# CST126

## Lab 2 – Stock Picker

In this lab you will create a program that prints stock information.

### Input

This lab will use a comma separated input file quotes.csv. The format of the file is:

|  |  |  |
| --- | --- | --- |
| Description | **Type** | **Comments** |
| Stock Symbol | 1-4 characters |  |
| Stock Name | Up to 25 characters | The Stock name is surrounded by quotes. IE “Mentor Graphics” |
| Price | Double |  |
| Earnings | Double | Earnings per share |

### Logic

In this program you will practice using classes, reading from an input file and using string object and cstring functions. You will have a new class for stock information. This class should have a separate stock.h for the interface and stock.cpp for the implementation. The .h file should have code to make sure it is only included once.

Your class should have private member data for:

* stock symbol (string)
* name (string)
* price (double)
* earnings (double)

Your class should have the following public member functions:

* A function to print the stock information. (Must be in your classes .cpp file)
* A default constructor that sets the stock symbol and name to blanks and the price and earnings to zero.
* A constructor that takes as input the stock symbol, name, price and earnings.
* A function that returns the price to the calling function.
* A function that updates the price given a new price as a parameter of type double.
* A function that returns the P/E (Price Earnings ratio). The P/E = price / earnings.
* Your program should get rid of the “ around the name before loading it into the stock object.

Except the print function any of the functions above may be fully implemented in the class definition. A function should go in the class definition only if it is small.

Your main program will have an array of at most 5 stocks. You will read the input file into this array. After you have read and printed the array you will simulate a 10% increase in stock price, and use your update price member function to update the stock price. You will then print this new price.

I’ve done a lot of the work in the main program for you. There are STUDENT TASKS to complete to get it finished up.

### Output

Here is a sample output based on the quotes.csv file. Your output should match this EXACTLY.

Welcome to the Stock Picker

Please enter the input file name including extension : quotes.csv

NWN Northwest Natural Gas Price: 58.30 Earnings -1.95 P/E 29.90

APPL Apple Inc. Price: 174.96 Earnings 1.90 P/E 92.08

GOOG Alphabet Inc. Price: 1029.27 Earnings 17.93 P/E 57.40

LUV Southwest Airlines Price: 55.08 Earnings 5.79 P/E 9.51

If you had a 10% appreciation in price the values would be

NWN Northwest Natural Gas Price: 64.13 Earnings -1.95 P/E 32.89

APPL Apple Inc. Price: 192.46 Earnings 1.90 P/E 101.29

GOOG Alphabet Inc. Price: 1132.20 Earnings 17.93 P/E 63.15

LUV Southwest Airlines Price: 60.59 Earnings 5.79 P/E 10.46