Final Programming Project – Savings

Note: When you turn in an assignment to be graded in this class, you are making the claim that you neither gave nor received assistance on the work you turned in (except, of course, assistance from the instructor or teaching assistants).

In this project, you will create a program that will determine the price of an order. The user will enter the number of flower bulbs they would like to purchase. If the user enters 25 or more, they will get a $1.50 discount on the price of each bulb. The original price of each bulb is $5.00. The program will calculate the price of the order of bulbs by multiplying the number of bulbs by the price, either discounted or original. The program will loop so that users can run the program as many times as they would like to see the price of different order of bulbs. If a -1 is entered, then the program will exit.

The program will have a method called discount() that will accept one integer as a parameter, the number of bulbs, and will return True or False depending on whether discount applies, number is greater or equal to 25, (True) or does not apply (False).

The program's main method will ask for a number of bulbs, it will then pass that number to the method discount(). This method will return the True or False value depending on if the number of bulbs is greater than or equal to 25. The main method will then use the returned Boolean value to determine the price of each bulb and then will calculate the total cost of the bulbs. The main method will keep looping until a -1 is entered.

When building this solution, first place all logic into the main method and have it run once. Once it works that way, add your loop and then move the decision logic out to the discount() method.

Here is a typical program run. The sample user input is shown in blue italics.

Input:

Enter a number: ***10***

Output:

The total cost of the bulbs is $50.00

Input:

Enter a number: ***30***

Output:

The total cost of the bulbs is $105.00

Input:

Enter a number: ***-1***

Output:

Goodbye or nothing

Before beginning this project, you will document your algorithm as a list of steps to take you from your inputs to your outputs. Each step will be added as a comment block within your code. You will have the comment block right above the code that performs the actions specified.

For example, before your lines of code that ask the user for inputs, you would have a comment block that states what inputs you are requesting from the user. Please see the example code provided as a sample of this.

This and all program files in this course must include a comment block at the beginning (top) of the source code file that contains:

- your name
- the Python program name
- project description
- the date

The comment lines should look like this:

```
################################################################################
#  Your name
#  Python program name
#  Project description
#  The date
################################################################################
```

Your program must be in its own file and must compile and execute correctly using IDLE or the command line.

Name your source code file **`Savings.py`**. Test your application to be sure that it produces the correct output.

You will submit the following to the Assignment link in Blackboard:

- source code (Savings.py)

Ask questions about any part of the programming project that is not clear!

Rubric

Topic	Points
Code runs and produces the correct output one time	30
The discount method is appropriately structured and called correctly	10
Loop runs correctly and ends when a -1 is entered	10
The if statements are correctly written as structured as demonstrated in this course	10
Main method is called	5
Code contains a comment block at the top as specified	5
Code contains comment blocks throughout that document the algorithm	5
Code is easy to read	5
Total	80