SHAPE AND ITS AREAS (LAB-4) / 3-11-2025

OUTPUT:

```
PS C:\Users\student\Desktop\1WN24CS120> cd "c:
Enter length and breadth of rectangle: 12 5
Area of Rectangle: 60
Enter base and height of triangle: 20 4
Area of Triangle: 40.0
Enter radius of circle: 7
Area of Circle: 153.86
PS C:\Users\student\Desktop\1WN24CS120>
```

PROGRAMM:

MainShape.java > Language Support for Java(TM) by Red Hat > MainShape

```java
import java.util.Scanner;

abstract class Shape {
    int a, b;
    abstract void printArea();
}

class Rectangle extends Shape {
    Rectangle(int a, int b) {
        this.a = a;
        this.b = b;
    }
    void printArea() {
        System.out.println("Area of Rectangle: " + (a * b));
    }
}

class Triangle extends Shape {
    Triangle(int a, int b) {
        this.a = a;
        this.b = b;
    }
    void printArea() {
        System.out.println("Area of Triangle: " + (0.5 * a * b));
    }
}

class Circle extends Shape {
    Circle(int a) {
        this.a = a;
    }
    void printArea() {
        System.out.println("Area of Circle: " + (3.14 * a * a));
    }
}

public class MainShape {
    Run main | Debug main | Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter length and breadth of rectangle: ");
        int l = sc.nextInt();
        int b = sc.nextInt();
        Shape rect = new Rectangle(l, b);
        rect.printArea();
```

```
47          System.out.print("Enter base and height of triangle: ");
48          int base = sc.nextInt();
49          int height = sc.nextInt();
50          Shape tri = new Triangle(base, height);
51          tri.printArea();
52
53          System.out.print("Enter radius of circle: ");
54          int r = sc.nextInt();
55          Shape cir = new Circle(r);
56          cir.printArea();
57
58          sc.close();
59      }
60  }
```