Assessment Submission Form

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Student Number	20200235
Assessment Title	Programming for Analytics - Individual assignment
Module Code	MIS 41110
Module Title	Programming for Analytics
Module Co-ordinator	Prof. Darren Redmond
Tutor (if applicable)	
Date Submitted	06/12/20
Date Received	
Grade/Mark	

A SIGNED COPY OF THIS FORM MUST ACCOMPANY ALL SUBMISSIONS FOR ASSESSMENT. STUDENTS SHOULD KEEP A COPY OF ALL WORK SUBMITTED.

Procedures for Submission and Late Submission

Ensure that you have checked the School's procedures for the submission of assessments.

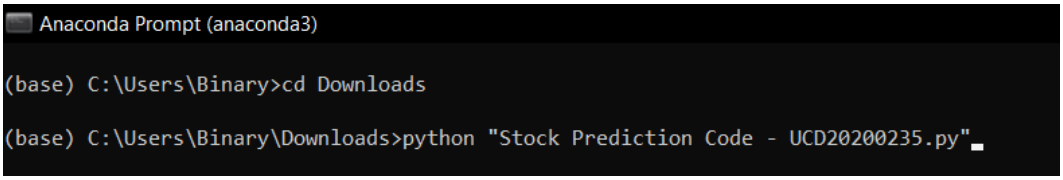
Note: There are penalties for the late submission of assessments. For further information please see the University's ***Policy on Late Submission of Coursework***, (http://www.ucd.ie/registrar/)

Plagiarism: the unacknowledged inclusion of another person's writings or ideas or works, in any formally presented work (including essays, examinations, projects, laboratory reports or presentations). The penalties associated with plagiarism designed to impose sanctions that reflect the seriousness of University's commitment to academic integrity. Ensure that you have read the University's ***Briefing for Students on Academic Integrity and Plagiarism*** and the UCD ***Plagiarism Statement, Plagiarism Policy and Procedures***, (http://www.ucd.ie/registrar/)

❖ **Step 0**

Download the '*TickerSymbol.xlsx*' and '*dateMap.xlsx*' files along with the python script "*Stock Prediction Code – UCD20200235.py*" and save it to a directory.

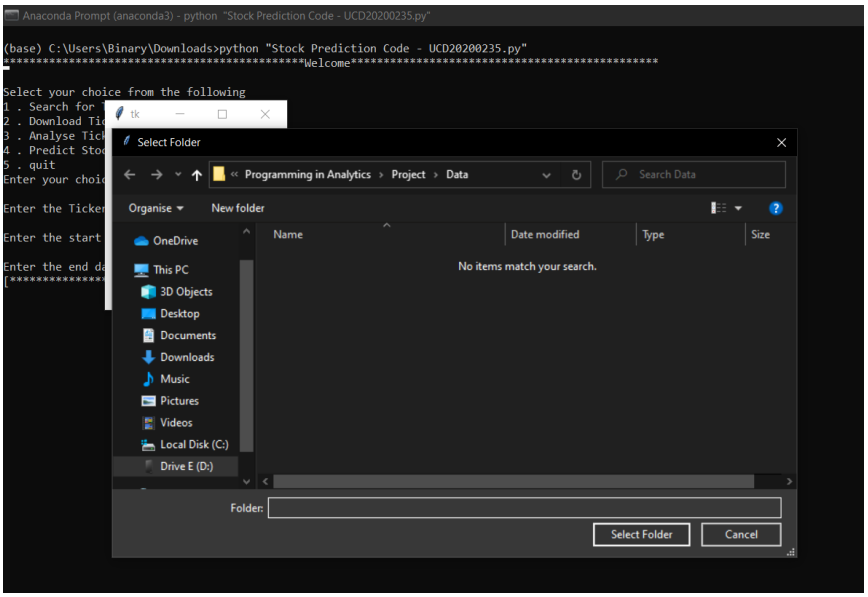
❖ **To run the python file**



Find where you have saved the python file. Open the Anaconda Prompt and type the directory after "cd" command and press enter. In the next line, type python "*Stock Prediction Code – UCD20200235.py*" and press enter. The python script will be triggered.

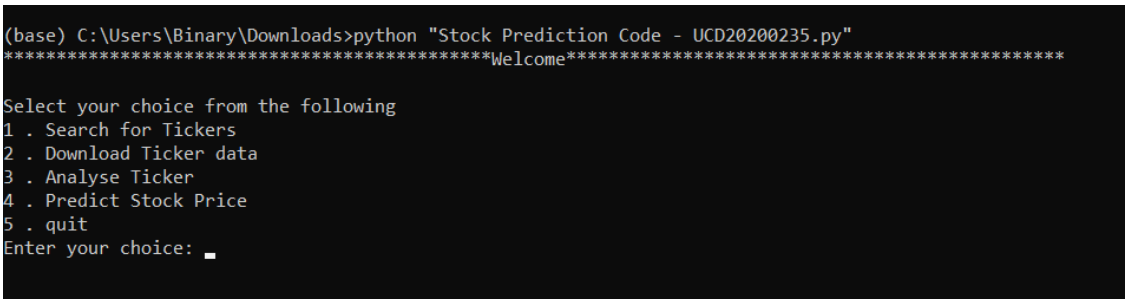
❖ **To set the working directory**

Once the python code is triggered, the user will be greeted with a welcome message and a dialog box will appear prompting the user to select the path. Select the folder in which you have saved '*TickerSymbol.xlsx*' and '*dateMap.xlsx*' files and press 'Select Folder'



