Giuseppe Bongiovi

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Final Project

Brief Description

In my project, I have used various techniques to create the stock buying application. I have used inheritance to keep track of the total account cash balance of the stock portfolio and bank account. The two derived classes share a common variable that changes easily and is common to both of them. The majority of functions are contained in the stock portfolio class. The construction and persistant status of the portfolio requires a start up check. When a portfolio has been previously constructed the program can take a “AccountInfo.txt file and read it and update all variables exclusive to the portfolio which includes cash balance and a list of securities owned and the quantities of shares owned. On start up all stock prices are loaded so that the value of the portfolio can be easily updated without search through the use of pointers for the price variable. StockAccount contains buy functions, sell functions, a basic sort function, an add function for the linked list, an update stock\_transaction\_History.txt function that also updates the Bank\_Transaction\_History.txt file. For the general stockdata a class was created that contained three variables, the stock, the price, and the date(the date was not used) that was stored in an STL vector container. A pointer in the StockAccount Nodes was pointed at the vector container price variable for easy access without search after the initial search.

The two design principles followed was involved in the class implementation. The classes followed a family hierarchy using the inheritance principles learned. Variables were shared even on non-inherited classes, showcasing the power of the class structures. Another design principle used was involved in the creation of the main function. The main function followed a structure that contained a large outside wrapper, and then inside that wrapper contained the meat. Using the class structure the meat interacted with each other.