages, ie stocks, mutual funds, options
- * **gnucash-ofx-export** by hoffie (last commit on 2014-07-14) Selectively export GnuCash transactions into OFX
- * **gnucash-portfolio** by MisterY (last commit on 2019-04-13) Tools for managing an investment portfolio in a GnuCash book
- * **gnucash-portfolio-cli** by MisterY (last commit on 2019-02-04) GnuCash Portfolio CLI
- gnucash-portfolio-webui** by MisterY (last commit on 2020-09-04) GnuCash Portfolio Web UI
- gnucash-prices** by nomis (last commit on 2020-03-08) GnuCash price database management
- * **gnucash-pyquotehist** by tfree87 (last commit on 2015-06-17) A simple python script which imports historical price quotes from yahoo into GnuCash via the command line without the need for Perl Finance::QuoteHist. Based on Peter Holtermann's quotes_hist script
- * **GnuCash-Python-Example** by petarkabashki (last commit on 2015-02-19) Example python script for importing data into GnuCash
- * **gnucash-python-free** by tbhartman (last commit on 2014-08-24) (No description available)
- * **GnuCash-Python-Scripts** by relyt29 (last commit on 2017-05-31) various python scripts to add to gnuCash functionality
- * **gnucash-qif-import** by hjacobs (last commit on 2018-12-29) GnuCash Python helper script to import transactions from QIF text files into GnuCash's own file format
- gnucash-reconciler** by rmehyde (last commit on 2020-08-02) Tool for comparing GnuCash records to bank records automatically
- * **gnucash-reports** by MeerkatLabs (last commit on 2019-10-03) Simple reporting framework for fetching data out of gnuCash files for display in a viewer.
- gnucash-rest** by loftx (last commit on 2020-10-06) A Python based REST framework for the GnuCash accounting application
- * **gnucash-rest-docker** by loftx (last commit on 2018-09-25) A dockerfile and associated files to quickly test the GnuCash Rest API
- * **gnucash-savings** by chrisbrasington (last commit on 2018-08-24) gnuCash-savings projection
- * **GnuCash-scripts** by sparth80 (last commit on 2019-07-28) Simple Python scripts to convert Bank statements to QIF format
- gnucash-scripts** by thomasrebele (last commit on 2019-10-27) (No description available)
- gnucash-select** by bulletmark (last commit on 2020-08-15) GnuCash File Selector
- * **gnucash-society** by hendrikvanantwerpen (last commit on 2013-04-13) Support application for societies based on GnuCash
- * **gnucash-stock-portfolio** by hjacobs (last commit on 2014-01-15) GnuCash Python utilities to manage a stock portfolio
- gnucash-stock-quotes** by DrSkippy (last commit on 2020-08-24) (No description available)

- * **gnucash-to-beancount** by henriquebastos (last commit on 2018-07-22) Gnucash to Beancount Converter.
- * **gnucash-tools** by cnuahs (last commit on 2016-07-26) Command line tools for use with Gnucash (<http://gnucash.org/>).
- * **gnucash-tools** by yanivmo (last commit on 2016-03-16) GnuCash interoperability scripts
- * **gnucash-tools** by dahnielson (last commit on 2012-05-14) Tools for working with GnuCash
- gnucash-tools** by iqt4 (last commit on 2020-02-16) (No description available)
- * **gnucash-toolset** by cirrax (last commit on 2019-04-24) Access and manipulate gnucash data.
- * **gnucash-util** by bstpierre (last commit on 2011-01-21) Utility scripts using GnuCash python bindings
- * **gnucash-utilities** by sdementen (last commit on 2017-11-23) Set of python scripts to work with GnuCash books
- * **gnucash-utils** by AndreasHeger (last commit on 2015-04-08) utility scripts for gnucash
- gnucash-vis** by chrln (last commit on 2020-05-16) A script to visualize state of accounts from a Gnucash file exported by the client for Android
- * **gnucash-xml-split** by fefe982 (last commit on 2014-08-30) Split GnuCash XML files into files containing transaction in a certain period (e.g. a year)
- gnucash2beancount** by shaform (last commit on 2020-09-02) (No description available)
- * **gnucash2googlesheets** by erikvanegmond (last commit on 2018-08-06) (No description available)
- * **gnucash2iif** by pawl (last commit on 2013-08-18) Converts a Gnucash general ledger to an IIF file (for quickbooks)
- * **gnucash_autobudget** by rmoehtn (last commit on 2017-03-06) Automatically adjust GnuCash transactions for envelope budgeting (discontinued)
- * **gnucash_balance_report** by tbhartman (last commit on 2014-08-24) get balance report from gnucash file
- * **gnucash_budget** by dschwen (last commit on 2017-01-22) Tools to work with a GnuCash database
- * **gnucash_converter** by boszkie (last commit on 2019-05-05) python script to convert rabobank (nl) csv format to gnuCash csv import format
- * **gnucash_django** by RobFisher (last commit on 2013-05-06) GnuCash Web Interface using Django.
- gnucash_envelope_assist** by MarkOfLark (last commit on 2020-01-02) Scripts that assist in using GnuCash for personal finances under the envelope system
- * **gnucash_explorer** by peap (last commit on 2019-02-13) Another option for exploring your gnucash database
- * **gnucash_exports** by jjuanda (last commit on 2014-01-13) GnuCash export scripts into several DBs/file formats
- gnucash_general_journal** by dorfsmay (last commit on 2020-01-20) GnuCash csv General Journal
- * **gnucash_import_from_bank** by silvester747 (last commit on 2019-08-03) Convert bank statements in a format GNUCash can import.
- gnucash_import_util** by shinnkondo (last commit on 2020-05-16) (No description available)
- * **gnucash_invoice_automator** by peanutbutterandcrackers (last commit on 2019-05-05) I haz the power of Libreoffice Calc and python-gnucash on my side
- * **gnucash_lbb_amazon** by elezar (last commit on 2015-12-28) Amazon Credit Card CSV pre-processor for GNU-Cash
- * **gnucash_magical_importer** by foguinhoeruca (last commit on 2019-01-23) Set of scripts to manage my personal finance with gnucash
- * **gnucash_ofx** by gevious (last commit on 2013-01-10) Convert gnucash xml file to set of OFX files

- * **gnucash_quotes** by belidzs (last commit on 2019-03-01) Download stock and currency quotes from Alpha Vantage and save it to GnuCash
- * **gnucash_tweaks** by jokim (last commit on 2019-07-29) Simple ad hoc tweaks, because I don't have time to learn to code inside GnuCash
- * **gnucashApi** by f-angi (last commit on 2017-12-04) (No description available)
- * **GnuCashImporter** by sphaero (last commit on 2019-02-25) Simple console tool to import mt940 file and match transactions to GnuCash accounts
- gnucashpricesupdater** by danfcosta (last commit on 2020-03-31) Update prices of Brazilian commodities on GnuCash database (SQLite)
- * **gnucashreconcile** by seddonym (last commit on 2017-04-12) (No description available)
- gnucashreport** by partizand (last commit on 2019-11-08) Python library for get reports from GnuCash to xlsx files
- * **GnucashReporting** by sholly (last commit on 2017-06-27) Python/Flask backend for gnucash reports
- * **gnucashreports** by youngchul (last commit on 2011-12-06) (No description available)
- gnucashREST** by f-angi (last commit on 2020-05-13) A REST(ful) API for basic GnuCash operations
- * **GNUCashTools** by s8002sid (last commit on 2019-08-13) This repository will be used for storing GNUCash tools
- * **gnuCashTools** by Walms (last commit on 2017-07-17) Just a few scripts to help manage my budget
- * **GnuCashUtils** by wlcasper (last commit on 2018-12-31) GnuCash scripts
- * **gnucashxml** by jorgenschaefer (last commit on 2017-02-06) New Maintainer, please use their repository
- * **hackerspace-gnucash** by cvonkleist (last commit on 2012-08-24) Gainesville Hackerspace GnuCash scripts, etc.
- * **importfindata** by gregorias (last commit on 2017-07-01) Script that updates Polish investment fund quotes in a GnuCash file.
- * **ing2gnucash** by hjmeijer (last commit on 2013-07-17) Converts downloaded ING (bank) transaction CSV files to GNUCash importable CSV
- * **ing2qif** by marijnvriens (last commit on 2014-10-18) Import ING bank statements and convert them to qif for importing into gnucash
- ing2qif2** by tychobismeijer (last commit on 2020-09-29) Convert ING csv to QIF format for GnuCash
- * **jeffs-gnucash-utils** by n1ywb (last commit on 2018-12-01) Jeff Laughlin's Python utilities for GnuCash. Includes HTML invoice generator.
- * **koert** by awesterb (last commit on 2017-07-08) Toolbox for the inspection of GnuCash (used by the financial control committee of Karpe Noktem).
- ledger-explorer** by saufrecht (last commit on 2020-10-23) Navigate any¹ hierarchical ledger graphically, all the way down to individual transactions. (¹ as long as it's formatted exactly like a GnuCash CSV export)
- * **ledger2gnucash** by dotmjs (last commit on 2016-01-19) Simple python script to convert ledger-cli files to GnuCash
- * **mint2gnucash** by SAL-e (last commit on 2019-10-06) Use mint.com together with GnuCash.
- * **Mint2GNUCash** by alexevans91 (last commit on 2017-03-04) Converts transaction CSV file from Mint.com to a format that can be imported into GNU Cash.
- * **mintcash** by hiromu2000 (last commit on 2019-07-05) Transfer transactions from Mint.com to GnuCash
- * **moneyguru-to-gnucash** by peppelan (last commit on 2019-04-21) Data migration from Moneyguru to GnuCash made easy

mwrr by jmtilli (last commit on 2020-08-18) Money-weighted rate of return calculator for GnuCash

