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CS 110

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CS 110 Final Project Report

**Overview and Summary of Project**

My program asks and takes 3 inputs of different stock tickers from the user and gets the history of each stock. I used yfinance rather than importing CSV files. Once it gets the history of each stocks starting from January 21st , which is the day that the first case of coronavirus was announced in the US. It prints then the history of each for the user. Text

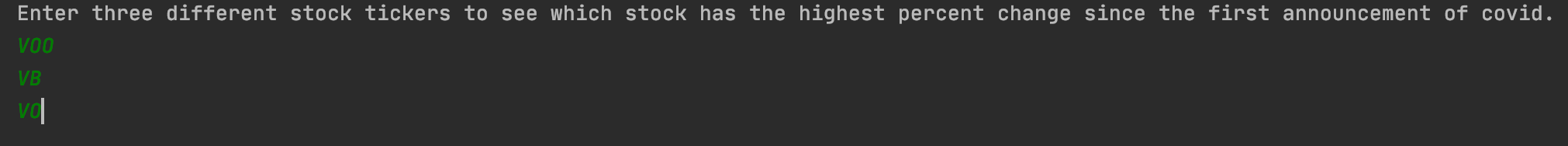
Description automatically generated

It then gets the closing prices from the 21st of January and the closing prices from the last imputed date and calculates the percent change for each ticker. Text

Description automatically generated

The code then places each ticker the user wrote to correlate with each percent change. The code then places each percent change into a for loop to compare and find the one with the highest percent change. Then prints out which stock had the highest percent change.Text

Description automatically generated

This is what the user will see with a sample imput of VOO,VO,VB. The Vanguard S&P 500, MID CAP and SMALL CAP index funds. 

Graphical user interface, text

Description automatically generatedGraphical user interface

Description automatically generatedText

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**Target Audience**

The target audience for my program would be any investor or analyst or even journalists who want to know what stocks the best since covid has started. Maybe not as many analysts because this only shows which out of 3 stocks has had the greatest increase and not any other variables. Smaller investors could use this and get

**Specific Programming Techniques Used**

Some examples of the programing techniques and tools I used were the libraries. I used yfinance, pandas, and pprint. Some other libraries I was going to use were graphics, pickle, math and csv. I also used for loops, lists, dictionary and conditional statements. The data was collected through a library called yfinance and analyzed using basic math.

**Challenges**

Challenges I faced in my design were finding out a way to get any stocks data because at first I was going to use csv files and only have specific stocks but I was able to use the yfinance library and have the user input the stock tickers they wanted. Another challenge was after getting the stock names that were imputed to correlate to the percent changes and I fixed this with a dictionary. One more challenge was printing the highest percent change and it kept giving me an error and I did not know what was going on. I was able to fix it by changing highest percent change to a string. I also had trouble printing anything after my last for loop but was able to fix it by removing “return highestpercentchange” it did not give me an error but just wouldn’t work and I could not figure out why. But since the variable was not a local one I did not need that.

**Future Extensions**

Possible extensions and improvements I could make is to have it so it can compare an infinite amount of stocks rather than just three. I could also have it compare different values other than the closing prices. I could also have it where the user can choose when to have the starting date of the data rather than just have it on the 21st of January. I could also add an option to just find the percent change of multiple stocks rather than comparing, or compare and tell all the values of each stock.