Lab Program 4:

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape.

Code:

LAB Program 4. Pevelop a Java program to acate an abstract class named Shape that contains two integers and an empty method ramed print Also (). Provide three classes named Rectargle, Triangle and Crule such that each one of the classes contain only the method print Also () that prints the assary the given shape. Impart java with Scanner; abstract class Shape I int 3 y double area and print area (); class Rectargle extends Shape I void print area (); class Rectargle extends Shape I void print area (); System out print ("Area of the fectoryle is: System out print ("Area of the fectoryle is: "+area");	close Greek extends Shape?. void printarea ()? area = 0.5 x y System out printly "Area of the Triangh is." + area); close circle extends Shape? void printarea ()? area = 8.1415 * x * x System out printly ("Area of the circle is: "+area); } close Area? public static void main (String [] args)? int choice; Scanna s = new Scanner (System in); system out printly ("In 1. Rectangle in choice = s. new that (); switch (choice)?
void printares () { area = x y; the ("Area of the Pectagle is= System out println ("Area of the Pectagle is= "+area");	system out painth (In I. kectargle in 2. Turangle in 3. cuckin) choice > s. northat ();
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Case 1: Rectargle 11 = new Rectargle (); System. aut printh ("Erita the layth and width of the Rectargle:"); 11. 2 = S. PextInt ();

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	Triangle \$1 = new Triangle (); System out printly ("Ender the height and base of the triangle:");
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4711	t1. 2 = s- next Int (); trust on the t1. y = s. next Int (); trust on the t1. printage (); breaks, live At wall all A maled
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	System out printh ("Enter the radius of the circk!")
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Output:

Command Prompt

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Microsoft Windows [Version 10.0.19045.2251]
(c) Microsoft Corporation. All rights reserved.
C:\Users\bmsce>cd C:\Users\bmsce\Desktop\cs014
C:\Users\bmsce\Desktop\cs014>javac Main.java
C:\Users\bmsce\Desktop\cs014>java Area
1:Rectangle
2:Triangle
3:Circle
Enter the length and width of the rectangle:
20
40
Area of the Rectangle is= 800.0
C:\Users\bmsce\Desktop\cs014>java Area
1:Rectangle
2:Triangle
3:Circle
Enter the height and base of the triangle:
10
20
Area of the Triangle is= 100.0
C:\Users\bmsce\Desktop\cs014>java Area
1:Rectangle
2:Triangle
3:Circle
Enter the radius of the Circle:
Area of the Circle is= 1256.60000000000001
C:\Users\bmsce\Desktop\cs014>
```