

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 & 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.

```
abstract class Shape
{
    int a=8, b=6;
    abstract void printArea();
}

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

class Triangle extends Shape
{
    float area-triangle;
    void printArea()
    {
        area-triangle = (float) (0.5*a*b);
        System.out.println("Area of triangle = " + area-triangle);
    }
}
```

class Circle extends Shape

```
{  
    float area-circle-1, area-circle-2;  
    void printArea()  
    {  
        area-circle-1 = (float) (3.14 * a * a);  
        area-circle-2 = (float) (3.14 * b * b);  
        System.out.println("Area of circle 1 = " + area-circle-1);  
        System.out.println("Area of circle 2 = " + area-circle-2);  
    }  
}
```

class abstract-areas

```
{  
    public static void main(String args[])  
    {  
        Rectangle r = new Rectangle();  
        r.printArea();  
        Triangle t = new Triangle();  
        t.printArea();  
        Circle c = new Circle();  
        c.printArea();  
    }  
}
```