* **NokiaCash** by sunziping2016 (last commit on 2016-06-01) A GnuCash-like software on S60v3 developed by python

ofxstatement by kedder (last commit on 2020-10-22) Tool to convert proprietary bank statement to OFX format, suitable for importing to GnuCash or other personal finance applications.

ofxstatement-al_bank by lbschenkel (last commit on 2020-05-23) Arbejdernes Landsbank plugin for ofxstatement

* **ofxstatement-lansforsakringar** by lbschenkel (last commit on 2019-03-05) Länsförsäkringar plugin for ofxstatement

* **ofxstatement-sparkasse-freiburg** by omarkohl (last commit on 2018-04-04) ofxstatement plugin for the German bank Sparkasse Freiburg-Nördlicher Breisgau

* **pdf2gc** by iqt4 (last commit on 2018-01-06) Read bank statement and import into GnuCash

piecash by sdementen (last commit on 2020-10-24) Pythonic interface to GnuCash SQL documents

* **pricedb-pull** by chrisberkhout (last commit on 2018-05-27) Pull historical prices for use in GnuCash and Ledger CLI

* **PyBank** by doughtor42 (last commit on 2018-01-20) Personal accounting software. Alternative to the likes of Quicken, iBank, Mint.com, and GnuCash

pygnc by ErwinRieger (last commit on 2020-03-22) My GnuCash extensions for German small businesses using gnuCash and aqbanking python-api's (ibr-gnc-module reloaded).

* **pygnclib** by tdf (last commit on 2014-05-26) Pyxb-based read and write support for GnuCash XML files

* **pygncash** by MatzeB (last commit on 2018-05-12) Python code to read gnuCash 2.6 sqlite3 files; features gnuCash 2 ledger translator.

pyGnuCash by sebgad (last commit on 2020-10-10) Python Access for GnuCash

pyTry by EpistemikPython (last commit on 2020-09-18) parse Monarch report files and create transactions to write to a GnuCash file

* **qb2gnc** by jfishe (last commit on 2018-09-28) Python 2 convert QuickBooks to GnuCash

* **qif-split** by ebridges (last commit on 2018-01-17) Splits transactions in a QIF file to support budgeting and more granular financial tracking.

qifqif by Kraymer (last commit on 2020-07-15) Enrich your .QIF files with categories.

rabo2ofx by gbonnema (last commit on 2019-12-10) A python script to convert Dutch Rabobank CSV files to OFX files for processing in GnuCash.

* **rabobank-gnucash-converter** by boterbloem5 (last commit on 2017-12-09) (No description available)

* **scripts** by cpg314 (last commit on 2019-03-24) Collection of Python scripts

simple_gnucash_budget_plots by csun (last commit on 2020-05-21) Simple budget plots for GnuCash - discussed in <https://www.csun.io/2020/05/17/gnucash-finance.html>

* **skr-json** by baltpeter (last commit on 2018-07-17) GnuCash account templates (Standard-Kontenrahmen) JSON

small_scripts by sercxanto (last commit on 2020-10-18) Simple scripts too small for own repo

square_transaction_parser by rwslipey (last commit on 2019-11-30) A simple script to help prepare square transaction csv data for import to accounting software like GNUCash

* **text-messaging-to-gnucash** by chrisbrasington (last commit on 2016-01-20) Create transactions via command-line text-messaging to gnuCash sqlite database.

- * **Timetracker-to-Gnucash-Invoice** by EvansMike (last commit on 2012-03-15) Takes Anuko Timetracker data and creates an Invoice in GnuCash
- * **twsgnucash** by twswm (last commit on 2012-08-05) (No description available)
- UpdateBudgetQtrly** by EpistemikPython (last commit on 2020-09-20) gnucash and google functions to update my BudgetQtrly document
- * **visa-parser** by pgruidi (last commit on 2014-01-08) A parser for the Visa pdf bill from www.visa.com.ar, useful for CSV import in GnuCash.
- * **volksbank-csv-to-gnucash-csv-converter** by Kaedo (last commit on 2017-11-05) (No description available)
- * **webgnucash** by donautech (last commit on 2019-09-26) Server for web version of GnuCash
- * **WestpacGNUCashManager** by jakeb1996 (last commit on 2017-08-20) Export your Westpac transactions in QIF format and prepare them for GnuCash
- * **zoysia** by honthion (last commit on 2018-12-22) gnucash python flask

Awk

- * **credit-card-statement-reconciler** by icyflame (last commit on 2019-07-27) Scripts to reconcile your credit card statement with your manually maintained accounts from GnuCash
- ibank2qif** by tomszilagi (last commit on 2020-02-06) Bank account transactions into GnuCash

C

- * **gnc-balcheck** by prebbz (last commit on 2018-02-25) Quickly get the balance of a GnuCash which uses a MySQL backend
- * **gnucash-2** by kleopatra999 (last commit on 2011-06-24) Yet another clone of the gnucash source code
- * **gnucash-aqplus** by jhs-s (last commit on 2012-06-24) Usually contains some fixes for aqbanking for GnuCash
- * **Gnucash-gnucash** by jimmymccord (last commit on 2018-05-19) (No description available)
- * **gnucash-jz-snap** by jacobzimmermann (last commit on 2018-08-26) (No description available)
- * **gnucash-svn** by kleopatra999 (last commit on 2010-04-08) another clone of gnucash, but this time not using github's clone, and therefore keeping the svn metadata
- * **gnucash_python** by davidjo (last commit on 2018-07-20) gnucash report writing in python
- * **tk_gnucash3.3-python** by tkerns1965 (last commit on 2018-11-30) (No description available)

C#

- * **bank2qif** by piontec (last commit on 2019-08-19) A companion project for <https://www.gnucash.org/>. Helps import bank statements to GnuCash.
- BudgetApp** by Lakendary (last commit on 2020-02-11) Budget web application for GnuCash
- * **CS320GnuCashTesting** by BrookJacob (last commit on 2018-12-13) Repository for the testing of GnuCash for CS320
 - * **FinanceWeb** by elohmeier (last commit on 2016-07-09) C#/.NET OData Adapter for reading GnuCash Databases with MSFT Excel

* **gnucash2ledger-cli** by marek-g (last commit on 2014-08-05) Gnucash (general ledger html report) to ledger-cli converter.

GnuCash2Qif by Jason-Carter (last commit on 2020-02-02) Convert GnuCash Sqlite database to QIF format

* **GnuCashCSLib** by kiranvr (last commit on 2018-02-20) A C# library to read values from GNUCash xml files.

* **GnuCashDotNetAPI** by SolidDynamics (last commit on 2019-08-11) A .NET API for GnuCash using the C API https://wiki.gnucash.org/wiki/Using_the_API

* **GnuCashParser** by nikitazu (last commit on 2015-02-19) .Net parser for GnuCash files format

GnucashPIDataImportGenerator by AdrianS-PL (last commit on 2020-10-20) (No description available)

* **GnuCashSharp** by rstarkov (last commit on 2017-07-17) A library for reading data from GnuCash XML files.

C++

* **gnucash-butchered** by iulianu (last commit on 2015-03-28) My own butchered version of Gnucash

* **gnuCash-price-upload** by gavin-blakeman (last commit on 2018-06-24) Upload .csv files to gnuCash prices

* **gnuCash-pud** by gavin-blakeman (last commit on 2018-08-18) Commodity Price Upload Daemon for gnuCash

* **gnutreemfc** by edkirkman (last commit on 2017-11-23) gnucash using MFC GUI and MySQL backend

investmentManager by gavin-blakeman (last commit on 2020-05-29) Web Based Application to complement gnuCash and provide management and user interface to manage mutual funds

* **UnderBudget** by vimofthevine (last commit on 2019-08-05) Advanced personal budget analysis application that integrates with GnuCash, Quicken, mint.com, etc.

CSS

gnucash_gtk3 by davidschmitt (last commit on 2020-08-22) GTK3 CSS for customizing GnuCash appearance

Dart

dartcash by sandeep84 (last commit on 2020-08-18) Dartlang implementation of GNUCash sqlite format file support.

* **gnucash-flutter** by pefdow (last commit on 2018-09-05) Flutter implementation of gnucash-android

moneybags by sandeep84 (last commit on 2020-08-10) A GNUCash viewer application.

