**PRACTICAL – 4(7 and 8)**

**Aim: Assume you want to capture shapes, which can be either circles (with a**

**Radius and a color) or rectangles (with a length, width, and color). You also**

**want to beable to create signs (to post in the campus center, for example), each of which has a shape (for the background of the sign) and the text (a String) to put on the sign.**

**SOURCE CODE:**

import java.util.Scanner;

class Practical\_4\_7 {

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

        Scanner in = new Scanner(System.in);

*int* n;

        System.out.println("Enter Your Choice\n1. Circle\n2. Rectangle\n");

        n = in.nextInt();

        switch (n) {

            case 1:

                Circle c = new Circle();

                c.get();

                c.input();

                c.output();

                break;

            case 2:

                Rectangle o = new Rectangle();

                o.get();

                o.input();

                o.output();

                break;

            default:

                System.out.println("\nInvalid Choice");

        }

        in.close();

    }

}

class signs {

*double* area;

    String colour, text;

    public *void* get() {

        Scanner in = new Scanner(System.in);

        System.out.print("Enter Colour :");

        colour = in.nextLine();

        System.out.print("Enter Text :");

        text = in.nextLine();

        in.close();

    }

}

interface Shape {

*void* input();

*void* output();

}

class Circle extends signs implements Shape {

*double* radius;

    public *void* input() {

        Scanner in = new Scanner(System.in);

        System.out.print("\nEnter Radius: ");

        radius = in.nextDouble();

        area = 3.14 \* radius \* radius;

        in.close();

    }

    public *void* output() {

        System.out.println("\nCircle");

        System.out.println("Text: " + text);

        System.out.println("Color: " + colour);

        System.out.println("Radius " + radius);

        System.out.println("Area: " + area);

    }

}

class Rectangle extends signs implements Shape {

*double* length, breadth;

    public *void* input() {

        Scanner in = new Scanner(System.in);

        System.out.println("\nEnter Length and breadth : ");

        length = in.nextDouble();

        breadth = in.nextDouble();

        area = length \* breadth;

        in.close();

    }

    public *void* output() {

        System.out.println("\nRectangle");

        System.out.println("TEXT: " + text);

        System.out.println("COLOUR: " + colour);

        System.out.println("Length " + length);

        System.out.println("Breadth " + breadth);

        System.out.println("Area: " + area);

    }

}

**OUTPUT:**

**Text

Description automatically generated**

**CONCLUSION:** In this practical we learnt about significance of interface.