

4. Lab Program - 4

import java.util.Scanner;

class InputScanner {

int d1, d2;

Scanner sc = new Scanner(System.in);

InputScanner() {

if (this.getClass().getName().equals("Circle")) {

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: " + (d1*d2)/2);

}

}

class Rectangle extends Shape {

void printArea() {

System.out.println("Area of rectangle: " + (d1*d2));

}

}

class Circle extends Shape {

void printArea() {

System.out.println("Area of circle: " + (d1*d1*3.14)/4);

}

}

```

class AreaMain {
    public static void main (String args[]) {
        System.out.println("Pranav Y - IBM2201204");
        Rectangle r = new Rectangle();
        Triangle t1 = new Triangle();
        Circle c = new Circle();
        r.printArea();
        t1.printArea();
        c.printArea();
    }
}
    
```

o/p ~~Ex~~ Pranav Y - IBM2201204

Enter d1 and d2:

1

2

Enter d1 and d2:

3

4

Enter d1:

3

Area of rectangle is: 2.0

Area of triangle is: 6.0

Area of circle: 28.259998

1/1/24