

**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 17**

**Aim**

Create an interface having prototypes of functions area() and perimeter(). Create two

classes Circle and Rectangle which implements the above interface. Create a menu driven

program to find area and perimeter of objects.

**Procedure**

import java.util.\*;

interface Shape{

void getdata();

void area();

void perimeter();

}

class Circle implements Shape{

double pi = 3.14;

double r;

Scanner sc = new Scanner(System.in);

public void getdata(){

System.out.println("Enter the radius of the circle:");

r = sc.nextDouble();

}

public void perimeter(){

System.out.println("Perimeter of the circle: "+(2 \* pi \* r));

}

public void area(){

System.out.println("Area of the circle: "+ (pi \* r \* r) );

}

}

class Rectangle implements Shape{

double l,b;

Scanner sc = new Scanner(System.in);

public void getdata(){

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

l = sc.nextDouble();

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

b = sc.nextDouble();

}

public void area(){

System.out.println("Area of a rectangle: "+(l\*b));

}

public void perimeter()

{

System.out.println("Perimeter of a rectangle: "+(2\*(l+b)));

}

}

public class CO3\_Q6 {

public static void main(String[] args) {

int ch;

Scanner sc = new Scanner(System.in);

Circle ob = new Circle();

Rectangle obj = new Rectangle();

do{

System.out.println("\n1.Circle\n2.Rectangle\n3.exit");

System.out.println("Enter your choice:");

ch = sc.nextInt();

switch(ch){

case 1 :ob.getdata();

ob.area();

ob.perimeter();

break;

case 2 :obj.getdata();

obj.area();

obj.perimeter();

break;

case 3 :System.out.println("Exited...");

System.exit(0);

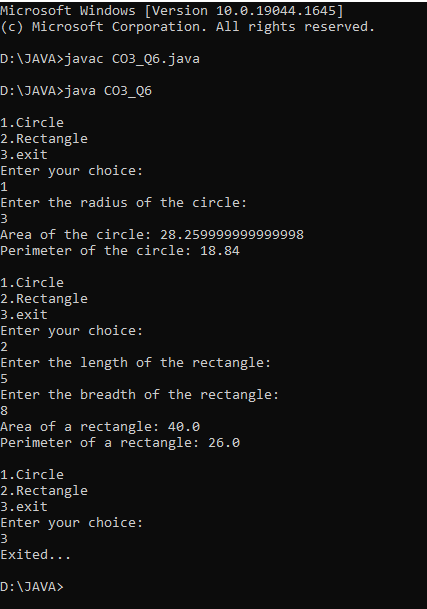
}

}while(true);

}

}

**Output Screenshot**

****