Diff

* **GnuCash-Windows-Fixes** by theochino (last commit on 2015-03-19) Pieces needed to Compile Gnu Cash on a Windows machine ... <http://wiki.gnucash.org/wiki/User:Bilkusg>

Dockerfile

docker-gnucash by mhitchens (last commit on 2020-06-13) GnuCash running via X11 over SSH

* **docker-gnucash** by HodeiG (last commit on 2019-07-11) docker-gnucash

* **docker-gnucash** by Caveja (last commit on 2019-01-03) Docker container with GnuCash built from source

* **docker-gnucash-novnc** by bertlorenz (last commit on 2018-07-25) (No description available)

* **gnucash-dev-docker** by diablodale (last commit on 2019-07-23) Docker containers for automated OS setup and dev/build environ for gnucash v3+ binaries and docs

gnucash-docker by aitor3ml (last commit on 2020-09-28) dockerized gnucash

gnucash-docker by mtbkapp (last commit on 2020-01-06) Run gnucash in docker with tigervnc and novnc for access from browser.

gnucash-docker by mtbkapp (last commit on 2020-01-06) Run gnucash in docker with tigervnc and novnc for access from browser.

GNUCash-Docker-Build by crossan007 (last commit on 2020-02-09) Docker based build environment for GNU-Cash

gnucash-docker-for-python by devbar (last commit on 2019-11-21) Container to provide working gnucash backend and python bindings

* **ppa-gnucash-xbt** by msvalina (last commit on 2019-09-13) Unofficial build of GnuCash with Bitcoin support for Ubuntu Bionic

F#

* **gnucash-tools** by cantsin (last commit on 2015-11-01) (No description available)

Gettext Catalog

* **gnucash-el** by pgaval (last commit on 2015-03-14) Automatically exported from code.google.com/p/gnucash-el

Go

bankcsv by lpenz (last commit on 2019-11-25) Tool that I use to convert the CSV from banks to gnucash3-compatible transaction CSV

coin by mkobetic (last commit on 2020-09-10) heavily simplified version of ledger-cli.org with a twist (very much a work in progress)

* **gnc-api-d** by vinymeuh (last commit on 2019-07-18) A read only REST server for GnuCash file

* **gnucash-csv-exporter** by andreph (last commit on 2018-03-17) Exports gnucash files to csv

gnucash-graphql by vinymeuh (last commit on 2020-03-05) A GraphQL server for GnuCash files

* **gnucash-parser** by xavier268 (last commit on 2019-09-14) Parse Gnucash files in Go

* **gnucash-viewer** by mmbros (last commit on 2017-01-12) A gnucash file viewer

* **gnucash-viewer-old** by mmbros (last commit on 2016-12-18) (No description available)

* **gocash** by remyoudompheng (last commit on 2013-09-21) gocash is a personal accounting interface similar to gnucash

p24fetch by tuxofil (last commit on 2020-09-26) Fetch transaction log from Privat24 for GnuCash

Groovy

* **Zio-Antunello** by masokotanga (last commit on 2011-09-28) un gnuCash online (?)

HTML

* **GnuCash-gnuCash-htdocs** by jimmymccord (last commit on 2018-05-19) (No description available)

gnuCash-htdocs by GnuCash (last commit on 2020-10-22) GnuCash website.

* **gnuCash-jp** by omoshetech (last commit on 2016-10-07) (No description available)

* **gnuCashkr.github.io** by GnuCashKr (last commit on 2017-05-10) gnuCashkr.github.io

Haskell

* **hGnuCash** by pharaun (last commit on 2017-12-31) Haskell xml library for parsing the gnuCash file format

* **hs-gnuCash** by knupfer (last commit on 2015-07-09) Haskell library to work with gnuCash

Inno Setup

gnuCash-on-windows by GnuCash (last commit on 2020-10-18) Support scripts to build gnuCash for Windows using mingw32.

Java

* **accounting** by milanogc (last commit on 2016-12-05) This project is an attempt to create a GnuCash like system, i.e. it adopts the double entry bookkeeping accounting system, for the management of personal finances.

* **android_search-recycler-cardview-learning-gnuCash** by cc-shifo (last commit on 2017-10-20) (No description available)

* **androidCash** by mbarbon (last commit on 2011-08-09) Simple Android GnuCash companion

BackupGnuCashLinux by goodvibes2 (last commit on 2020-05-20) Backup GnuCash for Linux (using openjdk + openjfx)

BackupGnuCashMigor by goodvibes2 (last commit on 2020-03-11) Backup GnuCash + Migor (my personal MS Access database)

BackupGnuCashWin by goodvibes2 (last commit on 2020-05-20) Backup GnuCash for Windows (using javafx)

* **barx** by pgiu (last commit on 2015-03-05) Exportador de la información del estado de cuenta de Banco Galicia a CSV/QIF para usar en MoneyManagerEx, GnuCash, etc.

* **barxm** by pgiu (last commit on 2015-03-06) Exportador de la información del estado de cuenta de Banco Galicia a CSV/QIF para usar en MoneyManagerEx, GnuCash, etc.

* **BudgetReportGnuCash** by martinlong1978 (last commit on 2011-04-08) Jasper Budget Report for GnuCash

* **convert-ingcsv-to-gnuCash** by jonaskoperdraat (last commit on 2016-06-12) Application to convert csv export from ING to a format GnuCash can import

- * **gcchart** by **jhogan** (last commit on 2015-06-14) An website for reading GnuCash datasources and creating charts written in Java.
- * **gnc4a** by **bwduncan** (last commit on 2011-01-16) GnuCash Companion for Android is an mobile application for devices running Google's Android operating system, which will enable the users of GnuCash to do small things like adding a transaction or creating an invoice or expense voucher on the go.
- * **gnc4a** by **glennji** (last commit on 2012-05-06) Gnucash for Android
- * **GncImport** by **fcuenca** (last commit on 2018-07-08) GnuCash transaction import tool
- * **GncXmlLib** by **fcuenca** (last commit on 2015-12-05) A small library to manipulate GnuCash data in XML format
- * **GnuCash-2.6.5-importer** by **jan438** (last commit on 2015-02-02) (No description available)
- gnucash-android** by **codinguser** (last commit on 2020-07-21) Gnucash for Android mobile companion application.
- gnucash-android** by **BattleCupcake** (last commit on 2020-09-25) (No description available)
- gnucash-android** by **yjkang0602** (last commit on 2020-03-31) (No description available)
- gnucash-android** by **yjkang0602** (last commit on 2020-03-31) (No description available)
- gnucash-android** by **nicxleo** (last commit on 2020-05-02) (No description available)
- * **gnucash-android-example** by **felipecmuniz** (last commit on 2018-05-28) (No description available)
- * **gnucash-merge** by **pnemonic78** (last commit on 2017-08-16) Merge two gnucash XML files.
- * **gnucash-utils** by **crankydillo** (last commit on 2019-08-31) (No description available)
- gnuCashAdaptors** by **yrado** (last commit on 2020-05-23) Scripts to make import to GnuCash simple
- * **GnuCashBudgetReport** by **bvitale** (last commit on 2012-01-21) A budget report for GnuCash data that is stored in MySQL.
- * **gnucashjgnash** by **leeboardtools** (last commit on 2018-01-23) Plugin for jGnash that converts a (simple) GnuCash database to jGnash
- * **gnucashMobile** by **nhrdl** (last commit on 2013-10-19) (No description available)
- * **gnuCashN** by **nyshthefantastic** (last commit on 2017-10-16) (No description available)
- * **gnucashtest** by **krismess** (last commit on 2019-09-26) Automated test for Gnucash Android app
- * **GnuCashToQIF** by **davidkgerman** (last commit on 2011-12-11) (No description available)
- * **GnuCashViewer** by **jrmcssoftware** (last commit on 2014-03-03) GnuCash Viewer
- IngAusOfxFixLinux** by **goodvibes2** (last commit on 2020-03-11) ING Australia OFX Fix for Linux - Fix OFX file before importing into GnuCash
- IngAusOfxFixWin** by **goodvibes2** (last commit on 2020-03-11) ING Australia OFX Fix for Windows - Fix OFX file before importing into GnuCash
- * **javacash** by **nhrdl** (last commit on 2013-08-09) Yet another implementation of gnucash in Java
- javacash** by **brentwalther** (last commit on 2020-10-13) An application for managing money. Inspired by GnuCash.
- * **jgc** by **kevemuellerr** (last commit on 2018-06-11) Java library to read GnuCash files
- jGnuCash2Qif** by **Jason-Carter** (last commit on 2019-10-27) Convert GnuCash Sqlite database to QIF format - the Java version
- * **jgnucashlib** by **tdf** (last commit on 2012-07-10) jGnucashLib - a java access to GnuCash files
- Maakboekinggen** by **zwijze** (last commit on 2020-10-13) Maakboekinggen in gnucash
- * **nordea-to-gnucash** by **mohamedamer** (last commit on 2013-12-08) (No description available)

* **workspace_gnucash** by won21kr1 (last commit on 2014-04-16) (No description available)

JavaScript

* **bcqif** by hugozap (last commit on 2015-09-23) Script simple para generar archivos QIF a partir de archivos .txt exportados desde Bancolombia y poder cargar los registros a programas como GnuCash

cash-cow by Lkxz (last commit on 2020-06-30) A basic double-entry bookkeeping system, similar to GnuCash, written in Go and React.

cashdash by mbugert (last commit on 2020-03-22) Interactive visualization of GnuCash data based on plotly Dash.

