**Assignment – 8**

Exercise 1:Write a program to prompt for a file name, and then read through the file line-by-line. Note: the file name is Erle.txtand its content is,

Erle is the enabling technology for the

next generation of aerial and terrestrial

robots that will be used in cities solving

tasks such as surveillance, enviromental

monitoring or even providing aid at catastrophes.

Ensure you create the file.

Exercise 2:Create a file called new\_world.txt.First add a new line to the file:Welcome to robotics time.. And then print the content of new\_world.txt.

Exercise 3: 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().

Exercise 4: Define a class called Songs, it will show the lyrics of a song. Its \_\_init\_\_() method should have two arguments:self and lyrics.lyricsis a list. Inside your class create a method called sing\_me\_a\_song that prints each element of lyricson his own line. Define a varible:

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.

Exercise 5: Define a class called Lunch.Its \_\_init\_\_() method should have two arguments:selfanf menu.Where menu is a string. Add a method called menu\_price.It will involve a ifstatement:

• 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().

Exercise 6: 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.