**Objective:** Pull historical stock data from TD Ameritrade API, organize data into dataframes, do simple calculations with dataframe, put results of calculations into a different dataframe (df\_output), and save df\_output to xlsx.

**Pseudocode – Outline:**

Read “TD\_Hist\_Data.xlxs”, Column A, “Stock\_List”

Initialize df\_output, and include headers from “TD\_Hist\_Data.xlxs”

Add the Stock\_list from “TD\_Hist\_Data.xlxs” to df\_output in Column A

For each stock in Stock\_List:

Get historical data from API-

*(See: “TDA Hist Data instructions/parameters”, below)*

Format api data into dataframe, “df\_stock”:

*(See: “Sample df\_stock Format”, attached for format)*

*Note: Time is important, data being there doesn’t matter either way*

Perform some simple tasks:

if no time “9:30” in Column A of df\_stock

-Add stock to Column G

-in Column H & I, write “9:30 n/a”

Continue

bmo\_vol = sum of column “volume” in df\_stock, from row 2 until and not including 9:30

bmo\_high = highest high of column “high” in df\_stock, from row 2 until and not including 9:30

if bmo\_high > 1.00 and bmo\_vol > 250,000:

-Add “stock” to Column C in “df\_output”

-Add “bmo\_high” to Column D

-Add “bmo\_vol” to Column E

else:

-Add “stock” to Column G in “df\_output”

-Add “bmo\_high” to Column H

-Add “bmo\_vol” to Column I

Save “df\_output” as “output\_{today’s date}

***TDA Hist Data instructions/parameters:***

- <https://developer.tdameritrade.com/price-history/apis/get/marketdata/%7Bsymbol%7D/pricehistory>

Parameters:

periodType – day

period – 1

frequencyType – 1

frequency – 1