Hello, World!

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

LESSON 10: Python Problem Solving

LABS

Lab Assignment 1 (poem2.py)

Put the blocks below into the correct order to print a famous poem.

```
print("Roses are red.")
print("And so are you.")
print("Sugar is sweet.")
print("Violets are blue.")
```

Lab Assignment 2 (mcdonalds.py)

Put the lines below into the correct order to declare the variables first and then print a following famous song.

```
print("And on that farm he had some" + animal + ", E-I-E-I-O!”)
print("Old MacDonald had a farm E-I-E-I-O!")
animal = "pigs"
print("everywhere " + sound + " " + sound + "!")
print("With a " + sound + " " + sound + “ here, and a " + sound + " " + sound + " there")
print("Old MacDonald had a farm E-I-E-I-O!")
sound = "oink"
```

Lab Assignment 3 (animals3.py)

```
print("****************************************")
print("Pink elephants are a weird combination!")
print("****************************************")
```

Modify the program so that it will make use of two variables: ***animal*** and ***color***. Ask the user to input the value for each of those variables.

Lab Assignment 4 (poem4.py)

My student Jen, standing proud is a fine example for the crowd

```
print("My student Jen, standing proud is a fine example for the crowd")
```

- Write a Python program that will display the poem on the screen.
  - Use a variable called ***name*** to store the user's name.
  - Ask the user to input a value for ***name***.

Lab Assignment 5 (robot5.py)

My robot's name is *Andrew*, it is *5ft* tall, and it's purpose is to *clean the house*

```
print("My robot's name is Andrew, it is 5ft tall, and it's purpose is to clean the house")
```

Robot Activity

Write a program to display your robot's information.

- Use a variable called ***name*** to store the robot's name, a variable called ***height*** to hold the robot's height, and a variable called ***purpose*** to hold the robot's purpose.
- Ask the user to input a value for ***name,*** a value for ***height***, and a value for ***purpose***.

Lab Assignment 6 (identity.py)

Write a Python program to ask the user to enter his/her name, school, city, state, and country. Then the program should print a message like the following (using the values entered by the user):

Alex is a student at **CITY TECH** in the city of **Brooklyn** on **New York** state. He is a citizen of the great country **USA**

Input and numeric values (inputnum.py)

```
length = input("What is the length? ")
width = input("What is the height? ")
area = length * width
print("Area of a rectangle with dimensions", length, "x", width, "is:")
print(area)
```

The function **`int()`** converts text to numeric value

- Remember that **input()** gives us a string value corresponding to what the user types

Lab Assignment 7 (age.py)

Modify the program to make it generic so that it will ask the user to input his/her name and birth year. Then it will calculate and print the age.

```
name = "Zion"
print (name)
birthyear = 2000
age = 2016 - birthyear
print (age)
```

Lab Assignment 8 (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 8 (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 9 (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 10: *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*"

Homework Assignment

Write a Python program to play *MadLibs*.

You can use this story or choose any story of your like. You can found some at:

- http://www.classroomjr.com/printable-mad-libs-for-kids/
- http://www.madglibs.com/

Due on Wednesday, April 13 by midnight