

### **Stock Trading System:**

My parent is passionate about the stock market since I was little. I would like to write a program from them to get the stock data and simple analysis easily. Also, I would like to add function to forecast the stock price by different financial methods. After the project, I will give them as a gift, to thanks them supporting me for the MIDS program.

(1)

**class Stock:**

'''the information of the stock.'''

**def \_\_init\_\_(self, symbol, start\_year, end\_year):**

**def getData(self):**

'''Get data of the stock, such as Open Price, Volume'''

**def output\_To\_Csv(self):**

'''Out the stock data as stock\_data.csv file'''

(2)

**class Plot:**

'''Visualizing the Data'''

**def \_\_init\_\_(self, stock1):**

**def plotOpen(stock1):**

'''Plot the Open Price of one stock'''

**def plotVolume(stock1):**

'''Plot the Volume of one stock'''

**def plotTotalTraded(stock1):**

'''Plot the Total Traded of one stock'''

**def plotMovingAverages(stock):**

'''Plot the Moving Averages of one stock'''

(3)

**class Plot3Stock(Plot):**

'''Visualizing the Data for 3 stock'''

**def \_\_init\_\_(self, stock1, stock2, stock3):**

**def plotOpen(stock1, stock2, stock3):**

'''Plot the Open Price of three stock'''

**def plotVolume(stock1, stock2, stock3):**

'''Plot the Volume of three stock'''

**def plotTotalTraded(stock1, stock2, stock3):**

'''Plot the Total Traded of three stock'''

**def plotScatterMatrix(stock1, stock2, stock3):**

'''Plot the ScatterMatrix of three stock'''

(4)

**class Analyze:**

    '''Analyze one stock'''

**def \_\_init\_\_**(self, stock1):

**def dailyPercentageChangeHist**(stock1):

        '''Plot the daily Percentage Change Histogram of one stock'''

**def dailyPercentageChangeBox**(stock1):

        '''Plot the daily Percentage Change Box of one stock'''

**def cumulativeReturn**(stock1):

        '''Plot the Cumulative Return of one stock'''

(5)

**class Analyze3Stock(Analyze):**

    '''Analyze 1~3 stock'''

**def \_\_init\_\_**(self, stock1, stock2, stock3):

**def dailyPercentageChangeHist**(stock1, stock2, stock3):

        '''Plot the daily Percentage Change Histogram of three stock'''

**def dailyPercentageChangeBox**(stock1, stock2, stock3):

        '''Plot the daily Percentage Change Box of three stock'''

**def dailyPercentageChangeScatterMatrix**(stock1, stock2, stock3):

        '''Plot the Daily Percentage Change Scatter Matrix of three stock'''

**def cumulativeReturn**(stock1, stock2, stock3):

        '''Plot the Cumulative Return of three stock'''