**Final Project for Programming Finance**

Name: Dazhi Li

NetID: dl939

The final project is like a stock management simulator. I have developed a few functions like randomly choosing stock price from two different stock price txt file. Also, I developed searching, buying, selling functions for user to manipulate their stock portfolio. Briefly speaking I have developed all the required functions in the final project requirements. Besides, I developed showing account value change graph for extra credits. The data structure I used is doubly linked list for storing stocks in stock portfolio account. I also use vector for storing stock price data read from stock price txt.

There are totally 7 txt files I used in my project:

Bank\_Transaction\_History.txt: This file will store the bank transaction history like deposit, withdraw and buy/sell stocks.

Portfolio\_Value\_Records.txt: This file will record every time a user does something in the system (Buy/Sell/Search) the total account value. And according to the recorded total value I draw a graph for showing visually value changes.

Result\_1.txt: Stock price in the first day

Result\_2.txt: Stock price in the second day

Stock\_Portfolio\_Account.txt: Storing the current cash balance the total value of the stocks in the account portfolio

Stock\_Portfolio\_Info.txt: Storing the current stocks (including prices and stock name) in the stock portfolio account

Stock\_Transaction\_History.txt: Storing the stock transaction (Buy/Sell) history

Important to know:

I have used third party library for drawing the graph, when do compiling:

If you are on Linux/MacOS system: please use g++/gcc dynamic linking library compiling include the MatPlot.dll and MatPlot.lib

If you are on Windows system and using Visual Studio: I guess just open the FinalProject.sln file will be fine, if not please select the linker input to the MatPlot.lib and include the MatPlot.h file.

Extra Features:

Allow user simply choosing existing account or creating a new account. Please note that a new account will delete all the previous account information.