* **cashviz** by nunofgl (last commit on 2017-12-28) Visualizations for GnuCash data.

* **finance_dashboard** by manicolosi (last commit on 2014-03-09) A dashing dashboard to show financial information from GnuCash

* **finquick** by dckc (last commit on 2018-10-04) web app access to gnucash financial data

gnucash-browser by phjardas (last commit on 2020-10-20) Web Interface for GnuCash Ledgers

* **gnucash-django** by nylen (last commit on 2015-11-20) Simple Web frontend for GnuCash, using Django

* **gnucash-ext** by matthewbednarski (last commit on 2015-05-30) (No description available)

gnucash-ppa by chenghlee (last commit on 2020-04-19) Sources for the chenghlee/gnucash PPA

* **gnucash-price-importer** by cortopy (last commit on 2018-05-05) Script for importing historic currency prices into gnucash

* **gnucash-reporter** by AaronLenoir (last commit on 2017-03-06) Visualizes some reports on GnuCash data.

* **gnucash-reporting-view** by MeerkatLabs (last commit on 2018-04-24) Angular JS Based viewer for gnucash-reports

gnucash-sql by wraithgar (last commit on 2020-07-04) Gnucash sqlite thingy

* **gnucash-viewer** by drjeep (last commit on 2013-07-19) Web viewer for Gnucash using Python/Flask

* **gnucash-web** by mrkrstphr (last commit on 2013-06-17) (No description available)

* **GnucashReportingNVD3** by sholly (last commit on 2017-07-04) NVD3 frontend/playground for gnucash reporting..

monalyzer by Vlad-ku (last commit on 2020-03-13) QIF (GnuCash)

* **profitcash-restful** by TheProfitwareGroup (last commit on 2012-09-16) [DEPRECATED] ProfitCash-RESTful is a RESTful service providing accounts and transaction information based on imported from GnuCash into MongoDB data.

qif-converter by matthijsmelissen (last commit on 2020-09-07) Converts CSV files from ING (Netherlands) and BCEE (Luxembourg) into QIF files. Suitable for GnuCash.

* **remotegnucash** by justinhunt1223 (last commit on 2017-04-17) Remote GnuCash

* **salis** by f0x52 (last commit on 2018-04-05) GnuCash alternative

* **skilap** by sergeyksv (last commit on 2017-06-26) Personal online applications, GnuCash clone and others

vue-gnucash by biker2000on (last commit on 2020-09-08) (No description available)

webgnucash-client by donautech (last commit on 2020-09-10) Client part of Web version of GnuCash

Jupyter Notebook

gnucash-historical-price-data by MichaelSchmidt82 (last commit on 2020-04-10) Add historical stock price data to gnucash ledgers.

* **gnucash-playground** by nlzimmerman (last commit on 2016-08-15) Just playing around with OFX and gnucash files; I am presumably the only person who cares about this sort of things.

* **gnucash_analysis** by prattmic (last commit on 2018-12-22) Analyze GnuCash data with Pandas

GnuCash_tools by PingWin87 (last commit on 2020-09-23) My toolset for GnuCash

* **py-gnucash** by ihkihk (last commit on 2017-05-17) Python scripts for analysis of gnucash database

PHP

* **buchungen** by jungepiraten (last commit on 2016-05-26) Webinterface für gnucash-Datenbank mit Funktion zum Verifizieren von Buchungen

* **cash-manager** by jUnG3 (last commit on 2017-02-18) (No description available)

* **cashonline-php-server** by okoalov (last commit on 2014-10-31) Backend part for cashonline project (clone of gnucash)

* **gnucash-dashboard** by bkrijg (last commit on 2017-12-28) (No description available)

* **gnucash-eloquent** by b3it (last commit on 2016-05-31) Laravel Eloquent Models for the GnuCash MySQL Backend

* **gnucash-laravel** by xstat (last commit on 2015-12-21) (No description available)

* **gnucash-php** by cebe (last commit on 2014-08-04) A library for reading gnucash XML format in PHP

* **gnucash-reports** by xstat (last commit on 2017-07-30) (No description available)

* **gnucash-tools** by cccmzwi (last commit on 2013-12-16) Convert your onlinebanking-export (CSV) to a neatly pre-categorized QIF-File which can be imported in Quicken or GnuCash

* **gnucash.cakephp** by claudineimatos (last commit on 2014-06-25) (No description available)

* **gnucashreports** by pedroabel (last commit on 2013-02-08) Set of custom reports that I use for my personal finances. To see the reports working on a sample database, check the website <http://gnucashreports.comuf.com/> ATTENTION: many problems yet. Many bugs that did not happen in my computer happened in this sample server.

* **php-gnucash** by mrkrstphr (last commit on 2013-06-17) (No description available)

PhpGnuCashMatchTransactions by puggan (last commit on 2019-10-31) Tool for GnuCash databases, to import and match up transactions from banks export-files

* **plans-comptables-francais** by Seb35 (last commit on 2019-04-17) Plans comptables français aux formats CSV et GNUCash

* **ThinkopenAt.Gnucash** by kraftb (last commit on 2018-01-12) A TYPO3 Flow package which allows to interface the GnuCash book keeping application

txs by vvvitaly (last commit on 2019-11-07) Export bills from different sources into GnuCash-like CSV

PLSQL

gnucash-mysql-additions by ohingardail (last commit on 2019-11-02) Custom MySQL functions to add useful functions to GnuCash

Perl

* **bsestocks** by poomalairaj (last commit on 2017-06-07) Perl module to fetch live price from Bombay Stock Exchange (BSE) for GnuCash Finance

* **budgetProgram** by Beahmer89 (last commit on 2016-10-23) Converts GNUCash programs xml output to csv file to see monthly/yearly spending habits

Finance-Quote-YahooJapan by LiosK (last commit on 2020-01-26) Finance::Quote::YahooJapan - A Perl module that enables GnuCash to get quotes of Japanese stocks and mutual funds from Yahoo! Finance JAPAN.

* **finance-bomse** by abhijit86k (last commit on 2017-11-06) A Perl module for fetching quotes for Indian stocks, intended for use with gnucash

* **finance-quote-brazil** by romulocecon (last commit on 2018-06-15) Gnucash/Finance::Quote modules to fetch prices of Brazilian stocks, bonds and mutual funds

* **FinanceQuoteBr** by ailtonljr (last commit on 2017-09-08) Perl Finance Quote modules for Brazilian market. Original files from <https://lists.gnucash.org/pipermail/gnucash-br/2016-November/000535.html>

* **gc2latex** by wertarbyte (last commit on 2011-02-25) create pretty GnuCash invoices with LaTeX and Perl

* **GnuCash-Branch** by LiosK (last commit on 2015-04-26) GnuCash::Branch - Utilities to implement branch accounting with GnuCash.

* **gnucash-extensions** by tomason (last commit on 2017-08-02) (No description available)

* **gnucash-monthly-budget-report** by mhodapp (last commit on 2015-03-01) perl program to generate monthly budget reports

* **GnuCash-MySQL** by theochino (last commit on 2015-03-18) A MySQL module to Gnu Cash

* **gnucash-perl** by goblin (last commit on 2011-01-29) Perl modules for reading and writing the Gnucash XML file

* **gnucash-quote-sources** by tjol (last commit on 2017-04-23) Some useful methods to fetch market price data for GnuCash

* **GnuCash-SQLite** by hoekit (last commit on 2015-05-20) A perl module to access GnuCash SQLite files.

* **GnuCash-SQLite** by gitpan (last commit on 2015-01-08) Read-only release history for GnuCash-SQLite

* **gnucash-summarizer** by Nazrax (last commit on 2016-05-06) (No description available)

gnucash-xml-to-ledger-dat by icyflame (last commit on 2020-02-11) A script to convert GNUCash's XML file to Ledger's dat file

* **gnucash2mysql** by xaprb (last commit on 2014-01-18) Gnucash to MySQL export script.

