

CS1213-01 Program #3

Fall 2018

Due: September 28 at class time

Assignment

You have been hired by the *BisonLube* company to write a program that computes the price of an automotive oil change at local *BisonLube* shops. The pricing is based on the number of quarts of oil that the customer buys, a volume discount for large orders, and whether the customer buys a new oil filter. There is a \$10.00 service charge that is the same for all customers, and 6% sales tax.

The customer may order any number quarts of oil at \$6.95 per quart. There is a 10% discount for orders of more than 6 quarts. The discount only applies to the cost of the oil itself, not to the filter, the service charge or the tax. Oil filters cost \$7.56 each.

When your program runs, it will prompt the user for these items of information:

- How many quarts of oil? Respond with a whole number of quarts.
- Include a new oil filter? Respond with "Y" for yes and "N" for no.

Calculate and display the itemized bill. Itemize the charge for the oil, the discount (only if a discount is applied), the charge for the filter (only if a filter is requested), the service charge, a subtotal (before tax), the sales tax, and the total charge. If the customer buys more than 10 quarts of oil, then display the federally mandated EPA notice about recycling used motor oil. Otherwise, do not include the EPA notice. Make your output look like the samples on the next page.

Sample Run

The following page shows some samples of how the screen must look when your program runs. You must strictly follow this format, wording, spacing, and alignment, including the number of decimal places on the numbers. The characters in **red** are typed by the user. The other characters are output by the program.

Sample #1

```
Number of quarts----- 4
Oil filter? (Y or N)---- Y
```

Your bill from BisonLube

```
Oil.....  $27.80
Filter....   7.56
Service...  10.00
-----
Subtotal..   45.36
Tax.....   2.72
-----
Total.....  $48.08
```

Sample #2

```
Number of quarts----- 12
Oil filter? (Y or N)---- N
```

Your bill from BisonLube

```
Oil.....  $83.40
Discount..   8.34
Service...  10.00
-----
Subtotal..   85.06
Tax.....   5.10
-----
Total.....  $90.16
```

Notice: The EPA recommends that you dispose of used motor oil at a certified recycling center.

Instructions for Turning in Your Project

I will not grade your project and you will receive a score of 0 if you do not comply with these instructions. You must turn in all materials by class time on the due date for them to be counted on time. Your submission is not complete—and I will not grade it—until you have turned in all the required materials. Anything that is not turned in by class time will be marked at least one day late and will receive a grading penalty as specified in the syllabus.

Turn in these things:

- Upload your Python program to Canvas.
- Turn in a hardcopy of your Python program at class time on the due date. Your hardcopy must match the electronic copy that you upload to Canvas.
- Turn in a printed, completed copy of the project form along with your hardcopy on the due date. There is a blank project form in *Handouts* on Canvas.