

Project Overview

- Write a C++ program to perform the following tasks
 - Read information for a stock purchase and sell
 - Name of the stock and number of shares
 - Buy price and sell price
 - Calculate the commission for buying (2%) and selling (1.5%) the stock
 - Calculate the total cost of the stock purchase (stock price + commission)
 - Calculate the total return from selling (stock price – commission)
 - Calculate net profit/loss: total return minus total cost
 - Calculate tax/tax credit: 25% of the net profit/loss
 - Output is to be the same as the sample solution

CPE112 Project 04

Project Constraints

- You may use any C++ programming constructs covered in Chapters 1-4 of your textbook.
- Output precision is to be 2 decimal places
- Input order shall follow that of the sample solution.
- **Output shall match the sample solution**

CPE112 Project 04

Hints

- Use the **float** data type for all variables except the name of the stock and the number of shares
- Use **cout << string(25,'*') << endl;** to output 25 *'s for the title lines
- Use **cout << string(35,'-') << endl;** to output 35 –'s for the output header
- Echo print all values read from standard input (cin) – see slide 6
- Use **setfill(char)** to change character used for unused spaces in **setw**

```
cout << setfill('*') << setw(10) << "Hello" << endl;  
*****Hello      (for right justification)  
Hello*****      (for left justification)
```
- Left justification is used for output phrases

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Sample Solution

- **Running the sample solution**

/home/work/cpe112/Executables/Project_04/Project_04_solution

- Some sample inputs to try
 - case 1: Apple 100 600 500 (P4_in1.txt)
 - case 2: Pepsi 200 50 100 (P4_in2.txt)

- **Running the Compare Solution Script**

/home/work/cpe112data/Project_04/CompareSolution.bash Project_04.cpp

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Redirected input

- Can create input files to use for input redirection.
- Files contain (separated by spaces or new line characters)
 - Company name
 - Number of shares
 - Buy price
 - Sell price
- Redirected input for file P4_in1.txt
./Project_04 < P4_in1.txt

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Echo Printing

- Echo printing prints out entered values
- Results in two values output when entries made by hand
- Provides the value used when a script runs the program (i.e. the comparison script) or input redirection is used

Sample Code:

```
cout << "enter a value: ";  
cin >> number;  
cout << number << endl; // this is the echo print
```

Output from above code with keyboard entry:

```
Enter a value: 20  
20
```

Output from above code run by a script:

```
Enter a value: 20
```

CPE112 Project 04