**Assignment#3 ( Wednesday Group 4.00 – 6.00 PM)**

Q1. Design a class called **Point**, which models a 2D point with x and y coordinates with following functionalities:

* Multiple constructors to constructs a point with the given x and y coordinates.
* Getter and setter for the instance variables x and y.
* A method **setXY()** to set both x and y.
* An overloaded method **setXY()**  to set both x and y with another point.
* A method **getXY()** which returns the x and y as an object of Point class.
* A **toString()** method that returns a string description of the instance in the format **"(x, y)".**
* A method called **distance(int x, int y)** that returns the distance from *this* point to another point at the given (x, y) coordinates.
* An overloaded method **distance(int x, int y)** thatreturns the distancefrom this point to another point object.

Q2. Design a class called **Triangle**, which models a triangle with 3 vertices with the following functionalities:

* A constructor that constructs a **Triangle** with three set of coordinates, v1=(x1, y1), v2=(x2, y2), v3=(x3, y3).
* An overloaded constructor that constructs a **Triangle** given three instances of **Point**.
* A **toString()** method that returns a string description of the instance in the format **"MyTriangle[v1=(x1,y1),v2=(x2,y2),v3=(x3,y3)]".**
* A **getPerimeter()** method that returns the length of the perimeter in double. You should use the **distance()** method of **Point** class to compute the perimeter.
* A method **printType(),** which prints ***"equilateral"*** if all the three sides are equal, ***"isosceles"*** if any two of the three sides are equal, or ***"scalene"*** if the three sides are different.
* A method **areaTriangle()** to calculate the area of the given triangle.

Also write a test driver (called TestTriangle) to test all the methods defined in the class.