Ahsanullah University of Science and Technology
Course Title: Object-Oriented Programming Lab
Course Number: CSE1206
Spring 2020

Online: 2 **Date: 17 January 2021** **Group: B1** **Time: 25 minutes**

Project Name: TestTriangle (main class)

	Marks
Class: **Triangle** Private Variable: **name** (String), **area** (double) Design the class (getter setter, constructors) as per your requirements.	**2**
Class: **GenerateTriangle** Create 3 overloaded methods named **createTriangle()** whose return type is **Triangle.** The methods calculate the areas according to the number of parameters. Then assigns the area and name to the Triangle object and returns it.	
createTriangle(double side) area = $(\sqrt{3})/4 \times side^2$ name = Equilateral Triangle	**3**
createTriangle(double side, double base) area = ½ x base x side name = Isosceles Triangle	**3**
createTriangle(double side1, double side2, double side3) area is calculated as follows: $A = \sqrt{s(s-a)(s-b)(s-c)}$ Here, **s** is the perimeter which is calculated as: (a+b+c) / 2 Name of triangle = Scalene Triangle	**3**
Now create the object of **GenerateTriangle** class and call all the 3 overloaded methods. Then print the names and areas from the objects generated by the methods. Take user input wherever needed.	**4**
Total:	**15**

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Sample Input	Sample Output
Input 1 value: 3 Input 2 values: 3 3 Input 3 values: 4 5 6	Equilateral Triangle Area: 3.8971143170299736 Isosceles Triangle Area: 4.5 Scalene Triangle Area: 9.921567416492215

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