Given an INI file, can you write an application that plot the cumulative return of a list of securities.

         The INI file has this format (see attachment):

[QQQ]

Ticker = QQQ

From   = 20151001

To     = 20151209

[SPY]

Ticker = SPY

From   = 20151101

To     = 20151209

[UCO]

Ticker = UCO

From   = 20151015

To     = 20151201

To get the daily closing price of the securities you can use the yahoo financial API. Here is an example on how to get the daily closing price of SPY from 20150101 to 20151209:

<http://ichart.finance.yahoo.com/table.csv?s=SPY&a=11&b=1&c=2015&d=11&e=9&f=2015&g=d&ignore=.csv>

This url will download a csv file with the adjusted close price in the last column.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date | Open | High | Low | Close | Volume | Adj Close |
| 12/9/2015 | 206.19 | 208.68 | 204.18 | 205.34 | 1.59E+08 | 205.34 |
| 12/8/2015 | 206.49 | 208.29 | 205.78 | 206.95 | 1E+08 | 206.95 |
| 12/7/2015 | 209.23 | 209.73 | 207.2 | 208.35 | 99016100 | 208.35001 |
| 12/4/2015 | 205.61 | 209.97 | 205.61 | 209.62 | 1.83E+08 | 209.62 |
| 12/3/2015 | 208.83 | 209.15 | 204.75 | 205.61 | 1.6E+08 | 205.61 |
| 12/2/2015 | 210.62 | 211 | 208.23 | 208.53 | 1.06E+08 | 208.53 |
| 12/1/2015 | 209.44 | 210.82 | 209.11 | 210.68 | 95897700 | 210.67999 |
|  |  |  |  |  |  |  |

The cumulative return can then be calculated and plotted:

**You are free to use whichever programming language you are comfortable with, but we are particularly interested on how you’re using a unit testing framework in your application (Junit in Java or unittest in matlab or python, ). You are also strongly encouraged to use OOP.**