

- **User Manual**

Given program helps the user to observe financial information such as stock price, moving average of stock price, predicted value of stock over a period and provides user to calculate returns for entered investment value. Initially when the program is executed, following screen appears for the user.

```
****Welcome To FinInfo Analytics****
      Select an option
1. Enter Company Name
2. Enter Company Symbol
3. List of Symbols
4. Exit
```

From this menu option, user can choose between given 4 options to move ahead in the program.

- **Observing Market Share and general company info.**

When option 1 is selected, it asks for user to enter the exact or some string of company name for which financial data is required. If company name does not match with any company name inside the list, user is again sent back to previous menu for searching the company. If some part of company is entered then a list of company is displayed, out of which user can choose the company based upon symbol.

```
Please enter: alphabet

Oops it doesn't look like a correct symbol - Looking For Anyone of these?

-----
248   Symbol                           GOOG
      Name                            Alphabet Inc.
      LastSale                         1032.48
      MarketCap                       $717.37B
      IPOyear                          2004
      Sector                           Technology
      industry                         Computer Software: Programming, Data Processing
      Summary Quote                    http://www.nasdaq.com/symbol/goog
249   Symbol                           GOOGL
      Name                            Alphabet Inc.
      LastSale                         1049.99
      MarketCap                       $729.54B
      IPOyear                          n/a
      Sector                           Technology
      industry                         Computer Software: Programming, Data Processing
      Summary Quote                    http://www.nasdaq.com/symbol/googl
dtype: object

-----
if not in the list? Hit 0 to try again OR any key to continue:
confirm the Company Symbol by entering :
```

If the user selects option 3, list of all the company symbols is displayed on the screen and option 4 exits the user from the program.

- **Opening Company website**

After correctly entering the company symbol, user could open selected companies' stock website by entering Y in the prompt as shown below. User is automatically directed towards the website when Y is entered and if N is entered, user is further presented with a menu option to move ahead in the program.

```
55  Symbol          ACN
    Name           Accenture plc
    LastSale        144.04
    MarketCap      $91.5B
    IPOyear        2001
    Sector         Miscellaneous
    industry       Business Services
dtype: object

Do you want to go to company link for some more info? (Y/N): Y
opening url
Company symbol is : ACN
```

Accenture plc Class A Ordinary Shares (Ireland) Quote & Summary Data

ACN \$147.63 \* 0.52 ↑ 0.35%

\*Delayed - data as of Nov. 24, 2017 - Find a broker to begin trading ACN now

Edit Symbol List    ACN    GOOGL    AAPL

Symbol Lookup     Save Stocks

When user chooses to return to the program or presses N while being asked to open the company link, a menu option is presented which further asks user to choose between Financial details of the company and stock prediction related data,

When user chooses Financial details, user is again presented with a menu option to observe basic financial details like mean value of the stock, volume of the stock, min value, max value etc. over certain period frame available in the menu.

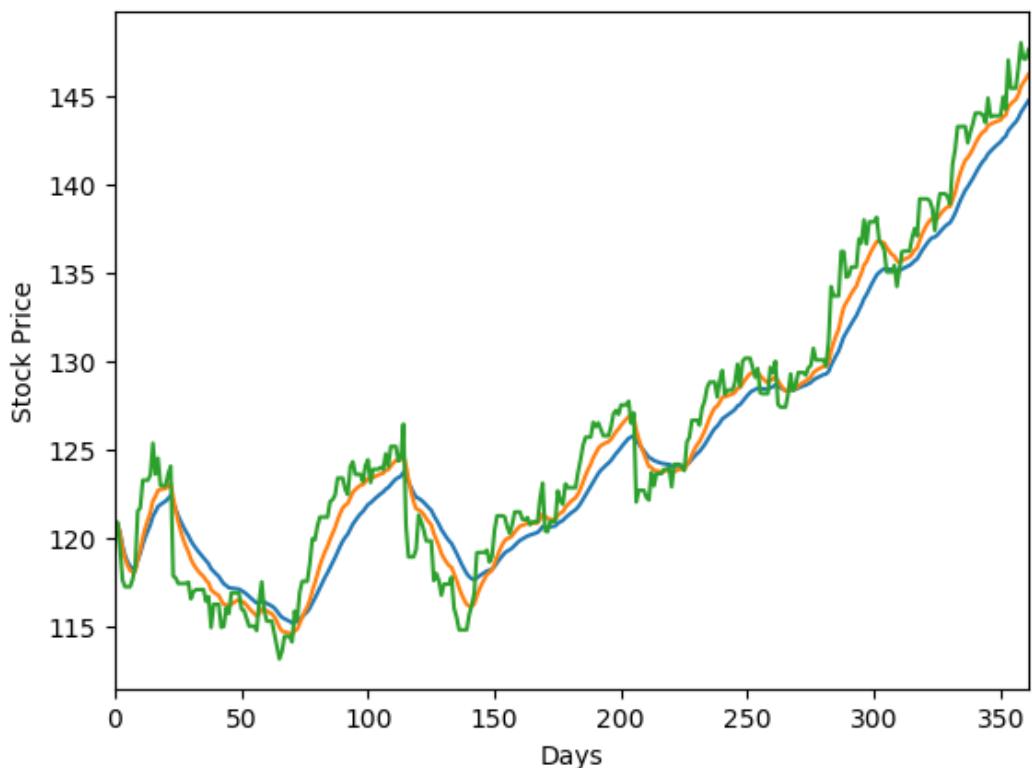
- Other Financial details.

```
Please select from the below options to see finance details :
```

1. Basic Financial Details
2. Other Financial Details
3. Go back to previous menu
4. Exit

In other Financial details menu, user can observe advanced financial data such as moving averages for user selectable-n, MACD values, weighted averages and coefficient of variation etc.

1. Moving Average
2. Weighted Moving average
3. MACD(Moving Average Conversion Diversions)
4. Coefficient of Variation
5. Go Back To previous Menu
6. Exit



Graph showing weighted fast and slow averages of stock price with respect to cost trend over time.

- **Prediction Model**

If the user chooses Prediction model related menu option, user is first asked to input the percentage of data between 0-99, to be used for training the model and then it can be used to observe trend of the stock price with time series graph, regression graph and a predicted value of stock for a user selectable date.

- ```
1. Check Cost Trend  
2. Regression Graph  
3. Predictor  
4. Calculate returns  
5. Go Back to previous menu  
6. Exit
```

```
Enter the date for which you want prediction in MM/DD/YYYY format: 12/12/2017  
Predicted value at 12/12/2017 for selected company is $151.437300  
R Squared Value is : 0.80756685276  
Mean Squared error Value is : 4.06715534642
```

User can also observe an approximate return on a value which can be entered by selecting Calculate returns from the prediction model menu.

```
Please Enter the Amount You want to invest: $1000  
Enter till when you want to invest in the format MM/DD/YYYY :12/12/2017  
Current Stock Price: $ 147.63  
Future Stock Price: $ [ 151.43730009]  
Roi is: $ [ 1025.78947431]  
Profit is: $ [ 25.78947431]
```

If user selects option 5, it takes back to the previous menu and option 6 exits the program.

----- UML BELOW -----

