

AMERICAN INTERNATIONAL UNIVERSITY BANGLADESH
DEPARTMENT: COMPUTER SCIENCE
COURSE:INTRODUCTION TO PROGRAMMING LAB
ASSIGNMENT-1, TOTAL MARKS:20
SEC-B1

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MARKS: 20

Create the following class named Point:

Class: point

Data members(private): double x, y //Cartesian co-ordinates of a point

Member functions (public):

```
point(double m, double n)    //initialize x and y with m and n and also use default
                             arguments to initialize x and y with 0

double getx()                //return x
double gety()                //return y
double distance(point p)     // return distance between two points [ distance between
                             calling object and received object]
```

If there are two points (x₁, y₁) and (x₂, y₂) , distance between them:

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Add another class in this code:

Class: Triangle

Data members (private): point x,y,z //three points of a triangle

Member functions(public):

```
Triangle(point p, point q, point r) //initialize the three points x,y,z of triangle with point p, q,
r

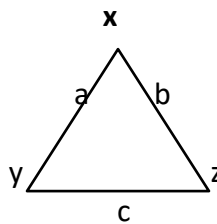
double perimeter()                //calculate the perimeter of a triangle and return the
result.
```

For a triangle with sides a, b and c, the perimeter P is defined as: P = a + b + c.

a is the distance between point x & y

b is the distance between point x & z

c is the distance between point y & z



Now, write main function to test your code.