

Title: Task B-1 Report**Author:** Robin Findlay-Marks, s103603871**Task information:**

I found this task to be fairly straightforward. For the candlestick chart, I used the mplfinance from the provided tutorial to make the code. As for the boxplot chart, I used matplotlib to make the boxplot chart. Both the code for the candlestick and boxplots were very, short and straightforward so I believe there is little explanation needed. Both the candlestick and boxplot chart functions (plus included comment explanations) can be seen in figure 01

```
353 def candlestickChart(filename):
354     # Get data
355     df = checkFiles(filename)
356
357     # Make it know that the date column is indeed a date
358     df['Date'] = pd.to_datetime(df['Date'])
359     # Set the index of the dataframe to be the date column
360     df = df.set_index(df['Date'])
361     df = df.sort_index()
362
363     # Get the last n days
364     actual_prices_small = df[-NDAYS:]
365
366     # Plot the candlestick chart
367     mpl.plot(actual_prices_small.set_index("Date"), type="candle", style="charles", title='Candlestick Chart')
368     # Uses mplfinance to make the candlestick chart
369     # uses the date column as index
370     # uses the 'charles' stle to make the decreasing days red and increasing days green
371
372 def boxplotChart(filename):
373     # Get data
374     df = checkFiles(filename)
375     # Get the last n days
376     actual_prices_small = df[-NDAYS:]
377
378     # Plot the boxplot chart
379     fig = actual_prices_small[['Open', 'Close', 'Low', 'High']].plot(kind='box', title='Boxplot Chart', grid=True)
380     # Uses Matplotlib to make the boxplot chart
381     # uses grid=True to make a grid so the chart is easier to read
382
383     # Add axis labels
384     plt.xlabel("Stock Data Type")
385     plt.ylabel("Price")
386
387     # Display the plot
388     plt.show()
```

Figure 01

I also restructured the functions from the previous task, made some improvments and I noticed an issue that has now been fixed.

There is now a parameters.py file, that is used to modify the parameters of how the program will run. Additionally the diferent modes of the program are now changd with a single 'MODE' variable and the program uses a switch to pick the correct mode

Example of candlestick chart can be seen in figure 02

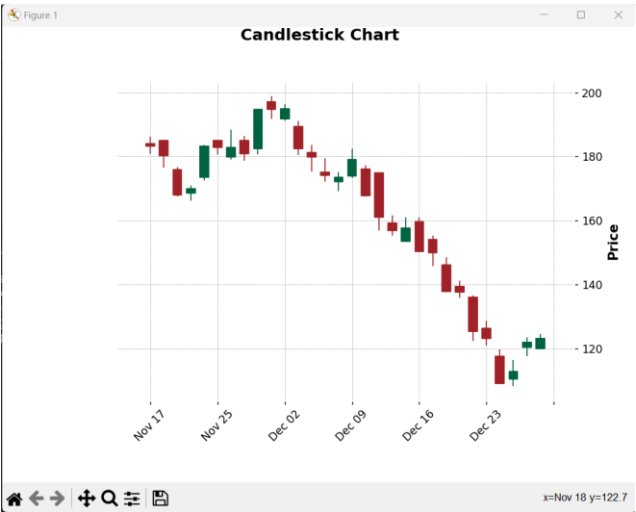


Figure 02

Example of boxplot chart can be seen in figure 03

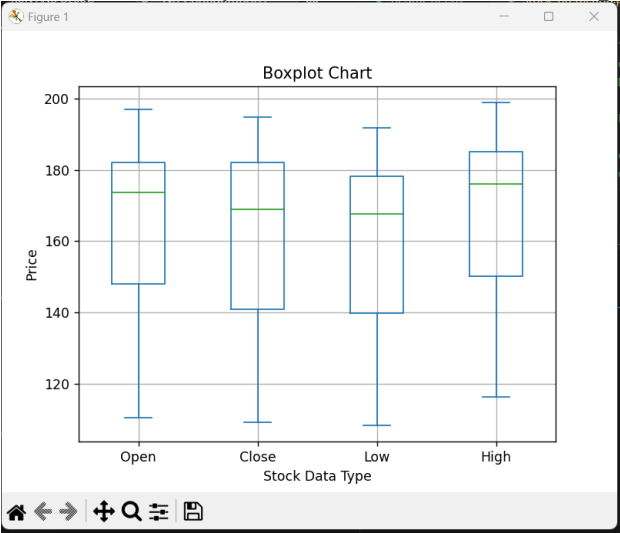


Figure 03