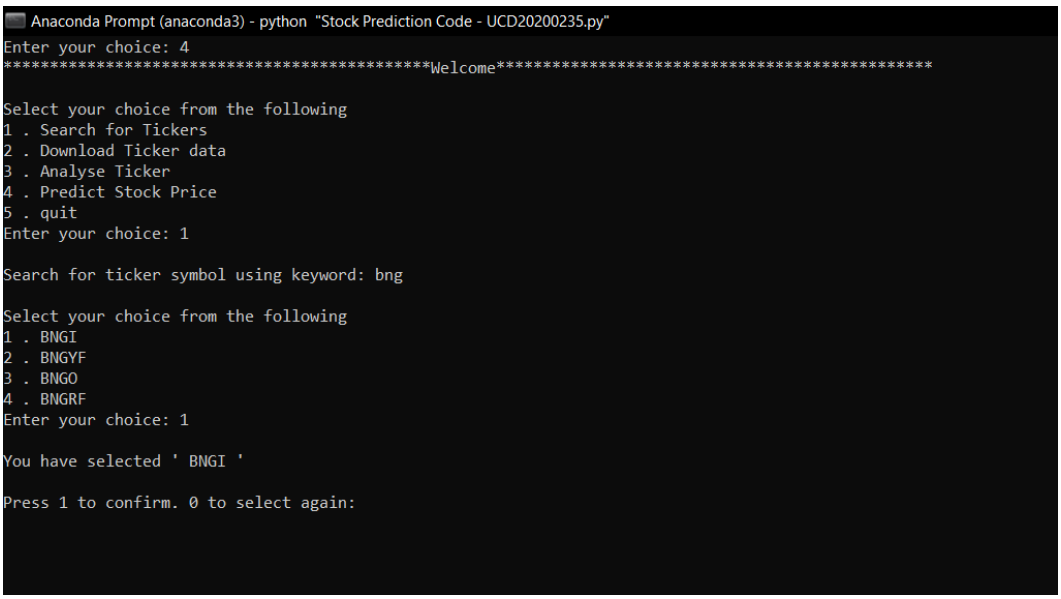
❖ **Navigating through the Main Menu**

The user will be presented with a list of options and will be prompted to choose one of those options. Enter the number corresponding to the option you prefer. Eg: Entering '1' will enable the user to search for Ticker Symbols



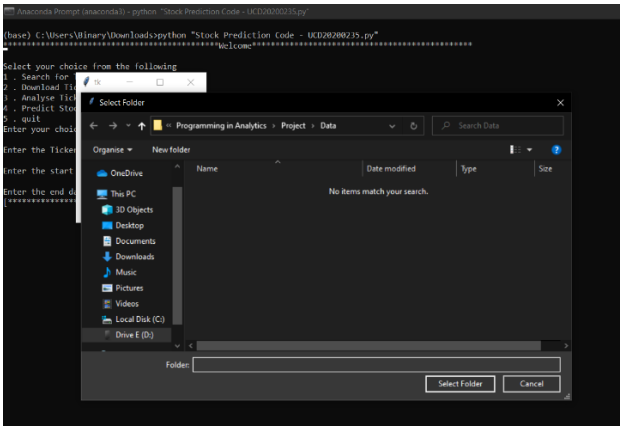
❖ **To search for Ticker Symbols**

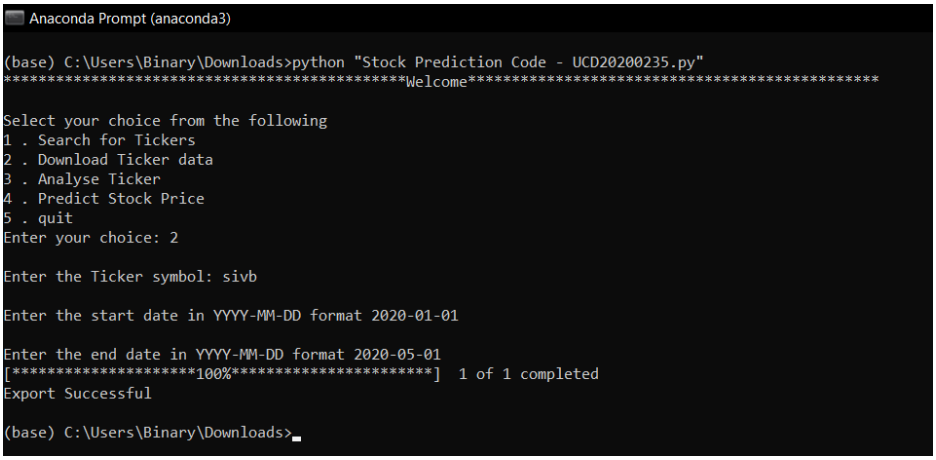
1. Press 1 in the Main menu
2. Enter the Keyword
3. Enter the Ticker option form the displayed choices
4. Once the user selects the Ticker of their choice, they will be prompted to confirm their selection. Entering 1 will confirm the selection while 0 will enable the user to select again.



