LAB 4 (Areas)
Using abstract

```
import java.util.Scanner;
class InputScanning {
    Scanner s = new Scanner(System.in);
    int getInput(String prompt){
        System.out.println(prompt);
        return s.nextInt();
    }
}

class shape extends InputScanning {
    double dim1;
    double dim2;
    shape(double a, double b){
        dim1 = a;
        dim2 = b;
    }
}

class Rectangle extends shape {
    Rectangle(){
        super(0,0);
        dim1 = getInput("Enter length");
        dim2 = getInput("Enter breadth");
    }
    double area(){
        System.out.println("Inside Area for Rectangle");
        return dim1 * dim2;
    }
}

class Triangle extends shape {
    Triangle(){
        super(0,0);
        dim1 = getInput("Enter length");
        dim2 = getInput("Enter base");
    }
}
```

```java
    double area() {
        System.out.println("Inside Area for Triangle");
        return dim1 * dim2/2;
    }
}

Class Circle extends shape{
    Circle() {
        Super(0,0);
        dim1 = getInput("Enter the radius");
        dim2 = dim1;
    }

    double area() {
        System.out.println("Inside Area for Circle");
        return Math.PI * dim1 * dim2;
    }
}

public class Areas {
    public static void main(String[] args){
        Rectangle rectangle = new Rectangle();
        System.out.println("Area of Rectangle:" +
                            rectangle.area());

        Triangle triangle = new Triangle();
        System.out.println("Area of Triangle:" +
                            triangle.area());

        Circle circle = new Circle();
        System.out.println("Area of Circle:" +
                            circle.area());
    }
}
```

O/P Enter length
3

Enter broadth.
4

Inside Area for Rectangle
Area of Rectangle: 12.0
Enter length
5

Enter base
6

Inside Area for Triangle
Area of Triangle: 15.0
Enter the radius
3

Inside Area for Circle
Area of Circle: 28.274333882308138

02/01/24