**CS 37 - Exam #3**

**20 Points Possible**

A program is needed for a Stock application which will have a class named Stock containing the following data members and methods:

**Seven Private Data Members:** stock name, number of shares, buy price, current price, total cost (number of shares \* buy price), current value (number of shares \* current price), and profit (current value – total cost) All numeric data members can be floats.

**Four Methods:**

1. A default constructor with default arguments which set the stock name to “ “ and the numeric private data members to 0.0.

2. A destructor that prints the stock name only for the object being destructed.

3. A method print which prints out all the private data members of the class.

4. A method calc which will recalculate the necessary private data members when the user enters the change in the current price of the stock. (for example, a value of .25 means the current price of the stock increases by 25 cents while a value of -.75 means the current price of the stock decreases by 75 cents. **The user should be prompted for the change in the current price of the stock in the main.** Please assume valid input is entered by the user and use parameter passing.

The main should print out the object twice, before the calc method is executed and after the calc method is executed.

**Sample output is as follows:**

the stock name is Joe's Technology

the number of shares is 150.00

the buy price is $69.34

the current price is $77.55

the total cost is $10401.00

the current value is $11632.50

the profit is $1231.50

enter the change in the current price: -.55

after the change in the current price

the stock name is Joe's Technology

the number of shares is 150.00

the buy price is $69.34

the current price is $77.00

the total cost is $10401.00

the current value is $11550.00

the profit is $1149.00

the stock Joe's Technology is destroyed

Press any key to continue . . .

**The instantiation to use is: Stock s("Joe's Technology", 150, 69.34, 77.55);**

**You will need to create the exact output specified on the exam question and copy and paste your output to the bottom of your program as a comment.**