CMPS 150 – Lab 8

The following is an exercise in using control structures, both decision statements and repetition statements. This lab also uses file input. This exercise will be available on Moodle if you wish to use it again.

1. ***Copy/Save the lab source code file for today from the Moodle Lecture Site***

    Look for the files for today "lab8.py" AND "fuel.py" and save the files to your machine.

2. ***Launch IDLE.***

3. ***Open the source code file just copied to your home directory.***

    Select "File" from the menu bar, "Open" from the menu, then `lab8.py` from the list of files.

4. ***Edit the first two lines of the code to have*** your ***name/clid/section.)***

```
# Author:        Your-Name
# ULID/Section:  Your-ULID & lecture section-number go here
```

Write the code to process an unknown number of sets of fuel consumption data. Each set of data contains:
- fuel type   (this will be either 'S', 'P', 'R' or 'D')
- number of gallons of fuel

Each of these pieces of data will be on a line by itself. Each read of data should look like this:

```
fuelType = infile.readline().strip()
fuelAmount = eval(infile.readline().strip())
```

The end of the data will be indicated when the fuel type is the uppercase letter "X"
We have discussed in class why the reading of string data (for the fuel type) must have the "strip" method added to it. The "strip" is not required for numeric data, but is allowed.

As you read each set of data, print a "neat & tidy" table of the total purchase (bill) for the fuel. The following is a table for each of the types of fuel:

Fuel Type	Price per Gallon	Description
S	$ 2.62	Super Unleaded
P	$ 2.36	Unleaded Plus
R	$ 2.12	Regular Unleaded
D	$ 2.35	Diesel

NOTE: This will be a sentinel control loop.
****

5. ***Save your changes and run your code.***   *(you can also simply press F5)*

6. ***Debug your code (perhaps you can skip this step).***

If you have any errors in your code, the interpreter will produce an error, with a line number, where it detects there is a problem with your code. Return to the editor and correct the error. Run it through the interpreter again (step 5) until it runs with no errors.

7. *Sample Run*

```
     Fuel Type       Gallons      Bill
-----------------------------------
Regular Unleaded      16.50      34.98
Diesel                32.75      76.96
Super Unleaded        21.20      55.54
Unleaded Plus         15.90      37.52
Regular Unleaded      17.10      36.25
Diesel                29.40      69.09
Regular Unleaded      15.25      32.33
Unleaded Plus         12.00      28.32
Super Unleaded        22.50      58.95
Regular Unleaded      14.80      31.38
Diesel                28.80      67.68
Super Unleaded        20.60      53.97
Unleaded Plus         10.00      23.60
Regular Unleaded      13.20      27.98
Diesel                25.00      58.75
Super Unleaded        24.50      64.19
```

8. *Exit Python*
Close the Python IDLE editor.
Close the Python IDLE shell.

9. *Upload to Moodle*
Get in a browser and login to Moodle.
Go to YOUR specific Upload section on the Moodle site.
Here you will see the submission link for lab today. Click on the link for Lab #8.
Click to "Add a Submission" then "Upload a File"
Select to "Choose a File" and go about the process of browsing/finding "lab8.py" on the computer
Select to "Upload this File"

When returned to the Upload screen, MAKE SURE to click on the "Save Changes" button.

You will be returned to the "Lab #8" screen. This time you should see your source code file listed on it.

10. *Logout of Moodle*