SmartBetas - Getting Started

Clone or download the repository on your computer:

```
git clone https://github.com/epfeff/smartbetas.git
```

Make sure that the required libraries are installed on your computer:

```
pip install pydal
```

Navigate to the root of the package and create a file containing stock tickers:

```
cd smartbetas
nano tickers.txt
....
```

Start the program and load the stock tickers file:

```
python smartbetas
....
Smart Betas Investing - Requires an internet connection
(beta):
....
(beta): load tickers.txt
--> found tickers.txt!
--> found 2 tickers
-->   0: AAPL
-->   1: TSLA
--> save tickers ? (y/n): y
```

You can confirm that the tickers were properly saved with `show tickers` :

```
(beta): show tickers
--> 2 ticker(s) ready
-->   0: AAPL -  Apple Inc.
-->   1: TSLA -  Tesla Inc.
```

Note that it is also possible to verify what tickers are saved in the database with `symbols` :

```
(beta): symbols
-->   0: AAPL -  Apple Inc.
-->   1: TSLA -  Tesla Inc.
-->   2: GOOGL -  Alphabet Inc.
-->   3: BABA -  Alibaba Group Holding Limited
```

You can then ask the program to generate a portfolio collection with `compute` :

```
(beta): compute
(-api): fetching data for AAPL
(-api): fetching data for TSLA
(-api): data fetched for TSLA!
(-api): data fetched for AAPL!
-------------------------------------------------------------------------
| Pos |     Volatility     |      Momentum      |     Composite      |
-------------------------------------------------------------------------
|  1  |   AAPL      21.9   |   AAPL     1.82 %  |   AAPL    189.0 $  |
|  2  |   TSLA     33.12   |   TSLA    -7.02 %  |   TSLA    211.03 $ |
-------------------------------------------------------------------------
--> save portfolio (y/n): y
--> portfolio name: MyPortfolio
--> portfolio MyPortfolio saved
```

The last generated portfolio collection is saved in the persistence layer, you can verify what is stored with `show portfolio` :

```
(beta): show portfolio
--> current portfolio
-------------------------------------------------------------------------
| Pos |     Volatility     |      Momentum      |     Composite      |
-------------------------------------------------------------------------
|  1  |   AAPL      21.9   |   AAPL     1.82 %  |   AAPL    189.0 $  |
|  2  |   TSLA     33.12   |   TSLA    -7.02 %  |   TSLA    211.03 $ |
-------------------------------------------------------------------------
```

Investing 100’000 USD in each portfolio is done with `invest` :

```
(beta): invest
 Invest 100'000 USD in each portefolio (y/n): y
 Invest in the [x] top securities (2): 2
 Name of the investment : MyInvestment
```

You can list all the investment made wiht `show invest` :

```
(beta): show invest
-------------------------------------------------------------------------
| Pos |    Id    |           Date           |           Name           |
-------------------------------------------------------------------------
|  1  |    1     |   2019-04-22 16:57:42    |       MyInvestment1      |
|  2  |    2     |   2019-04-27 13:59:42    |       MyInvestment2      |
|  3  |    3     |   2019-04-27 14:05:07    |       MyInvestment3      |
|  4  |    4     |   2019-04-28 12:31:58    |       MyInvestment4      |
|  5  |    5     |   2019-04-28 12:32:38    |       MyInvestment5      |
|  6  |    6     |   2019-05-19 16:41:09    |       MyInvestment6      |
-------------------------------------------------------------------------
```