* **gnucash2mysql_extras** by hmackiernan (last commit on 2018-12-23) Extra scripts and bits for gnucash2mysql

* **gnuCash_Quote** by z-Wind (last commit on 2016-01-06) modify perlsitelibFinanceQuote.pm

* **MoneyDance-GnuCash-Importer** by ets (last commit on 2015-10-31) Script to convert GnuCash data into a native MoneyDance XML file format

* **Paypal-csv-to-qif-converter** by sonologic (last commit on 2011-05-04) Converts paypal .csv to qif for importing in gnucash

* **perl-gnucash-reader** by hoekit (last commit on 2014-06-14) (No description available)

PerlFinanceQuoteBloomberg by alex314159 (last commit on 2020-07-01) Bloomberg module for the Perl Finance::Quote module (used in particular by GnuCash)

* **query_gnucash_db** by hmackiernan (last commit on 2016-08-20) Perl script to query a MySQL db created by the 'gnucash2mysql' script

Perl6

* **perl6-gnucash** by eikef (last commit on 2016-08-24) Use gnucash library from Perl 6

R

gnucashAndR by mrop (last commit on 2020-07-23) (No description available)

* **ShinyBudgetAnalysis** by paulheider (last commit on 2017-04-06) A Shiny app (R-based dashboard) that gives insight into your GnuCash budget habits over time.

Roff

* **gnucash-docker** by rusodavid (last commit on 2019-04-20) (No description available)

Ruby

* **accounting** by freegeek-pdx (last commit on 2013-11-18) accounting utilities for xtuple import and allocation in xtuple and gnucash

* **arges** by isimluk (last commit on 2016-12-31) Calc roe from gnucash transaction log

* **banks-to-gnucash** by toniprada (last commit on 2019-01-10) Quaterly bank reports in CSV GnuCash-friendly format directly in your email.

boekhouden-met-gnucash by mauritslamers (last commit on 2020-05-21) Een Nederlandse handleiding over het boekhouden met GnuCash

* **cnab2ofx** by abinoam (last commit on 2016-01-04) CNAB240 to OFX conversion script

* **dnbnor2qif** by kentdahl (last commit on 2016-09-21) dnbnor2qif is a simple tool to help integrate data from the DnBNOR online bank monthly transcripts ("kontoutskrift") to a QIF accepting financial program, i.e. GnuCash.

* **equity_flow** by fernandors87 (last commit on 2018-07-20) A personal asset management software

* **gnucash-invoice** by ixti (last commit on 2018-07-28) Easy to use invoice printer for GnuCash.

* **gnucash-rb** by vbatts (last commit on 2012-07-11) Ruby access to Gnucash SQL database

* **gnucash-summarizer** by arthurljones (last commit on 2019-01-10) (No description available)

* **gnucash2bmd** by ngiger (last commit on 2017-05-30) Convert GnuCash CSV files into CSV which can be read by <http://www.bmd.com/>

* **gnucash2ledger** by xaviershay (last commit on 2016-09-28) Convert GnuCash files to a format supported by the ledger command line application

* **gnucash_export** by alibby (last commit on 2009-10-26) Export gnucash data to sqlite/ csv

* **gnucash_getquotes** by hubcity (last commit on 2018-03-14) (No description available)

rcash by salex (last commit on 2020-10-21) Rails Double Entry Accounting app patterned after GNUCash

ruby-gnucash by holtrop (last commit on 2020-02-25) Ruby library for extracting data from GnuCash data files

* **vfwcash** by salex (last commit on 2018-09-06) A Ruby CLI application that produces PDF reports from GnuCash

Rust

stay-the-course by DavidCain (last commit on 2020-09-22) Lazy portfolio rebalancer for GnuCash users

SQLPL

* **gnucash-tools** by schoettl (last commit on 2017-07-05) Collection of tools to work with GnuCash efficiently

Scala

* **gnucash-stuff** by crankydillo (last commit on 2011-12-30) (No description available)

* **GnuCashExtractor** by Winbee (last commit on 2015-08-12) Extract data from gnuCash and copy it into an open document spreadsheet

YNAB4toGnuCashMigrationTool by galbarm (last commit on 2020-02-18) YNAB 4 to GnuCash Migration Tool

Scheme

* **bas-report** by spandan888 (last commit on 2017-08-11) GST India Report / Business Tax Report

* **gc-decl-reports** by yawaramin (last commit on 2014-02-09) GnuCash declarative reports

* **gnucash-account-balance-chart** by timabell (last commit on 2009-04-11) account balance line chart for gnucash

* **gnucash-custom-reports** by BenBergman (last commit on 2018-07-11) (No description available)

* **gnucash-multicolumn** by daniel-beet (last commit on 2017-09-18) Advanced date and text filtering and multicolumn reports

* **gnucash-paypal-invoice-template** by charlesmulder (last commit on 2018-06-20) GnuCash invoice template that resembles a PayPal invoice

* **gnucash-reports** by dschwen (last commit on 2016-01-27) Custom reports for Gnucash

* **gnucash-reports** by trailbound (last commit on 2012-08-03) Custom set of gnucash reports, currently in development.

* **gnucash-reports** by cnuahs (last commit on 2015-12-29) Custom reports for use with GnuCash (<http://gnucash.org/>).

gnucash-reports by jaminh (last commit on 2020-08-06) Reports for personal finance using gnucash

* **gnucash-reports** by wentzel (last commit on 2016-11-14) Some nice reports for GnuCash

* **gnucash-statement-table** by waldeinburg (last commit on 2016-01-13) GnuCash report with cash flow over time

* **gnucashportable** by GordCaswell (last commit on 2016-12-20) GnuCash packaged in PortableApps.com Format

* **GnuCashReports** by wlcasper (last commit on 2018-03-03) Custom Reports for GnuCash

ibr-gnc-module by ErwinRieger (last commit on 2020-03-28) GnuCash Erweiterungen für deutsche Buchhaltung

Shell

- * **AccountsConvertToGnucash** by **tontako** (last commit on 2016-12-23) Convert Kakeibo(Android Application) CSV exports to QIF format (usable by GnuCash and others)
- ansible-role-gnucash** by **alvistack** (last commit on 2020-10-21) Ansible Role for GnuCash Installation
- * **archlinux-gnucash-latest** by **nengxu** (last commit on 2015-03-31) Archlinux AUR package building scripts for latest Gnucash
- * **docker_gnucash** by **tkerns1965** (last commit on 2018-01-19) (No description available)
- * **docker_gnucash_novnc** by **tkerns1965** (last commit on 2018-01-25) (No description available)
- * **gnucash-build** by **hanulhan** (last commit on 2018-02-20) (No description available)
- * **gnucash-build-script** by **z-Wind** (last commit on 2019-03-08) for ubuntu
- * **gnucash-csv-import** by **thomasramapuram** (last commit on 2016-08-08) (No description available)
- * **gnucash-devel** by **aur-archive** (last commit on 2015-08-15) (No description available)
- * **gnucash-docker** by **limitedAtonement** (last commit on 2017-01-27) docker image for repeatable gnucash builds.
- * **gnucash-docs** by **aur-archive** (last commit on 2015-08-15) (No description available)
- * **gnucash-docs-old** by **yasuakit** (last commit on 2011-09-24) Manual and User Guide for Gnucash, the open-source accounting program
- * **gnucash-hbci** by **aur-archive** (last commit on 2015-08-15) (No description available)
- * **gnucash-on-debian** by **rayelnigma** (last commit on 2018-09-16) a set of build scripts to build gnucash using Ninja for faster builds
- * **gnucash-on-fedora-copr** by **zhiqinghuang** (last commit on 2015-10-29) A set of build scripts geared towards creating rpm packages for gnucash and gnucash-docs on Fedora's Copr infrastructure. It's currently used to build nightly rpm packages for the maint and master branches intended for testing changes since the last release..
- gnucash-on-flatpak** by **Gnucash** (last commit on 2020-10-15) Packaging scripts to generate flatpaks directly from gnucash and gnucash-docs git repositories
- gnucash-on-osx** by **Gnucash** (last commit on 2020-10-03) Gtk-OSX moduleset, gtk-mac-bundler bundles, and ancillary files for creating GnuCash OSX Application Bundle.
- gnucash-on-osx** by **jralls** (last commit on 2020-07-12) Build GnuCash on OSX without X11
- * **gnucash-python** by **aur-archive** (last commit on 2015-08-15) (No description available)
- * **gnucash-svn** by **aur-archive** (last commit on 2015-08-15) (No description available)
- gnucash-util-jp** by **mikkun** (last commit on 2020-08-09) GnuCash
- gnucash.AppImage** by **ecmu** (last commit on 2020-04-12) AppImage build for gnucash
- * **gnucash.SlackBuild** by **botzkobg** (last commit on 2015-04-02) SlackBuild script to compile GnuCash
- * **LittleBudget** by **kstripp** (last commit on 2012-06-17) Little Budget Tool for GNUCash
- * **nordea2ofx** by **nsrosenqvist** (last commit on 2014-10-24) A quick implementation of a converter between Nordea's CSV export to OFX so that it can be imported into various applications, such as Homebank or GnuCash. Only supporting Swedish and my edge cases, please consider improving the script and send a pull request for the changes.
- * **TW5-GNUCash-Assistant** by **JulioCantarero** (last commit on 2016-03-12) A custom edition of TiddlyWiki5 designed to collect financial information from your banks and export them in QIF format

Swift

* **cash** by **cjwirth** (last commit on 2017-07-03) iOS companion app for GnuCash

TSQL

gnucash-reports by **fredzica** (last commit on 2020-01-12) Custom reports that use data from gnucash's SQL database

* **GNUCashProcs** by **nicholasceliano** (last commit on 2019-10-22) (No description available)

Tcl

* **pycash** by **davinirjr** (last commit on 2015-01-25) Some Python utilites that GnuCash users may find useful.

