Homework 1
Aggregating data

Due August 29th by 11:59 PM
Submit assignment on Canvas
using the format hw1_lastName_firstName.py

Summary:

In this assignment you will create a python script that reads and summarizes stock data. The script will calculate basic summary statistics for each stock, which will then be reported on the screen.

Homework Instructions:

Create a Python script that computes summary statistics for a group of stocks from a file of trading data.

Your program should do the following:
1. Read 5 years of monthly stock data for 10 companies from *yfinance*
2. Calculate the following for each stock:
   a. Number of months the stock traded
   b. Average trade volume
   c. Average dollar volume
   d. Average monthly return
   e. Standard Deviation of monthly returns
   f. Geometric return over the time period
   g. Print the summarized data to the screen
3. After printing the summarized data to the screen:
   a. Find the stock with the highest average return
   b. Find the stock with the highest standard deviation
   c. Find the two stocks with the highest correlation
   d. Find the two stocks with the lowest correlation
   e. Print this data to the screen
4. Time the script (link 2), and report the length of time to the screen.

Grading Process

I will award points according the rubric in the syllabus, which emphasizes good programming practices. Make sure to use comments where applicable, and that the code is organized.