```java
/* PRACTICAL11: Describe abstract class called Shape which has three subclasses say Triangle, Rectangle, Circle. Define one method area() in the abstract class and override this area() in these three subclasses to calculate for specific object i.e. area() of Triangle subclass should calculate area of triangle etc. Same for Rectangle and Circle.

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// CODE:

import java.util.Scanner;
abstract class Shape
{
    public abstract double area();

}
class Triangle extends Shape
{
    private double base;
    private double height;
    public Triangle(double base, double height)
    {
        this.base = base;
        this.height = height;
    }
    public double area()
    {
        return 0.5 * base * height;
    }
}

class Rectangle extends Shape
{
    private double length;
    private double width;
    public Rectangle(double length, double width)
    {
        this.length = length;
        this.width = width;
    }
    public double area()
    {
        return length * width;
    }
}

class Circle extends Shape
{
    private double radius;
    public Circle(double radius)
    {
        this.radius = radius;
    }
    public double area()
    {
        return Math.PI * radius * radius;
    }
}
```

```
public class practical11
{
   public static void main(String[] args)
   {
      Scanner input = new Scanner(System.in);
      System.out.print("-->> Enter the Base and Height for the Triangle: ");
      double b = input.nextDouble();
      double h = input.nextDouble();

      System.out.print("-->> Enter the Length and Width for the Rectangle: ");
      double l = input.nextDouble();
      double w = input.nextDouble();

      System.out.print("-->> Enter the Radius for the Circle: ");
      double r = input.nextDouble();

      Shape triangle = new Triangle(b, h);
      Shape rectangle = new Rectangle(l, w);
      Shape circle = new Circle(r);

      System.out.println("--> Area of Triangle: " + triangle.area());
      System.out.println("--> Area of Rectangle: " + rectangle.area());
      System.out.println("--> Area of Circle: " + circle.area());
      input.close();
   }
}
```