To measure the returns of an investment, simple type in `check` :

```
(beta): check
-------------------------------------------------------------------
| Pos |    Id    |          Date          |          Name          |
-------------------------------------------------------------------
|  1  |    1     |   2019-04-22 16:57:42  |       MyInvestment1    |
|  2  |    2     |   2019-04-27 13:59:42  |       MyInvestment2    |
|  3  |    3     |   2019-04-27 14:05:07  |       MyInvestment3    |
|  4  |    4     |   2019-04-28 12:31:58  |       MyInvestment4    |
|  5  |    5     |   2019-04-28 12:32:38  |       MyInvestment5    |
|  6  |    6     |   2019-05-19 16:41:09  |       MyInvestment6    |
-------------------------------------------------------------------
--> Session ID ? (Id): 1
(-api): working....
-------------------------------------------------------------------------------
                           MyInvestment1 - Report
-------------------------------------------------------------------------------
                         Volatility Based Portfolio
-------------------------------------------------------------------------------
| Ticker |N Shares| Purchase Date |  Initial  |  Current  | Abs Change|Returns |
-------------------------------------------------------------------------------
|  MBRX  | 11261  |   2019-04-22  |   1.48 $  |   1.16 $  | -3603.52 $|-21.62 %|
|  RAD   |  1718  |   2019-04-22  |  9.7006 $ |   9.13 $  | -980.29 $ |-5.88 % |
|  KEYW  |  1487  |   2019-04-22  |  11.21 $  |  11.22 $  |  14.87 $  | 0.09 % |
|  ACB   |  1832  |   2019-04-22  |   9.1 $   |   8.68 $  | -769.44 $ |-4.62 % |
|  STLD  |  500   |   2019-04-22  |  33.335 $ |  30.02 $  | -1657.5 $ |-9.94 % |
|  AMD   |  597   |   2019-04-22  | 27.9316 $ |   27.5 $  | -257.67 $ |-1.55 % |
| Total  |   NA   |   2019-04-22  | 100015.0 $| 92761.5 $ | -7253.5 $ |-7.25 % |
-------------------------------------------------------------------------------
                          Momentum Based Portfolio
-------------------------------------------------------------------------------
| Ticker |N Shares| Purchase Date |  Initial  |  Current  | Abs Change|Returns |
-------------------------------------------------------------------------------
|  AMD   |  597   |   2019-04-22  | 27.9316 $ |   27.5 $  | -257.67 $ |-1.55 % |
|  ACB   |  1832  |   2019-04-22  |   9.1 $   |   8.68 $  | -769.44 $ |-4.62 % |
|  GWW   |   56   |   2019-04-22  |  298.71 $ |  267.1 $  | -1770.16 $|-10.58 %|
| GOOGL  |   13   |   2019-04-22  | 1241.93 $ | 1168.78 $ | -950.95 $ |-5.89 % |
|  AAPL  |   82   |   2019-04-22  |  204.29 $ |  189.0 $  | -1253.78 $|-7.48 % |
|  BABA  |   90   |   2019-04-22  | 185.195 $ |  169.57 $ | -1406.25 $|-8.44 % |
| Total  |   NA   |   2019-04-22  | 99638.5 $ | 93230.3 $ | -6408.2 $ |-6.43 % |
-------------------------------------------------------------------------------
                          Composite Based Portfolio
-------------------------------------------------------------------------------
| Ticker |N Shares| Purchase Date |  Initial  |  Current  | Abs Change|Returns |
-------------------------------------------------------------------------------
|  ACB   |  1832  |   2019-04-22  |   9.1 $   |   8.68 $  | -769.44 $ |-4.62 % |
|  AMD   |  597   |   2019-04-22  | 27.9316 $ |   27.5 $  | -257.67 $ |-1.55 % |
|  MBRX  | 11261  |   2019-04-22  |   1.48 $  |   1.16 $  | -3603.52 $|-21.62 %|
|  KEYW  |  1487  |   2019-04-22  |  11.21 $  |  11.22 $  |  14.87 $  | 0.09 % |
|  RAD   |  1718  |   2019-04-22  |  9.7006 $ |   9.13 $  | -980.29 $ |-5.88 % |
|  STLD  |  500   |   2019-04-22  |  33.335 $ |  30.02 $  | -1657.5 $ |-9.94 % |
| Total  |   NA   |   2019-04-22  | 100015.0 $| 92761.5 $ | -7253.5 $ |-7.25 % |
-------------------------------------------------------------------------------
```

Whenever you measure returns, the output is saved as a report into the database, you can access it with `report` :

```
(beta): report
-------------------------------------------------------------------
```

```
| Pos |    Id    |          Date          |          Name          |
-------------------------------------------------------------------
|  1  |    1     |       2019-04-26       |       6 Big Stuffs     |
|  2  |    2     |       2019-04-27       |       6 Big Stuffs     |
|  3  |    3     |       2019-04-27       |           Test         |
|  4  |    4     |       2019-04-27       |       6 Big Stuffs     |
|  5  |    5     |       2019-04-28       |         One One        |
|  6  |    6     |       2019-05-18       |   Glorious Investment  |
|  7  |    7     |       2019-05-19       |       6 Big Stuffs     |
-------------------------------------------------------------------
--> Report ID ? (Id): 1
```

You can recall previous portfolio to list their stocks tickers and/or to reinvest in them with `portfolios`:

```
(beta): portfolios
-------------------------------------------------------------------
|  id |   Date   |      Name     |              Tickers             |
-------------------------------------------------------------------
|  1  |2019-04-23|   Apple Test  |               AAPL               |
|  2  |2019-04-23|   Test Apple  |               AAPL               |
|  3  |2019-04-23|      Test     |               AAPL               |
-------------------------------------------------------------------
--> portfolio ID ? (Id): 4
--> invest or view tickers? (i/v):
```

SmartBetas - Regenerating the documentation

Clone or download the repository on your computer:

```
git clone https://github.com/epfeff/smartbetas.git
```

Make sure that the required libraries are installed on your computer:

```
pip install pydal
pip install sphinx
pip install rhinotype
```

Navigate to the documentation folder and if necessary, update the version in `conf.py`. Once the changes are completed (either on `index.rst` or in the code), regenerate the PDF and HTML.

```
cd smartbetas/docs/source
... edit/changes ...
cd ..
Make rhino
Make html
```