CSCI 161 Lab Assignment 5   Points 10

Objective:

To work with functions in python.

Assignment:

Create a function called **menu ()**, by passing two arguments **var1** and **var2**, which contains user input integer values. The objective of the **menu ()** is to display the menu, and call other user defined functions **minimum ()**, **discount ()**, **Pythagorean ()** and **exit ().**

1. Prompt the user to enter two positive integer numbers and store it in variables **var_1** and **var_2**.

2. Define a function **menu ()** to display the following options:

   1 – Minimum
   2 –Calculate discount
   3 – Pythagorean theorem
   4 – Exit

   For each user input one of the following functions will be executed.

   Option 1: The function **minimum ()** is used to find the minimum among the two input numbers **var1** and **var2** (which should be passed through the function call).

   Option 2: Define the function **discount ()**. This function is used for calculating the discount of a number. It should accept an integer number and a percentage rate (integer) and calculates the discount using the formula, **Discount = Number * rate/100**.

   Option 3: Define the function **Pythagorean ()**. This function should get 3 dimensions, width, height, and hypotenuse from users, and check whether the 3 integer arguments passed along with it, follows the Pythagorean theorem (**$hypotenuse^2 = width^2 + height^2$**). The function should return a boolean (True or False).

   Option 4: Define function **exit_func ()**, to exit from the menu. The function should exit from the menu, for the user input 4.

(Note: The two integer variables var1, var2 and width, height and hypotenuse parameters can be declared outside the menu function and is passed as arguments through the function.)

Sample Output:

```
1. Minimum
2. Calculation of Discount
3. Pythagorous Theorem
4. Exit


Enter an option: 1
Enter first integer: 67
Enter second integer: 98
Minimum is   67

1. Minimum
2. Calculation of Discount
3. Pythagorous Theorem
4. Exit


Enter an option: 2

Enter a number: 120

Enter the percentage rate(%):10
Discount is   12.0

1. Minimum
2. Calculation of Discount
3. Pythagorous Theorem
4. Exit


Enter an option: 3

Enter a base3

Enter the an altitude4

Enter the a hypotonus5
True

1. Minimum
2. Calculation of Discount
3. Pythagorous Theorem
4. Exit


Enter an option: 4

Leaving from the program..

C:\Users\aydan\Desktop>
```

Instructions:

- Preferred programming environment:

  - OS   : Linux (Mint)
  - Interpreter   : Python 3 (not Python 2)
  - Editor   : gedit or editor of your choice

- The program is saved as a file with .py extension.

- The program should include a comment block at the top with your name, course number and course section, assignment number
  For example:
  # Your name
  # CSCI II 161 L01/L02
  # Assignment 5

- Upload your file as your ***lastname_firstname_assignmentnumber.py***
For example:
  lastname_firstname_5.py