Sprint Overview

This sprint will be focused on beginning to implement the trading bot aspect of MaxTrade. This will include buying, selling, and analyzing current positions.
Some potential challenges of this sprint is that I will need to learn a new library called Qt for Python to implement the GUI aspect of the trader. Additionally, I will need to familiarize myself with the robin_stocks library.

Current Sprint Detail

Add Buy/Sell Bot

1. Setup Robinhood API to connect to user accounts.
    a. Import robin_stocks library
2. Allow user to securely log in
    a. Implement keyring library to store user password securely.
    b. Connect to robin_stocks with user info
    c. Provide way for user to enter MFA token
3. Find all user positions and display them (not gui)
4. Allow for manual input of stop losses and take profit % on each position w/ loop.
5. Sell if less than or equal to stop loss or greater than or equal to take profit

Given the selling feature being ready, if I buy a share of a cheap stock and set the stop loss to 0%, then I expect the bot to immediately sell my position.
Given the display feature working correctly, if I connect my account, I expect the bot to output all open positions.
Given the secure password feature working, if I open the program for the first time, I expect to have to login on the first attempt, and then the password to be automatically loaded using the keyring library.

Add Bot GUI

1. Add pyQT / qt to project virtual env.
2. Display positions in table format in gui window.
    a. Use qt QWidget module
3. Allow users to select position from table and set loss and gain, as well as for multiple positions.
    a. Turn cells into clickable buttons
4. Show that bot is running with a loading gif.
5. Text box with bot output (“Placed sell order for this position”)

Given the GUI window to be working, if I run the program, I expect to be able to see all open positions in a table format.
Given the buttons are working, if I click on a position, I expect a textbox to appear asking for stop loss and gain.
Given the bot runs continuously, if I buy a share of a cheap stock and set the stop loss to 0%, then I expect the bot to immediately sell my position.

Backlog

1. Add the ability to buy stock/option when the asset reaches a certain price. 2. First do this without gui, create “watchlist” and query prices from yahoo each loop. When it reaches the specified price place buy order.
1. Add bot entering at specific price to GUI. 2. Add text entry box where stock ticker is entered, and additional box for price of entry, as well as whether to buy options or stock.
1. Begin working on the scanner aspect. Add different things which the user can select (Volume, price, IV percentile, RSI, MA) 2. Query yahoo finance to get price data for each ticker, begin with most exclusive factors like price. 3. Print output as “watchlist”
1. Add GUI interface to scanner. 2. Add Scanner tab to application. 3. Add sliders for each factor, as well as a text box. 4. Add a scan button, with loading gif. 5. Add output box for results, and option to save to file.
1. Begin working on the analysis portion. 2. Set up AWS server 3. Add mysql database to it 4. Begin pulling and storing data in database
1. Create another tab in GUI for analysis. 2. Create a basic graph using a ticker and queried data.
1. Add overlaying MA to graph. 2. MA will be calculated client side.
1. Add Volume subgraph underneath current graph. 2. Add RSI graph option to graph
1. Pull news feed from morningstar and place it on GUI interface.