Lebanese University
IUT - Saida
CCNE II

LAB 6-7 OOP

Notice: you will use the class point of the previous assignment.

Exercise 1: Class Triangle

1. Write a class called Triangle that contains 3 attributes:
   A, B,C : are objects of the class **Point**.
2. Write 3 constructors :
   - One that takes 3 parameters which are points.
   - One that takes 6 parameters which are coordinates of each point.
   - One that takes an object triangle as parameter.
3. Write the following methods :
   - Input: allows entering six values which are coordinates of the three points.
   - Display: prints the coordinates of each point of the current triangle.
   - Translate: takes 2 values and translate each point of the triangle.
   - TriangleType: prints an integer according to the type of the current triangle.
     1 : equilateral , 2 : isosceles , 3 : right , 4 : isosceles right or 5 : any triangle
4. Modify the method ToString() for the class **Triangle**.

public override string ToString(){// you should return a set of characters}

5. Overload the **operators ==, !=, < et >** of the class **Triangle** knowing that a triangle is bigger than another one if its perimeter is bigger.

Exercice 2: Classe ColorPoint

1) Write the class ColorPoint that inherits from the class **Point.** It contains an additional attribute:
   color : **string** corresponding to the color of the current point.
2) Write two constructors.
3) Write the following methods:
   1. **Display**() : prints the color and the coordinates of the current object from the class ColorPoint. (Remark: it exists in the class Point)
   2. **SetColor** (string c), that allows to redefine the color of the current object from the class ColorPoint.
   3. Modify the method ToString() for the class **ColorPoint**.
4) TEST:

Create 3 points P1, P2, P3 then create a triangle T1 formed by P1, P2 and P3.
Display the type of T1. Create an object of the class colorpoint CP ((1,1), red) and display it.