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Stocks Analysis Program

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STOCKS ANALYSIS PROGRAM

USER MANUAL

PART 1

HOME SCREEN

When you start to run the program, the program will start and show the USER MANUAL SCREEN of the software, as shown in Figure-1.1.

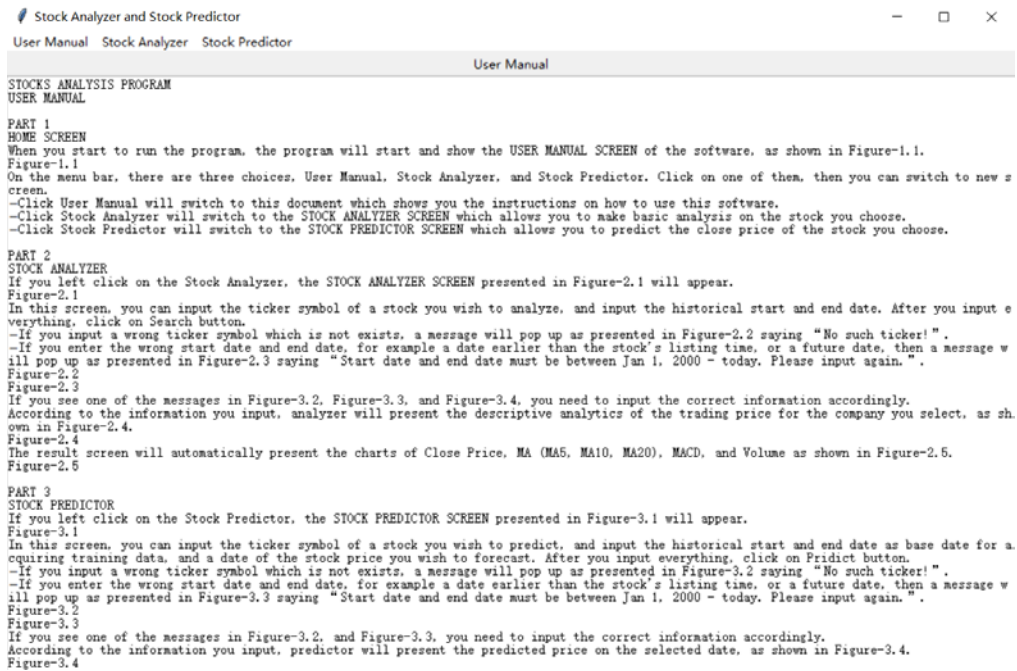


Figure-1.1

On the menu bar, there are three choices, *User Manual*, *Stock Analyzer*, and *Stock Predictor*. Click on one of them, then you can switch to new screen.

- Click *User Manual* will switch to this document which shows you the instructions on how to use this software.
- Click *Stock Analyzer* will switch to the STOCK ANALYZER SCREEN which allows you to make basic analysis on the stock you choose.
- Click *Stock Predictor* will switch to the STOCK PREDICTOR SCREEN which allows you to predict the close price of the stock you choose.

PART 2

STOCK ANALYZER

If you left click on the *Stock Analyzer*, the STOCK ANALYZER SCREEN presented in Figure-2.1 will appear.

The screenshot shows a web application window titled "Stock Analyzer and Stock Predictor". The window has a navigation bar with links: "User Manual", "Stock Analyzer", and "Stock Predictor". The main content area is titled "Stock Analysis" and contains a form with the following fields:

- Ticker**: A single text input field.
- Start Date**: A date selection interface with three input fields labeled "Year", "Month", and "Day".
- End Date**: A date selection interface with three input fields labeled "Year", "Month", and "Day".
- Search**: A button located below the date fields.

Figure-2.1

In this screen, you can input the ticker symbol of a stock you wish to analyze, and input the historical start and end date. After you input everything, click on *Search* button.

- If you input a wrong ticker symbol which is not exists, a message will pop up as presented in Figure-2.2 saying "No such ticker!".
- If you enter the wrong start date and end date, for example a date earlier than the stock's listing time, or a future date, then a message will pop up as presented in Figure-2.3 saying "Start date and end date must be between Jan 1, 2000 - today. Please input again.".

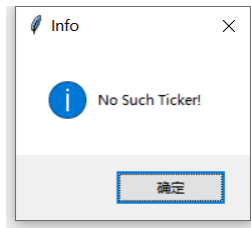


Figure-2.2

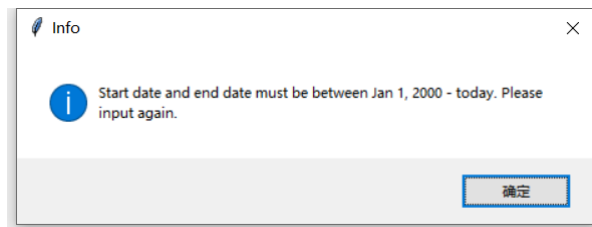


Figure-2.3

If you see one of the messages in Figure-3.2, Figure-3.3, and Figure-3.4, you need to input the correct information accordingly.

According to the information you input, analyzer will present the descriptive analytics of the trading price for the company you select, as shown in Figure-2.4.

xom	2001-01-05 00:00:00	2002-01-05 00:00:00
	Close	Volume
count	248.000000	2.480000e+02
mean	41.249980	1.149989e+07
std	2.200794	3.298661e+06
min	35.830002	4.286300e+06
25%	39.855000	9.452975e+06
50%	41.245001	1.097110e+07
75%	42.880001	1.305185e+07
max	45.775002	2.532260e+07

Figure-2.4

The result screen will automatically present the charts of Close Price, MA (MA5, MA10, MA20), MACD, and Volume as shown in Figure-2.5.

