```
s.displayArea();
t.displayArea();
c.displayArea();
System.out.println("Sheeyash Sinha
        1BM22CS273");
    }
}
```

Output:

```
Enter dimensions of the rectangle (length
    and breadth):
2 3
Enter dimensions of the triangle (base and
    height):
2 4
Enter dimensions of the circle (radius):
3
Area of Rectangle: 6.0
Area of Triangle: 4.0
Area of Circle: 28.2599
Sheeyash Sinha 1BM22CS273
```

02/01/24

```
class Triangle extends Shape{
{   void getInput(){
        System.out.println("Enter dimensions
          of triangle(base and height): ");
        a = sc.nextDouble();
        b = sc.nextDouble();
    }
    void displayArea(){
        System.out.println("Area of Triangle: "
            +(0.5*a*b));
    }
}
class Circle extends Shape
{
    void getInput(){
    System.out.println("Enter dimensions of
      the circle(radius): ");
    a = sc.nextDouble();
    }
    void displayArea(){
    System.out.println("Area of circle: "+(3.14*a*a
                                        ));
    }
}
class Main{
    public static void main(String args[])
    {
    Rectangle r = new Rectangle();
    Circle c = new Circle();
    Triangle t = new Triangle();
    r.getInput();
    t.getInput();
    c.getInput();
```

LAB-4

8) develop a JAVA program to create an abstract class named Shape that contain 2 integers and an empty method named displayArea(). Provide three classes name Rectangle, Triangle and Circle such that each one of the classes contains only method getInput and displayArea for taking dimensions as input and prints area.

→
```
import java.util.Scanner;
class InputScanner{
    Scanner sc;
    InputScanner(){
        sc = new Scanner(System.in);
    }
}
abstract class Shape extends InputScanner{
    double a;
    double b;
    abstract void getInput();
    abstract void displayArea();
}
class Rectangle extends Shape{
    void getInput(){
        System.out.println("Enter dimensions of the rectangle (length and breadth): ");
        a = sc.nextDouble();
        b = sc.nextDouble();
    }
    void displayArea(){
        System.out.println("Area of Rectangle: "
            +(a*b));
    }
}
```