For our semester project we would like to create a Python script to be used for automated stock and cryptocurrency trading. The main objectives of this script will be to: 1) apply user-written stock trading strategies to past OHLC (Open-High-Low-Close) data of user-selected stocks 2) apply strategies to current OHLC data 3) buy/sell stocks according to these strategies.

The bulk of the code will be written using the Pandas and Backtrader Python libraries. Pandas will be used to create and visualized trading strategies which will tell the user when to buy or sell based on various market indicators. Backtrader will be used to submit those buys or sells and connect the script to the market using Alpaca Paper Trading APIs.

This script is useful for those who want to be able to competitively trade but do not have the time or resources to watch stock prices all day long. This will allow those people to do their own research on stocks and price move indicators and apply them to different stocks once and allow the program to do the trading.

The completion of this project will be marked by a code that can successfully apply different strategies to different past OHLC data, apply different strategies to current OHLC data, buy and sell stocks, and can connect a user’s Alpaca account to the stock market.

A successful outcome would include all of the aforementioned qualities as well as hold at least five different strategies with a success rate of 70% or higher when applied to at least five different stocks.