

## Lab - Program - 4

```
import java.util.Scanner;
```

```
abstract class Shape
```

```
{
```

```
    int a;
```

```
    int b;
```

```
    abstract void printArea();
```

```
}
```

```
class Rectangle extends Shape
```

```
{
```

```
    void printArea()
```

```
{
```

```
        Scanner ss = new Scanner(System.in);
```

```
        System.out.println("Rectangle Details:");
```

```
        System.out.println("Enter the length:");
```

```
        a = ss.nextInt();
```

```
        System.out.println("Enter the breadth:");
```

```
        b = ss.nextInt();
```

```
        System.out.println("Area of Rectangle : " +  
            (double)(a*b) + " sq. units");
```

```
class Triangle extends Shape
```

```
{
```

```
    void printArea()
```

```
{
```

```
        Scanner ss = new Scanner(System.in);
```

```
        System.out.println("Triangle Details:");
```

```
        System.out.println("Enter the breadth:");
```

```
        a = ss.nextInt();
```

```

system.out.println("Enter the height: ");
b = ss.nextInt();
system.out.println("Area of Triangle: " +
    (double)(0.5 * a * b) + " sq. units");
    }
}

```

class Circle extends Shape

```

{
    void printArea()
    {

```

```

        Scanner s = new Scanner(System.in);
        System.out.println("Circle Details");
        System.out.println("Enter the radius: ");
        a = s.nextInt();
        System.out.println("Area of circle: %0.3f
            sq. units", (double)(3.1415 * a * a));
    }
}

```

class Shapemain

```

{
    public static void main(String args[])
    {

```

```

        Rectangle r = new Rectangle();
        r.printArea();
        Triangle t = new Triangle();
        t.printArea();
        Circle c = new Circle();
        c.printArea();
    }
}

```