



Lab11



Lab 11: Ch14 Object-Oriented Programming

Prob. 1

In the textbook we created our first class "partyAnimal" as follows:

```
class PartyAnimal:
    def party(self) :
        print("Hi party member")
```

Try to define two new variables (name, totalNumber) and a new method called 'display()' in the class, so that each time after we create an instance, we call method 'display()' to print out the name for the instance and calculate the total number for all the instances created.

```
Welcome to the party, Jon Snow !
So far we have totally 1 guests!
Welcome to the party, Daenerys Targaryen !
So far we have totally 2 guests!
```

Prob. 2

Create a class named remote_control. Using this class, you can change volume up or down, switch channels back and forth, and turn the TV on or off. After you create this class, apply all methods separately and test them one by one. P.S. keep each variable the same as where you left.

Prob. 3

Write a Python class that has three methods **get_String**, **lower_string**, and **upper_String**. **get_String** accepts a string from the user. **lower_string** print the string in lower case, and **upper_String** print the string in upper case.

Please use the following string to test your class.

```
Type in a string: Today is a beautiful day. I love Statesboro.
The original string is:
Today is a beautiful day. I love Statesboro.

The converted lower case for the input is:
today is a beautiful day. i love statesboro.
```

```
The converted upper case for the input is:  
TODAY IS A BEAUTIFUL DAY. I LOVE STATESBORO.
```

Prob. 4

Write a Python class named Rectangle constructed by a length and width and a method which will compute the area of a rectangle Create another **subclass** called square, which inherits all attributes from the class Rectangle. Create another method that will compute the perimeter of a square. Create a rectangle object to calculate the area for the length of 3 and width of 2. Create another square object and calculate the area and perimeter of the given square with length 3.

P.S. Don't hard-coding the length and width in your method.

```
Area of a Rectangle with length 3 and 2 is: 6  
Area of a square with length 3 is: 9
```

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