

Mary Vange

CMPT 220

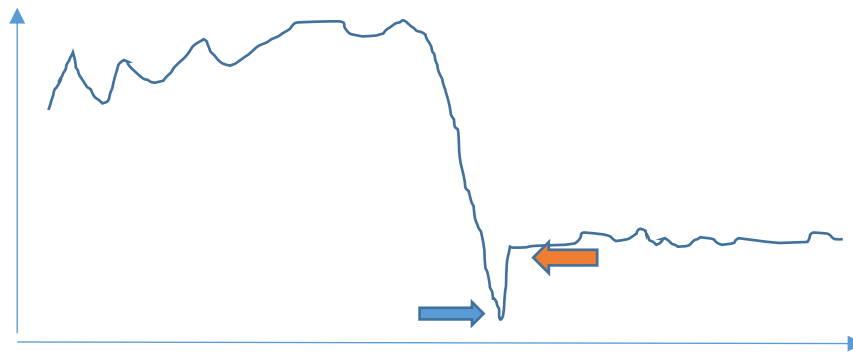
Project 2

Gap Down Trading Method

Introduction

I plan to create code that can call information on stocks from Yahoo Finance and then use this information to buy, sell, or hold stocks. I want to use the Gap Down method to make profits on the stock market.

A “gap down” is when a stock’s price falls significantly. My code will tests companies for gap downs by showing whether or not their price has fallen 15% or more. The theory is that once a significant gap happens, you can buy at the lowest point and then sell once it rebounds, therefore making a profit.



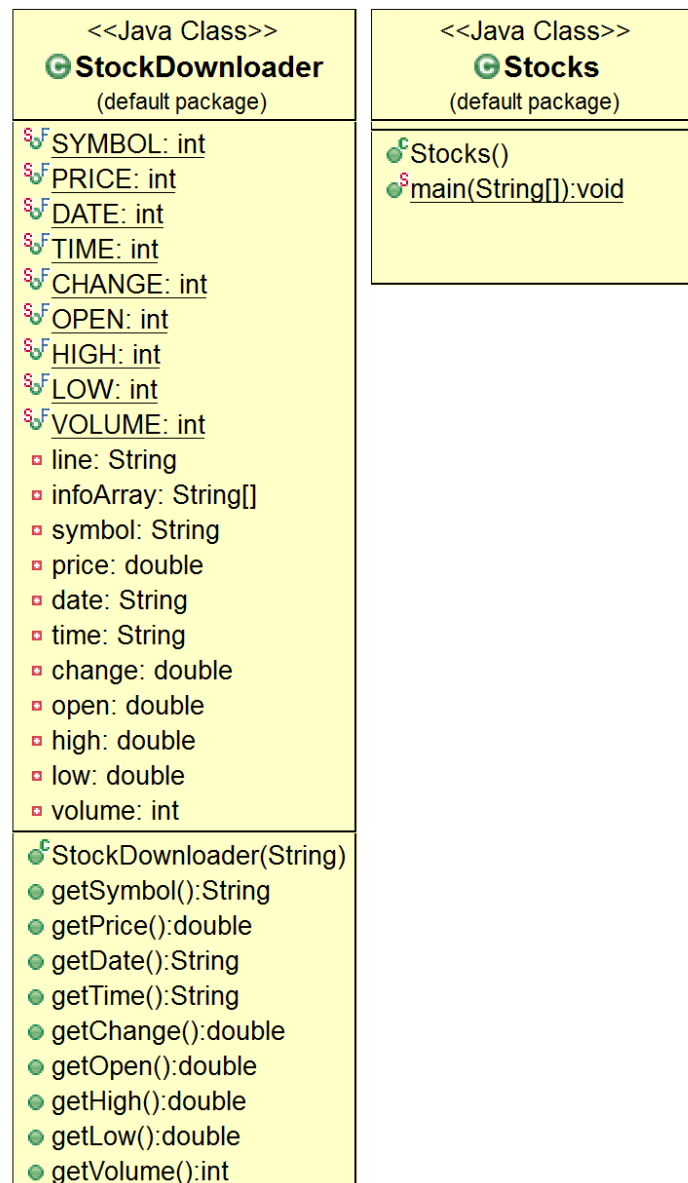
In the graph above, this is the usual pattern. If an investor can buy at the blue arrow and sell at the orange arrow, when the price begins to stabilize, then they can make a profit. This gap down happens because people are not rational. Usually, when bad news comes out, there is an overreaction in the market, and then there is a re-adjustment (where the orange arrow is). If I can profit off of this pattern by detecting when a stock drops 15% or more, buying at the low point, detect when it rises 10% or more from that low point, and sell, then I can make a considerable amount of money by repeating this

process. My code will alert the user when the stock has gapped down, when it has rebounded, and when there hasn't been a significant change.

An investor could use my code in a few ways. If they see that there are companies that have come out with bad news, when the markets were closed, then they can use my code first thing in the morning to check if the bad news had produced a gap down.

Detailed Systems Description

UML Diagram:



Things to Add:

So far I am happy with the program but it is simple. Here are some things I'm working on adding but I'm not sure if they will be possible without more advanced systems:

- I'd like for the program to run continuously-updating every 10 minutes- but my laptop doesn't have that capability. If it ran continuously, it would check for gap downs every 10 minutes, and I'd be able to take advantage of a gap down during the trading day instead of a gap down that happens overnight. I specify 10 minutes because the drop in price needs at least 10 minutes for news to come out, traders to react, and the price to fall 15% so that my program can detect it.
- I wish there was a way to store previous historical prices on stocks (I could create an array, which I've tried, but there are just too many stocks and a lot of constantly updating information). Historical prices would help me have a better understanding of how the stock moves – if its price is \$1, then a 15% change isn't that significant.
- I want to include a way of averaging out prices too:



If I could store the historical data of price movements of every minute and then calculate the variance of these movements, I could see that the price is plateauing and that I should sell.

In addition, I could average it out and sell at a peak of the plateau (which in finance is called support- the line where the price can't seem to break above- the green line of the graph). Once the price gets as close to the green line as possible, I would sell.