

ISYS 350, Spring 22, Assignment 3, Due Date: Wednesday, 3/2/22

You will receive two extra credits, 12/10, for completing this assignment.

Part 1: (6 points)

An Internet service provider offers four subscription packages to its customers, plus a discount for nonprofit organizations:

Package A: 10 hours of access for \$12.95 per month. Additional hours are \$4.00 per hour.

Package B: 20 hours of access for \$14.95 per month. Additional hours are \$2.00 per hour.

Package C: 30 hours of access for \$20 per month. Additional hours are \$1.00 per hour.

Package D: Unlimited access for \$35.95 per month.

A nonprofit organizations will get 20% discount on all packages.

Create a Python program that asks user to enter the following information:

The Package customer selects

The hours used

Is the customer a nonprofit organization

And compute the monthly charge accordingly.

Test your program with these data:

a. Package B using 25 hours, not nonprofit: cost: \$24.95

Enter package (A, B, C, D): b

Enter hours used: 25

Are you a nonprofit organization?(y/n): n

The service charge is: \$24.95

b. Package C using 40 hours, is non-profit: cost;\$24

Enter package (A, B, C, D): c

Enter hours used: 40

Are you a nonprofit organization?(y/n): y

The service charge is: \$24.00

Note: Considering the possibility that user may enter the package with uppercase or lowercase letter, you may use string's upper() or lower() to convert the package to the case you want and check the package correctly in your program. Similarly, convert the nonprofit y/n answer to either upper or lower case.

Part 2: (6 points)

An electric company charges customers based on Kilowatt-Hours (Kwh) used. The rules to compute the charge are:

First 50 Kwh	35 cents per Kwh
Each of the next 100 Kwh (up to 150 Kwh, the first 50 Kwh used is still charged at 35 cents each)	45 cents per Kwh
Each of the next 300 Kwh (up to 450 Kwh, Kwh used between 50 and 150 are charged at 45 cents each)	65 cents per Kwh
All Kwh over 450, (Kwh used between 150 and 450 are charged at 65 cents each)	80 cents per KH

Create a Python program that asks a user to enter Kwh used, and compute the electricity charges. The Kwh used could be a number with decimals.

Requirements:

- 1. Input validation: Kilowatt-Hours cannot exceed 2000.**
- 2. Test your program with (1) Kwh=4500, (2) Kwh = 400**

Sample run:

```
Enter Kilowatt-Hours used: 400  
Kilowatt-Hours used: 400.0 , charge is: $225.00  
>>>
```

```
Enter Kilowatt-Hours used: 4500  
The Kilowatt-Hours used cannot be more than 2000!  
>>>
```

Copy the source code and paste to a Word document, and copy the output and paste it to the same Word document. Submit the Word document by email attachment.