TypeScript

gnucash-global-importer by **klodzack** (last commit on 2020-09-10) (No description available)

gnucash-graphql by **phjardas** (last commit on 2020-07-17) GraphQL Wrapper For GnuCash Ledgers

GnuCashImporter by **nicholasceliano** (last commit on 2020-07-19) (No description available)

v9-geckos-team-07 by **chingu-voyages** (last commit on 2020-09-05) GeckoCash: A web-based GnuCash clone.

* **web-cash** by **ashishmondal** (last commit on 2017-06-29) Web version of GnuCash

* **web-cash** by **ashishmondal** (last commit on 2017-06-29) Web version of GnuCash

Visual Basic

* **OneClickToQif** by **OneClickToQif** (last commit on 2017-04-23) OneClickToQIF consists of a set of templates and macros, which are used to export data from your spreadsheets to QIF format, as used by programs such as GnuCash, Money and Quicken. You can use the templates as provided, or adapt your own spreadsheet, so your data is automatically exported to QIF with a single click.

XSLT

* **asciidoc-conversion** by **codesmythe** (last commit on 2018-08-27) Script and tools to convert GnuCash DocBook XML to AsciiDoc

gnucash-docs by **Gnucash** (last commit on 2020-09-27) Documentation for GnuCash Accounting Program.

* **gnucash-docs** by **mattig7** (last commit on 2018-02-10) (No description available)

* **Gnucash-gnucash-docs** by **jimmymccord** (last commit on 2018-05-19) (No description available)

Unknown

- * **accounting-plans** by jeblad (last commit on 2018-02-09) Accounting plans for GnuCash
- * **accounts** by sjtug (last commit on 2016-09-25) Accounts of SJTUG in GnuCash Format
- accounts_gnucash** by Baneeshaque (last commit on 2020-02-29) (No description available)
- * **an-gnucash** by wanjing (last commit on 2012-07-30) android app for gnucash
- * **ansible-role-gnucash** by wtanaka (last commit on 2019-08-26) Ansible role for installing gnucash
- booker** by hesy-mzh (last commit on 2020-08-22) Account data for GnuCash
- budget** by bhagdave (last commit on 2020-10-24) My Budget from Gnucash
- * **chloris** by honthion (last commit on 2018-12-17) gnucash python django
- * **Church-Accounting-Using-GnuCash** by leggie (last commit on 2017-11-18) Various excel templates containing vba scripts that makes church accounting using the open source accounting tool GnuCash as described in the blog "<http://financeandaccountingforchurches.blogspot.in/2012/12/church-accounting-using-gnucash-1.html>". The files in the links mentioned there are hosted in this repository
- * **CICtoGnuCash** by jbruffault (last commit on 2016-06-15) (No description available)
- * **commerzbank-csv4gnucash** by zanto001 (last commit on 2018-12-05) Tweak CSV exports from commerzbank for importing into GnuCash.
- * **ComptaTest** by palric (last commit on 2017-05-05) Exercices programmation python/panda: importation de fichiers comptas bancaires, formatage et importation dans GnuCash
- * **CPA-006-Asap-Cheques** by dougransom (last commit on 2017-09-26) Gnucash Check Configurations to print on Canadian Cheques from ASAP Cheques.
- csv2qif** by andreaZhrustichelli (last commit on 2020-09-15) Python program to convert csv file into a qif file ready to import in GnuCASH
- * **docker-gnucash** by mbessler (last commit on 2015-07-15) Containerized GnuCash
- * **docker-gnucash** by rainu (last commit on 2017-11-20) A gnucash docker image
- * **docker-gnucash** by sgalkin (last commit on 2018-01-31) gnucash docker image with SpiderOakOne integration
- * **docker-mobile-gnucash** by au-phiware (last commit on 2016-12-20) Docker containers for justin-hunt1223/mobilegnucash
- GCTranslate** by AshokR (last commit on 2020-06-30) GnuCash Translation
- * **GnuCash-3part-check** by agh1 (last commit on 2012-06-06) A 3-part check format for GnuCash
- gnucash-accounts** by ordtrogen (last commit on 2019-12-18) Some Account Hierarchy Templates for GnuCash in Swedish
- * **gnucash-android-master** by abdullahwale (last commit on 2018-10-19) (No description available)
- * **gnucash-api** by jjuanda (last commit on 2013-12-14) REST APIs for GnuCash files
- gnucash-build-debian** by willelop (last commit on 2020-09-06) Installs in Debian all the required dependencies for building gnucash
- * **gnucash-compose** by daveyb (last commit on 2017-03-11) docker-compose file(s) to bring up local gnucash cluster
- * **gnucash-data** by anshprat (last commit on 2015-06-02) data files for my gnucash encrypted with gpg
- * **gnucash-docker** by KaiLemke (last commit on 2017-12-18) containerized gnucash 2.6

- * **gnucash-docker** by dbcesar (last commit on 2018-04-16) Dockerfile and docker-compose to install and run gnu-cash 3.0 from a docker container
- * **gnucash-docs** by cygwinports (last commit on 2018-04-09) Cygwin gnucash-docs packaging
- * **gnucash-fire-tools** by KarolOlko (last commit on 2018-10-16) Slicing gnucash DB for more insights
- * **gnucash-guide-asciidoc** by codesmythe (last commit on 2018-08-23) The GnuCash Tutorial and Concept Guide, converted to Asciidoc
- * **gnucash-my_chart_of_accounts** by 5472qaywsx (last commit on 2019-02-25) my personal chart of accounts for gnucash
- gnucash-pot** by fellen (last commit on 2020-03-25) Portable Template of GnuCash
- * **gnucash-queries** by g2010a (last commit on 2016-10-20) Queries to extract data from GnuCash's database
- * **gnucash-rest** by mhitchens (last commit on 2014-05-03) A Spring Data/Spring REST interface to a gnucash data file
- gnucash-stuff** by ajablonski (last commit on 2020-08-31) (No description available)
- GnuCash-Tutorials** by duguqiubailee (last commit on 2020-10-19) (No description available)
- * **gnucash-web** by djbrown (last commit on 2016-01-01) (No description available)
- GNUCASH.APP-ERICK-CLEWIS** by ErickClewisAccountsdatamoneymarketing (last commit on 2020-03-03) USD\$ DATABASE OPEN SOURCE DATA
- * **gnucash_auto** by torchtarget (last commit on 2017-08-18) A simple transaction importer for GnuCash
- * **gnucashdeb** by twt2 (last commit on 2019-09-28) (No description available)
- * **gnucashdockeraws** by fervincent (last commit on 2019-03-29) (No description available)
- * **GnucashSW** by Oldobaba (last commit on 2018-07-04) (No description available)
- gnucashTelegram** by f-angi (last commit on 2020-02-14) (No description available)
- * **JsCash** by rafaelbeckel (last commit on 2019-04-24) Double entry accounting system inspired by GNUCash
- * **kg7je** by twt2 (last commit on 2019-09-12) Stephen Butler's Debian Package Files for GnuCash
- * **knab-gnucash-converter** by bkrijg (last commit on 2017-05-03) A python script for converting KNAB bankstatement information files into a suitable gnucash csv import file
- * **lepturus** by honthion (last commit on 2018-12-17) gnucashH5 vue
- moflow** by msobkow (last commit on 2020-10-22) Money Flow is a revisioning of GNU Cash as a web-enabled Spring Tool Suite 4 application set
- * **nordea-csv2qif** by martinolsen (last commit on 2012-09-09) Convert Nordea CSV exports to QIF format (usable by GnuCash and others)
- org.gnucash.GnuCash** by flathub (last commit on 2020-09-27) (No description available)
- * **PayPalConvert** by rowantree (last commit on 2015-11-04) Convert PayPal csv files to qif for loading into Gnu-Cash
- * **perotis** by honthion (last commit on 2018-12-17) gnucashApp flutter
- * **rabo2qif** by milovanderlinden (last commit on 2011-01-25) export mut.txt to qif for gnucash
- * **resource-gnucash-build** by hgati (last commit on 2018-03-21) (No description available)
- Singularity-GNUCash** by rgrandin (last commit on 2019-12-30) Fedora 28 build of GNUCash

- * **splitwise-to-gnucash** by **yfed** (last commit on 2018-08-07) A script to grab transactions from Splitwise and export them in CSV form for import in GnuCash
 - * **tk_ansible_gnucash_vscode01** by **tkerns1965** (last commit on 2019-08-28) (No description available)
 - * **Vishal-Ramteke** by **vishal7788** (last commit on 2019-09-01) GnuCash Mobile Automation Test
 - * **Vishal-Ramteke** by **vishal7788** (last commit on 2019-09-01) GnuCash Mobile Automation Test
- webcash** by **turlog** (last commit on 2020-06-17) WebCash is a proxy service that allows connecting to GNUCash databases with REST API.

