

the basics of trading

Trading is a common occurrence in everyday life. Whether it's swapping players on a fantasy team or purchasing groceries at a market a trade is always being made. We will be focusing on the trading that occurs in the financial markets. In the old days this type of trading was done at a centralized location in the "trading pit" with buyers and sellers yelling across the room at each other. Now on any given day there are millions of things that can be traded at exchanges around the world just from a phone. Here in Chicago we like to trade commodities like barrels of oil and bushels of wheat on the futures and options exchanges. In London they like to trade different currency pairs in case you need to swap US dollars for British pounds or Japanese yen. Most familiarly though is the trading of stocks. This happens maybe most notably in New York, but it occurs in many different cities and countries around the world.

Owning shares of Apple stocks means that the investor *owns (a very small) portion of the entire* Apple company. This comes with certain privileges including having a say in how the company is run at shareholder meetings as well as sharing in the profits the company makes in the form of quarterly or yearly dividends. But sometimes people want to make a quick buck instead of waiting around for Apple to report their earnings and dole out the profits. *That's when the investor becomes a trader and sells the stocks for a (hopefully higher) price.*

Consider the scenario where Alan buys a single share of Apple stock (ticker:AAPL) at \$180 and later that day is able to sell the same stock for \$185. Rather quickly Alan has made a \$5 profit for a 2.7% gain in a day. If Alan can repeat this every day with more and more shares he will be a very rich man. Unfortunately this is not an easy task.

We want to **Buy** and **Sell** stocks.

Here is an example of **Market Data**:



A **Buy Order** has the two pieces of information:

(number of shares to buy, time)

A **Sell Order** has two pieces of information also:

(numbers of shares to sell, time)

questions

1. If you have \$100, create a list of buy orders and sell orders that maximizes your profit.
 - a. Try with 1 buy and 1 sell
 - b. Try with 10 buys and 10 sells.
 - c. Try with unlimited buys and unlimited sells
2. How can you track your buy and sell orders?
3. How are you deciding when to buy and sell?

Let's start coding:

In the folder trading/ there are three files to look at:

Python

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starter-data.csv  
trades.csv  
worksheet_1.py
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starter-data.csv has market data

trades.csv has a series of buy/sell orders

worksheet_1.py a trading simulator

At the bottom of the worksheet_1.py simulator, you will see buy and sell orders.
Implement your strategies on the simulator.