

For this assignment you will turn in 2 files.

Stock.py and FileDR.py

FileDR should have 2 function definitions, `getFile` and `readFile`.

getFile(url, newFileName)

url: is a string containing the url of a file

newFileName: is a string of what the new file should be named

It should check to see if there is a file in the current directory with the name in the variable `newFileName`.

If there is delete it.

Then go to the url and download that file saving it in the current directory named whatever the string is in `newFileName`.

No return value.

readFile(fname)

fame: is a string of the file name to read from

This function should open a file in the current directory with the name stored in `fname`.

It should store each line of the file as a string into a list.

Return the list.

Stock Class

Create a stock class following the UML diagram below.

Stock
-stockList -stockName
+getClose() String +getOpen() String +getStockList() List +getStockName() String +reduce() Int

Your constructor should be able to handle 3 different parameter combinations as follows.

Look at the example AddSquareRoot.py and ASRClient.py to get you started on how to do this.

Constructor()

Takes no parameters. StockList should equal and empty list and StockName should = an empty string.

Constructor(stockName)

Takes one parameter of the stockName as a string. StockName should be set to what is passed into the function. StockList should be populated from the file StockName + .csv.

Example if "MSFT" is passed into the function.

StockName = "MSFT"

StockList = A list of strings that are the lines from the file "MSFT.csv"

Constructor(stockName, url)

Takes two parameters. StockName should be set to what is passed into the function in the first parameter.

A file should be downloaded from the url (second parameter) and named StockName + .csv like in the previous construction. If the file already exists it is deleted first.

StockList = A list of strings that are the lines from the file StockName + .csv

getClose(String: closeDate)

closeDate: is a string with a date in the format YYYY-MM-DD

This method should find the closing value for a stock in stockList for a given date and return that value. If there is no data for that date return "-1".

Return type is a string.

getOpen(String: openDate)

openDate: is a string with a date in the format YYYY-MM-DD

This method should find the open value for a stock in stockList for a given date and return that value. If there is no data for that date return "-1".

Return type is a string.

getStockList()

Returns stockList.

getStockName()

Returns stockName.

reduce(List: dateList)

dateList: is a List of dates in string form with the format YYYY-MM-DD

All records in stockList with a date not included in dateList are removed.

Return the number of records left in the list after removal.

Reduce function must traverse the list using a for loop with defined range that goes backwards.