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

Offline - 03 Set – A

Project Name: ShapeTest (main class)

	Marks
Class: **Shape3D** Private Variable: **shapeName** (String), **surfaceArea** (double) Design the class (getter setter, constructers) as per your requirements.	**2**
Class: **ProduceShape3D** Create 3 overloaded methods shapeNamed **createShape3D()** whose return type is **Shape3D.** The methods calculate the surfaceAreas according to the number of parameters. Then assigns the surfaceArea and shapeName to the Shape3D object and returns it.	
createShape3D(double side) surfaceArea = $6 * side^2$ shapeName = Cube	**3**
createShape3D(double radius, double height) surfaceArea = $\pi * radius^2 * height$ shapeName = Cylinder	**3**
createShape3D(double x, double y, double z) surfaceArea= $2xy + 2yz + 2zx$ shapeName = Cuboid	**3**
Now create the object of ProduceShape3D class and call all the 3 overloaded methods. Then print the **shapeNames** and **surfaceAreas** 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: 4 2 Input 3 values: 6 7 8	Cube Area: 54.0 Cylinder Area: 100.53096491487338 Cuboid Area: 292.0

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