Hello, World!

EMT1111: Logic and Problem Solving | Spring 2016 | Dr. Mendoza

LESSON 11: Python Problem Solving (Labs)

SIMPLE PYTHON PROGRAMS III

Lab Assignment 1 (triangle.py)

Write a Python program that will calculate and print the area of a triangle. Ask the user to input the triangles measurements (base and high).

- The area of a triangle is defined as half the product of the base times the height.
  - area = base x high / 2

Lab Assignment 2 (weight.py)

Write a Python program that will ask the user to enter his/her weight in pounds. Then it will convert the user's weight to kilograms and display it.

- To convert from pounds to kilograms, use the following formula:
  - `weightInPounds * 0.45359237`

Lab Assignment 3 (adult.py)

```
age = 18
if age < 21:
    print ("You cannot drink yet")
    print ("You can't drive either")
print ("Goodbye")
```

Change the program so that it will ask the user to enter his/her age

Lab Assignment 4(price.py)

Write a Python program to ask the user for the price of an item. Then, depending on the price entered by the user, the program should display one of the following messages:

- "Good price!", if the price is less than 50
- "Regular price", otherwise (price is greater than or equal to 50)

Lab assignment 5: *Sign In* (signin.py)

Write a Python program to emulate the signing in functionality.

- Create a variable named psswd to store a password (any password of your choice).
  - The password should be a string value (text)
- The program should ask the user to enter the password, assign it to the variable mypswd
- If the user enters the correct password, the program will simply say "*Access Granted*"
- If the user does not enter the correct password, the program will simply say "*Access Denied*"

Lab Assignment 6 (temperature.py)

Write a Python program to ask the user for the weather, specifically, the current temperature in Fahrenheit degrees. Then, depending on the temperature entered by the user, the program should display one of the following messages:

- "*Not too bad out there*", if the temperature is 50 or more
- "*You might want to wear a jacket today*", otherwise

Lab Assignment 7 (adult.py)

Write a Python program to ask the user for his/her birth year. Based on the year entered, the program will calculate the user's age. Finally, depending on the user's age, the program should display one of the following messages:

- "*You are a minor*", if the user is under 18 years of age
- "*You are an adult. Be responsible.*", otherwise

Lab Assignment 8 (today.py)

Write a Python program to ask the user for the day of the week. Then, depending on the day entered by the user, the program should display one of the following messages:

- "*You have your EMT1111 class today. That means lots of Python programming!*", if the day is Friday
- "*No Python programming today. Of course you can always practice at home.*", otherwise

Lab Assignment 9

Write a Python program to ask the user for the price of an item. Then, depending on the price entered by the user, the program should display one of the following messages:

- "*Must buy!*", if the price is less than 50
- "*On sale. Good price*", if the price is between 50 and 59
- "*Regular price.*", if the price is between 60 and 75
- "*Expensive!*", if the price is greater than 75