❖ **To Download data**

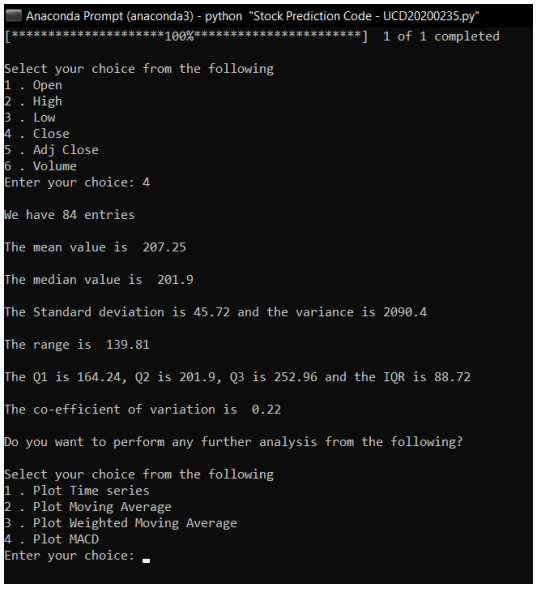
1. Press 2 in main menu
2. Enter the Ticker Symbol
3. Enter the Start and End Date
4. Select the working directory when prompted
5. The data will be exported to the selected directory

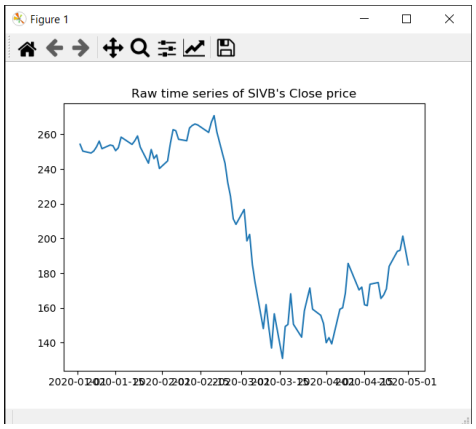




❖ **To Analyse the data**

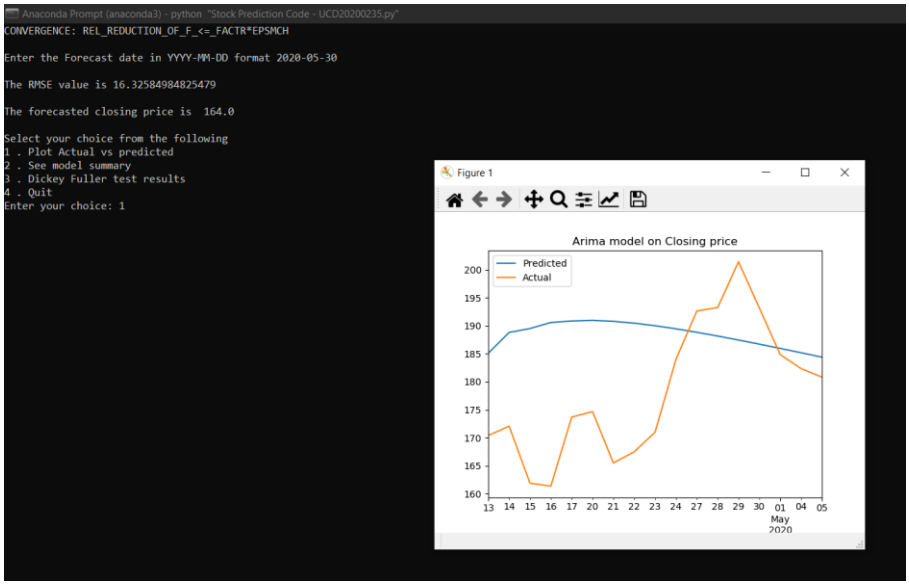
1. Press 3 in the main menu
2. Enter the Ticker Symbol
3. Enter the Start and End Date
4. Select the column you wish to analyse. The user will be presented with basic statistics of the column
5. Post that, the user will be prompted to select their choice of further analysis. Selecting the desired option will provide the user with the required chart.
    - Press 1 for Time Series
    - Press 2 for Moving Average
    - Press 3 for Weighted moving average
    - Press 4 for MACD





❖ **To Forecast closing price on a particular date**

1. Press 4 in the main menu
2. Enter the Ticker Symbol
3. Enter the Start and End Date
4. Enter the Forecast date.
5. The user will be provided with the forecasted price as well as the RMSE value.
6. Further options to see the model parameters will be displayed.
    - Select 1 to see Actual vs Predicted graph
    - Select 2 to see the model summary
    - Select 3 to run the Dickey fuller test



The UML Diagram