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**Stock Bot Documentation and Results**

One of the final pieces of the project was a Stock Bot in which we were to program, from scratch, a bot that would track stocks and tell users whether it was a good time to buy, sell, or wait. A .pdf file with instructions was used to program the Stock Bot and will be included for reference within the documentation files in GitHub.

**Current Result Graphs**

**Classes and Method Descriptions**

There are three classes associated with the current stock bot iteration. These classes run the bot, read data, or print a current date. The StockBot class is the one that runs the bot, the StockReader reads data and contains getter and setter methods, and the StockEvaluator returns a current stock result for a specific date (the closing and opening prices for the data). Each of these can come together to print information, calculate RSI (Relative Strength Index), and determine whether to buy, sell, or hold a stock.

* Methods in the StockBot class:
  + calculateRSI() – calculates the RSI for a given series of stock data. The RSI is calculated using formatting from the RSI site given within the instructions. The method takes two parameters, the first being the data list and the second being the quarter where the RSI is calculated (N value, or range or dates).
  + buySellHold() – determines whether the user should buy, sell, or hold their current stock based on the RSI that has been calculated. If the RSI is less than 30, buy. If the RSI is greater than 70, sell. Otherwise, hold. Takes RSI value as a parameter.
* Methods in the StockEvaluator class:
  + readData() – Takes a filename as a parameter and reads stock data from the file.
  + calculateMovingAverage() – Using the site provided within the instructions as guidance, the moving average was calculated to return an average across a specific range of values (very similar to a smoother function like those programmed within other parts of this project. I would like to reprogram a lot of this to work with my original smoother programs).
* Methods in the StockReader class:
  + getDate() – returns the date.
  + getOpenPrice() – returns the open price for the current date.
  + getClosePrice() – returns the closed price for the current date.
  + setDate() – sets the date to a new one passed as a parameter.
  + setOpenPrice() – sets the open price to a new one passed as a parameter.
  + setAdjClosePrice() – sets the closed price to a new one passed as a parameter.
  + toString() – this is an overridden method that prints the current stock data into the console in a formatted way. The date, closing price, and open price are displayed with labels when this method is called.