

Lab Exercise 8:

Q1: Follow the steps:

- Create a class, Triangle. Its `__init__()` method should take `self`, `angle1`, `angle2`, and `angle3` as arguments. Make sure to set these appropriately in the body of the `__init__()` method.
- Create a variable named `number_of_sides` and set it equal to 3.
- Create a method named `check_angles`. The sum of a triangle's three angles is It should return True if the sum of `self.angle1`, `self.angle2`, and `self.angle3` is equal 180, and False otherwise.
- Create a variable named `my_triangle` and set it equal to a new instance of your Triangle class. Pass it three angles that sum to 180 (e.g. 90, 30, 60).
- Print out `my_triangle.number_of_sides` and print out `my_triangle.check_angles()`.

Q2: Define a class called Songs, it will show the lyrics of a song. Its `__init__()` method should have two arguments:`self` and `lyrics`.`lyrics` is a list. Inside your class create a method called `sing_me_a_song` that prints each element of `lyrics` on his own line. Define a variable:

```
happy_bday = Song(["May god bless you, ",  
                  "Have a sunshine on you,",  
                  "Happy Birthday to you !"])
```

Call the `sing_me_song` method on this variable.

Q 3: Define a class called Lunch. Its `__init__()` method should have two arguments:`self` and `menu`. Where `menu` is a string. Add a method called `menu_price`. It will involve a `if` statement:

- if "menu 1" print "Your choice:", `menu`, "Price 12.00", if "menu 2" print "Your choice:", `menu`, "Price 13.40", else print "Error in menu".

To check if it works define: `Paul=Lunch("menu 1")` and call `Paul.menu_price()`.

Q 4: Define a Point3D class that inherits from object Inside the Point3D class, define an `__init__()` function that accepts `self`, `x`, `y`, and `z`, and assigns these numbers to the member variables `self.x`, `self.y`, `self.z`. Define a `__repr__()` method that returns `"(%d, %d, %d)" % (self.x, self.y, self.z)`. This tells Python to represent this object in the following format: (x, y, z). Outside

the class definition, create a variable named `my_point` containing a new instance of `Point3D` with `x=1`, `y=2`, and `z=3`. Finally, print `my_point`.

Q5: Write a Python class which has two methods `get_String` and `print_String`. `get_String` accept a string from the user and `print_String` print the string in upper case.