

## LAB-4

```
import java.util.Scanner;  
class InputScanner {
```

```
    int d1, d2;
```

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

```
    InputScanner() {
```

```
        if (this.getClass() == Circle.class) {
```

```
            System.out.println("Enter d1: ");
```

```
            d1 = sc.nextInt();
```

```
        }
```

```
    } else {
```

```
        System.out.println("Enter d1 and d2: ");
```

```
        d1 = sc.nextInt();
```

```
        d2 = sc.nextInt();
```

```
    }
```

```
}
```

```
}
```

```
abstract class Shape extends InputScanner {  
    abstract void printArea();
```

```
}
```

```
class Triangle extends Shape {
```

```
    void printArea() {
```

```
        System.out.println("Area of triangle is " + (double)
```

```
            (d1 * d2) / 2);
```

```
    }
```

```
}
```

```
class Rectangle extends Shape {
```

```
    void printArea() {
```

```
        System.out.println("Area of rectangle is " + (double)
```

```
            (d1 * d2));
```

```
}
```



```

class Circle extends Shape {
    void printArea() {
        System.out.println("Area of circle " + (double)(3.14 * d1 * d1));
    }
}

```

```

}

class AreaMain {
    public static void main (String args[]) {
        System.out.println("Rishi - 18M22CS222");
        Rectangle r = new Rectangle();
        Triangle tr = new Triangle();
        Circle c = new Circle();
        r.printArea();
        tr.printArea();
        c.printArea();
    }
}

```

### Output -

Enter d1 and d2

5

4

Enter d1 and d2

5

3

Enter d1

6

Area of rectangle is : 20.0

Area of triangle is : 7.5

Area of circle is : 113.039

2/01/24