In doing this project I tried to show different capabilities of Python rather than concentrating on the capabilities of the program itself. I used different classes with inheritance and multiple inheritance. I also used a list, dictionary…etc.

The program represents a primitive functionality of a stock broker that supports adding investors, allowing investors to buy and sell stocks based on bid and ask prices from the market. It also allows listing the different investors and their stock and cash holdings.

The program stores all the data in a Sqlite3 database between sessions or invocations but to gain fast execution it stores the data in memory while running and writes it to the database for saving between sessions. If the database is empty it creates the necessary tables and looks for a Csv File which is named as Market_Quotes.csv and reads the stock prices from it and insert them into the database.

The program can be forced to discard all its data and reinitialize with empty tables by setting the variable reinitializeDB= True otherwise if it is set to False the program save the all its data to database.

The modules are imported Sqlite3, Datetime, and Csv

Problems

I coded the market as a list of objects of class stock then I converted it to use a dictionary where the key is the stock symbol and the value is the stock object. When accessing an entry in that dictionary by its symbol it returned the stock object as unknown class which was confusing and I had to research how to access its members.

While inserting the data into the database keeping track of the necessary quotation marks was confusing and of the necessity to convert float to string.

While coding the program if there were errors in the code that caused stopping the program before committing the data to the database then the database gets lock and I had to reset the kernel.