8.3.5 Python links

- cross compilation of python executable from Linux to Windows : <http://milkator.wordpress.com/2014/07/19/windows-executable-from-python-developing-in-ubuntu/>
- SQLAlchemy page: <http://www.sqlalchemy.org/>

8.3.6 Threads used during the course of development

- sphinx error message: <http://stackoverflow.com/questions/15249340/warning-document-isnt-included-in-any-toctree-for-included>

8.3.7 Thanks

None of this could be possible without :

- the GnuCash project, its core team of developers and its active community of users
- python and its packages amongst which sqlalchemy
- github, readthedocs and travis-ci for managing code, docs and testing

The todo list:

- write more tests
- review non core objects (*budget*, *business*)
- build a single exe to ease install on windows (following <http://milkator.wordpress.com/2014/07/19/windows-executable-from-python-developing-in-ubuntu/>)

INDICES AND TABLES

- `genindex`
- `modindex`
- `search`

PYTHON MODULE INDEX

p

- `piecash`, 79
- `piecash._common`, 75
- `piecash._declbase`, 76
- `piecash.budget`, 76
- `piecash.business`, 59
- `piecash.business.invoice`, 55
- `piecash.business.person`, 55
- `piecash.business.tax`, 59
- `piecash.core`, 75
- `piecash.core._commodity_helper`, 59
- `piecash.core.account`, 59
- `piecash.core.book`, 61
- `piecash.core.commodity`, 66
- `piecash.core.currency_ISO`, 68
- `piecash.core.factories`, 69
- `piecash.core.session`, 70
- `piecash.core.transaction`, 72
- `piecash.kvp`, 77
- `piecash.ledger`, 78
- `piecash.metadata`, 78
- `piecash.sa_extra`, 78

A

Account (class in *piecash.core.account*), 59
 account (*piecash.budget.BudgetAmount* attribute), 76
 account (*piecash.core.transaction.Lot* attribute), 74
 account (*piecash.core.transaction.Split* attribute), 72
 accounts (*piecash.core.commodity.Commodity* attribute), 67
 accounts () (*piecash.core.book.Book* property), 65
 AccountType (class in *piecash.core.account*), 59
 action (*piecash.core.transaction.Split* attribute), 73
 active (*piecash.business.person.Customer* attribute), 56
 active (*piecash.business.person.Employee* attribute), 57
 active (*piecash.business.person.Vendor* attribute), 58
 adapt_session () (in module *piecash.core.session*), 72
 add () (*piecash.core.book.Book* method), 64
 addr1 (*piecash.business.person.Address* attribute), 55
 addr2 (*piecash.business.person.Address* attribute), 55
 addr3 (*piecash.business.person.Address* attribute), 55
 addr4 (*piecash.business.person.Address* attribute), 55
 Address (class in *piecash.business.person*), 55
 address (*piecash.business.person.Customer* attribute), 57
 address (*piecash.business.person.Employee* attribute), 58
 address (*piecash.business.person.Vendor* attribute), 58
 amount (*piecash.budget.BudgetAmount* attribute), 76
 amounts (*piecash.budget.Budget* attribute), 76

B

base_currency (*piecash.core.commodity.Commodity* attribute), 67
 Book (class in *piecash.core.book*), 61
 book (*piecash.core.account.Account* attribute), 60
 book () (*piecash.core.book.Book* property), 64
 Budget (class in *piecash.budget*), 76
 budget (*piecash.budget.BudgetAmount* attribute), 76
 budget_amounts (*piecash.core.account.Account* attribute), 60
 BudgetAmount (class in *piecash.budget*), 76

build_uri () (in module *piecash.core.session*), 70
 business_company_address
 (*piecash.core.book.Book* attribute), 64
 business_company_contact
 (*piecash.core.book.Book* attribute), 63
 business_company_email
 (*piecash.core.book.Book* attribute), 63
 business_company_ID (*piecash.core.book.Book* attribute), 63
 business_company_name (*piecash.core.book.Book* attribute), 63
 business_company_phone
 (*piecash.core.book.Book* attribute), 63
 business_company_website
 (*piecash.core.book.Book* attribute), 64

C

calculate_imbalances ()
 (*piecash.core.transaction.Transaction* method), 74
 CallableList (class in *piecash._common*), 75
 cancel () (*piecash.core.book.Book* method), 64
 children (*piecash.core.account.Account* attribute), 60
 ChoiceType (class in *piecash.sa_extra*), 78
 close () (*piecash.core.book.Book* method), 64
 code (*piecash.core.account.Account* attribute), 59
 commodities () (*piecash.core.book.Book* property), 65
 Commodity (class in *piecash.core.commodity*), 66
 commodity (*piecash.core.account.Account* attribute), 59, 61
 commodity (*piecash.core.commodity.Price* attribute), 66
 commodity_scu (*piecash.core.account.Account* attribute), 59
 compile_datetime () (in module *piecash.sa_extra*), 78
 control_mode (*piecash.core.book.Book* attribute), 62
 counter_bill (*piecash.core.book.Book* attribute), 63
 counter_customer (*piecash.core.book.Book* attribute), 63

counter_employee (*piecash.core.book.Book* attribute), 63
counter_exp_voucher (*piecash.core.book.Book* attribute), 63
counter_invoice (*piecash.core.book.Book* attribute), 63
counter_job (*piecash.core.book.Book* attribute), 63
counter_order (*piecash.core.book.Book* attribute), 63
counter_vendor (*piecash.core.book.Book* attribute), 63
country() (*piecash.core.currency_ISO.ISO_type* property), 68
create_book() (in module *piecash.core.session*), 70
create_currency_from_ISO() (in module *piecash.core.factories*), 69
create_stock_accounts() (in module *piecash.core.factories*), 69
create_stock_from_symbol() (in module *piecash.core.factories*), 69
credit (*piecash.business.person.Customer* attribute), 56
creditcard_account (*piecash.business.person.Employee* attribute), 58
currencies() (*piecash.core.book.Book* property), 65
currency (*piecash.business.person.Customer* attribute), 56
currency (*piecash.business.person.Employee* attribute), 57
currency (*piecash.business.person.Vendor* attribute), 58
currency (*piecash.core.commodity.Commodity* attribute), 67
currency (*piecash.core.commodity.Price* attribute), 66
currency (*piecash.core.transaction.Transaction* attribute), 73
currency() (*piecash.core.currency_ISO.ISO_type* property), 68
currency_conversion() (*piecash.core.commodity.Commodity* method), 67
cusip (*piecash.core.commodity.Commodity* attribute), 66
cusip() (*piecash.core.currency_ISO.ISO_type* property), 68
Customer (class in *piecash.business.person*), 56
customers() (*piecash.core.book.Book* property), 65

D

date (*piecash.core.commodity.Price* attribute), 66
default_currency (*piecash.core.book.Book* attribute), 62
delete() (*piecash.core.book.Book* method), 64

description (*piecash.budget.Budget* attribute), 76
description (*piecash.core.account.Account* attribute), 60
description (*piecash.core.transaction.Transaction* attribute), 73
discount (*piecash.business.person.Customer* attribute), 56

E

email (*piecash.business.person.Address* attribute), 56
Employee (class in *piecash.business.person*), 57
employees() (*piecash.core.book.Book* property), 65
enter_date (*piecash.core.transaction.Transaction* attribute), 73

F

fax (*piecash.business.person.Address* attribute), 56
flush() (*piecash.core.book.Book* method), 64
fraction (*piecash.core.commodity.Commodity* attribute), 67
fraction() (*piecash.core.currency_ISO.ISO_type* property), 68
fullname (*piecash.core.account.Account* attribute), 60

G

get() (*piecash._common.CallableList* method), 75
get() (*piecash.core.book.Book* method), 64
get_balance() (*piecash.core.account.Account* method), 61
get_foreign_keys() (in module *piecash.sa_extra*), 78
get_system_currency_mnemonic() (in module *piecash._common*), 76
GncCommodityError, 66
GncConversionError, 75
GncImbalanceError, 75
GncNoActiveSession, 75
GncPriceError, 66
GncValidationError, 75
GnucashException, 75

H

hidden (*piecash.core.account.Account* attribute), 60
hybrid_property_gncnumeric() (in module *piecash._common*), 75

I

id (*piecash.business.person.Customer* attribute), 56
id (*piecash.business.person.Employee* attribute), 57
id (*piecash.business.person.Vendor* attribute), 58
impl (*piecash.kvp.SlotType* attribute), 77
invoices() (*piecash.core.book.Book* property), 65
is_closed (*piecash.core.transaction.Lot* attribute), 74

`is_saved()` (*piecash.core.book.Book* property), 64
`is_template` (*piecash.core.account.Account* attribute), 60
`ISO_type` (class in *piecash.core.currency_ISO*), 68

