

## lab program-4

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). 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 print Area () that prints the area of the given shape.

```
import java.util.Scanner;
abstract class shape
{
    shape(){}
    int h,b;
    abstract void printArea();
}
class rectangle extends shape
{
    Scanner s=new Scanner(System.in);
    void printArea()
    {
        System.out.println("Enter height and width of rectangle");
        h=s.nextInt();
        b=s.nextInt();
        System.out.println("Area of Rectangle is "+b*h);
    }
    rectangle(){}
}

class triangle extends shape
{
    Scanner s=new Scanner(System.in);
    void printArea()
    {
        System.out.println("Enter height and base of rectangle");
        h=s.nextInt();
        b=s.nextInt();
        System.out.println("Area of Trianle is "+0.5*b*h);
    }
    triangle(){}
}

class circle extends shape
{
    Scanner s=new Scanner(System.in);
    void printArea()
    {
        System.out.println("Enter radius of Circle");
        h=s.nextInt();
        System.out.println("Area of Circle is "+3.14*h*h);
    }
    circle(){}
}

class main
{
    public static void main(String xx[])
    {
        rectangle r=new rectangle();
        r.printArea();
        triangle t=new triangle();
        t.printArea();
        circle c=new circle();
        c.printArea();
    }
}
```