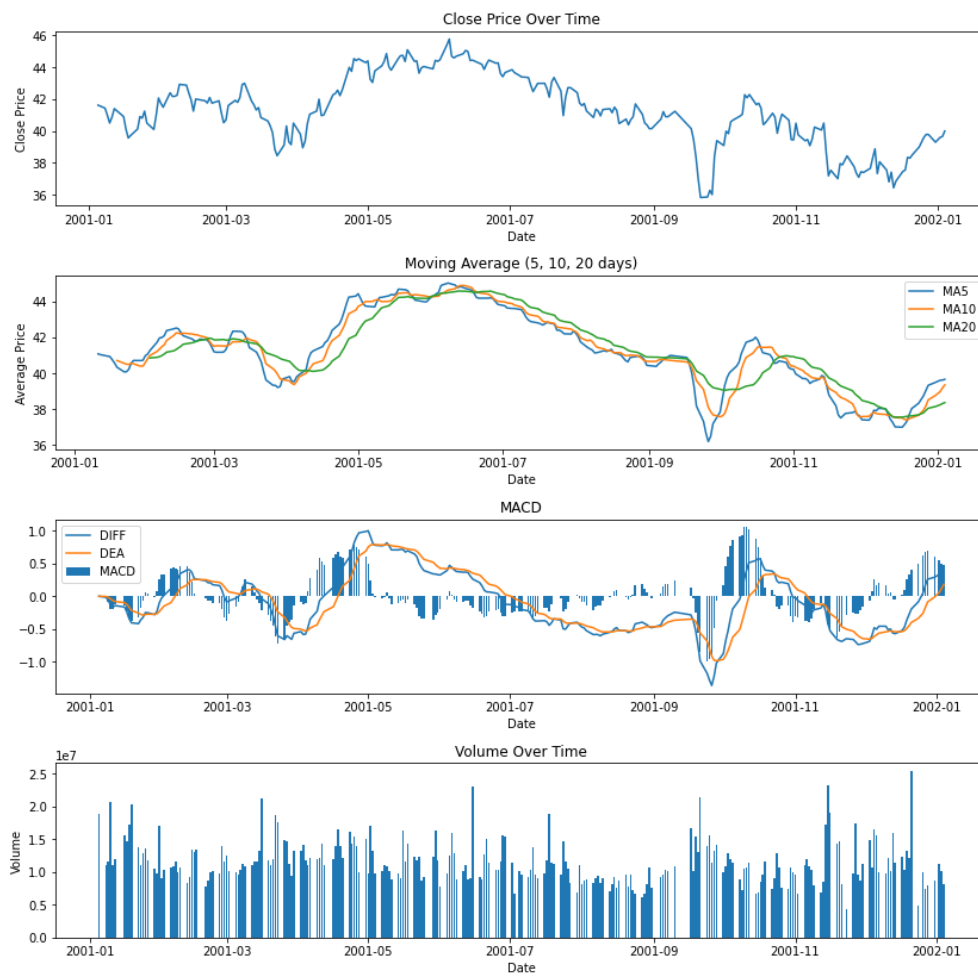


Figure-2.5

PART 3

STOCK PREDICTOR

If you left click on the *Stock Predictor*, the STOCK PREDICTOR SCREEN presented in Figure-3.1 will appear.

The screenshot shows a web application window titled "Stock Analyzer and Stock Predictor" with a navigation bar containing "User Manual", "Stock Analyzer", and "Stock Predictor". The main content area is titled "Stock Prediction" and contains the following form elements:

- Ticker**: A single-line text input field.
- Start Date of Training Data**: A date selection interface with three input fields labeled "Year", "Month", and "Day".
- End Date of Training Data**: A date selection interface with three input fields labeled "Year", "Month", and "Day".
- Prediction Date**: A date selection interface with three input fields labeled "Year", "Month", and "Day".
- Prediction Result**: A label above a large, empty rectangular box.
- Predict**: A button located below the Prediction Result box.

Figure-3.1

In this screen, you can input the ticker symbol of a stock you wish to predict, and input the historical start and end date as base date for acquiring training data, and a date of the stock price you wish to forecast. After you input everything, click on *Predict* button.

- If you input a wrong ticker symbol which is not exists, a message will pop up as presented in Figure-3.2 saying "No such ticker!".
- If you enter the wrong start date and end date, for example a date earlier than the stock's listing time, or a future date, then a message will pop up as presented in Figure-3.3 saying "Start date and end date must be between Jan 1, 2000 - today. Please input again.".

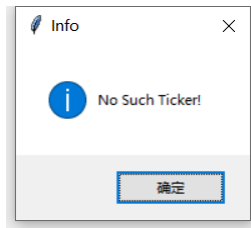


Figure-3.2

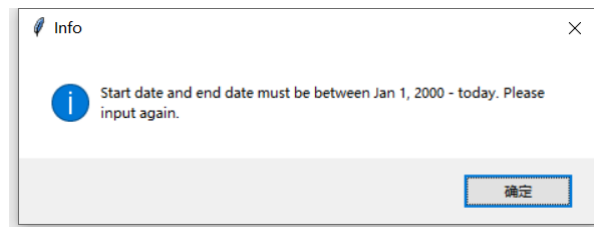


Figure-3.3

If you see one of the messages in Figure-3.2, and Figure-3.3, you need to input the correct information accordingly.

According to the information you input, predictor will present the predicted price on the selected date, as shown in Figure-3.4.

Prediction Result			
Linear Regression Model:			
Predicted Price:-25.083286225834854			
MSE: 3.854374885945022			
2: 0.2574426611506788			R
Non-linear Regression Model:			
Predicted Price: 25.365355008767665			
MSE: 3.808909130836115			
2: 0.5761502199723711			R
Predict			

Figure-3.4