K

`KVP_Type` (class in *piecash.kvp*), 77

L

`language` (*piecash.business.person.Employee* attribute), 57
`Lot` (class in *piecash.core.transaction*), 74
`lot` (*piecash.core.transaction.Split* attribute), 72
`lots` (*piecash.core.account.Account* attribute), 60

M

`mapped_to_slot_property()` (in module *piecash.sa_extra*), 78
`memo` (*piecash.core.transaction.Split* attribute), 72
`mnemonic` (*piecash.core.commodity.Commodity* attribute), 67
`mnemonic()` (*piecash.core.currency_ISO.ISO_type* property), 68
module
 piecash, 79
 piecash._common, 75
 piecash._declbase, 76
 piecash.budget, 76
 piecash.business, 59
 piecash.business.invoice, 55
 piecash.business.person, 55
 piecash.business.tax, 59
 piecash.core, 75
 piecash.core._commodity_helper, 59
 piecash.core.account, 59
 piecash.core.book, 61
 piecash.core.commodity, 66
 piecash.core.currency_ISO, 68
 piecash.core.factories, 69
 piecash.core.session, 70
 piecash.core.transaction, 72
 piecash.kvp, 77
 piecash.ledger, 78
 piecash.metadata, 78
 piecash.sa_extra, 78

N

`name` (*piecash.budget.Budget* attribute), 76
`name` (*piecash.business.person.Address* attribute), 55
`name` (*piecash.business.person.Customer* attribute), 56
`name` (*piecash.business.person.Employee* attribute), 57
`name` (*piecash.business.person.Vendor* attribute), 58
`name` (*piecash.core.account.Account* attribute), 60

`namespace` (*piecash.core.commodity.Commodity* attribute), 67
`natural_sign` (*piecash.core.account.Account* attribute), 61
`non_std_scu` (*piecash.core.account.Account* attribute), 60
`notes` (*piecash.business.person.Customer* attribute), 56
`notes` (*piecash.business.person.Vendor* attribute), 58
`notes` (*piecash.core.transaction.Transaction* attribute), 74
`num` (*piecash.core.transaction.Transaction* attribute), 73

O

`obj_guid` (*piecash._common.Recurrence* attribute), 75
`object_to_validate()`
 (*piecash.core.account.Account* method), 61
`object_to_validate()`
 (*piecash.core.commodity.Commodity* method), 68
`object_to_validate()`
 (*piecash.core.commodity.Price* method), 66
`object_to_validate()`
 (*piecash.core.transaction.Lot* method), 74
`object_to_validate()`
 (*piecash.core.transaction.Split* method), 73
`object_to_validate()`
 (*piecash.core.transaction.Transaction* method), 74
`observe_commodity()`
 (*piecash.core.account.Account* method), 61
`on_book_add()` (*piecash.business.person.Employee* method), 58
`open_book()` (in module *piecash.core.session*), 71

P

`parent` (*piecash.core.account.Account* attribute), 60
`Person` (class in *piecash.business.person*), 56
`phone` (*piecash.business.person.Address* attribute), 56
piecash
 module, 79
piecash._common
 module, 75
piecash._declbase
 module, 76
piecash.budget
 module, 76
piecash.business
 module, 59
piecash.business.invoice
 module, 55

`piecash.business.person`
 module, 55
`piecash.business.tax`
 module, 59
`piecash.core`
 module, 75
`piecash.core._commodity_helper`
 module, 59
`piecash.core.account`
 module, 59
`piecash.core.book`
 module, 61
`piecash.core.commodity`
 module, 66
`piecash.core.currency_ISO`
 module, 68
`piecash.core.factories`
 module, 69
`piecash.core.session`
 module, 70
`piecash.core.transaction`
 module, 72
`piecash.kvp`
 module, 77
`piecash.ledger`
 module, 78
`piecash.metadata`
 module, 78
`piecash.sa_extra`
 module, 78
`placeholder` (*piecash.core.account.Account* attribute), 60
`post_date` (*piecash.core.transaction.Transaction* attribute), 73
`Price` (class in *piecash.core.commodity*), 66
`prices` (*piecash.core.commodity.Commodity* attribute), 67
`prices()` (*piecash.core.book.Book* property), 65
`prices_df()` (*piecash.core.book.Book* method), 65
`process_bind_param()` (*piecash.kvp.SlotType* method), 77
`process_bind_param()`
 (*piecash.sa_extra.ChoiceType* method), 78
`process_result_value()` (*piecash.kvp.SlotType* method), 77
`process_result_value()`
 (*piecash.sa_extra.ChoiceType* method), 78
`pure_slot_property()` (in module *piecash.sa_extra*), 78

Q

`quandl_fx()` (in module *piecash.core._commodity_helper*), 59
`quantity` (*piecash.core.transaction.Split* attribute), 72

`query()` (*piecash.core.book.Book* property), 65
`quote_flag` (*piecash.core.commodity.Commodity* attribute), 67
`quote_source` (*piecash.core.commodity.Commodity* attribute), 67
`quote_tz` (*piecash.core.commodity.Commodity* attribute), 67

R

`rate` (*piecash.business.person.Employee* attribute), 57
`reconcile_date` (*piecash.core.transaction.Split* attribute), 73
`reconcile_state` (*piecash.core.transaction.Split* attribute), 73
`Recurrence` (class in *piecash._common*), 75
`recurrence_mult` (*piecash._common.Recurrence* attribute), 75
`recurrence_period_start`
 (*piecash._common.Recurrence* attribute), 75
`recurrence_period_type`
 (*piecash._common.Recurrence* attribute), 75
`recurrence_weekend_adjust`
 (*piecash._common.Recurrence* attribute), 75
`recurse` (*piecash.core.account.Account* attribute), 61
`RO_threshold_day` (*piecash.core.book.Book* attribute), 62
`root_account` (*piecash.core.book.Book* attribute), 62
`root_template` (*piecash.core.book.Book* attribute), 62

S

`save()` (*piecash.core.book.Book* method), 64
`scheduled_transaction`
 (*piecash.core.account.Account* attribute), 60
`scheduled_transaction`
 (*piecash.core.transaction.Transaction* attribute), 73
`ScheduledTransaction` (class in *piecash.core.transaction*), 74
`session` (*piecash.core.book.Book* attribute), 62
`shipping_address` (*piecash.business.person.Customer* attribute), 57
`sign` (*piecash.core.account.Account* attribute), 59
`SlotType` (class in *piecash.kvp*), 77
`source` (*piecash.core.commodity.Price* attribute), 66
`Split` (class in *piecash.core.transaction*), 72
`splits` (*piecash.core.account.Account* attribute), 60
`splits` (*piecash.core.transaction.Lot* attribute), 74
`splits` (*piecash.core.transaction.Transaction* attribute), 73

`splits()` (*piecash.core.book.Book* property), 65
`splits_df()` (*piecash.core.book.Book* method), 65

T

`table_version` (*piecash.core.session.Version* attribute), 70
`tax_included` (*piecash.business.person.Customer* attribute), 57
`tax_included` (*piecash.business.person.Vendor* attribute), 58
`tax_override` (*piecash.business.person.Customer* attribute), 56
`tax_override` (*piecash.business.person.Vendor* attribute), 58
`taxtable` (*piecash.business.person.Customer* attribute), 57
`taxtable` (*piecash.business.person.Vendor* attribute), 58
`taxtables()` (*piecash.core.book.Book* property), 65
`term` (*piecash.business.person.Customer* attribute), 57
`term` (*piecash.business.person.Vendor* attribute), 59
`track_dirty()` (*piecash.core.book.Book* static method), 64
`trading_account()` (*piecash.core.book.Book* method), 64
`Transaction` (class in *piecash.core.transaction*), 73
`transaction` (*piecash.core.transaction.Split* attribute), 72
`transactions` (*piecash.core.commodity.Commodity* attribute), 67
`transactions()` (*piecash.core.book.Book* property), 65
`type` (*piecash.core.account.Account* attribute), 59
`type` (*piecash.core.commodity.Price* attribute), 66

U

`update_prices()` (*piecash.core.commodity.Commodity* method), 68
`uri` (*piecash.core.book.Book* attribute), 62
`use_split_action_field` (*piecash.core.book.Book* attribute), 62
`use_trading_accounts` (*piecash.core.book.Book* attribute), 62

V

`validate()` (*piecash.core.account.Account* method), 61
`validate()` (*piecash.core.book.Book* method), 64
`validate()` (*piecash.core.commodity.Commodity* method), 68
`validate()` (*piecash.core.commodity.Price* method), 66
`validate()` (*piecash.core.transaction.Lot* method), 74

`validate()` (*piecash.core.transaction.Split* method), 73
`validate()` (*piecash.core.transaction.Transaction* method), 74
`value` (*piecash.core.commodity.Price* attribute), 66
`value` (*piecash.core.transaction.Split* attribute), 72
`Vendor` (class in *piecash.business.person*), 58
`vendors()` (*piecash.core.book.Book* property), 65
`Version` (class in *piecash.core.session*), 70

W

`workday` (*piecash.business.person.Employee* attribute), 57