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**Batch:Mca-B**

**Date:27-06-22**

**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 15**

**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.

**Program:**

import java.io.\*;

interface AandP

{

double area();

double peri();

}

class Circle implements AandP

{

double r;

Circle(double r)

{

this.r=r;

}

public double area()

{

return 3.14\*r\*r;

}

public double peri()

{

return 2\*3.14\*r;

}

}

class Rectangle implements AandP

{

double l,b;

Rectangle(double l,double b)

{

this.l=l;

this.b=b;

}

public double area()

{

return l\*b;

}

public double peri()

{

return 2\*(l+b);

}

}

public class Shapes

{

public static void main(String args[])

{

double r=0,l=0,b=0;

int opt;

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

try

{

do

{

System.out.println("\n Please enter a choice \n");

System.out.println("\n 1. CIRCLE\n");

System.out.println("\n 2. RECTANGLE\n");

System.out.println("\n 3. EXIT\n");

opt=Integer.parseInt(br.readLine());

if(opt==1)

{

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

r=Double.parseDouble(br.readLine());

Circle c1=new Circle(r);

c1.area();

System.out.println("\n Perimeter of the circle: "+c1.peri());

System.out.println("\n Area of the circle: "+c1.area());

}

if(opt==2)

{

System.out.println("\n Enter the length and breadth of the rectangle\n");

l=Double.parseDouble(br.readLine());

b=Double.parseDouble(br.readLine());

Rectangle r1=new Rectangle(l,b);

System.out.println("\n Area of the rectangle : "+r1.area());

System.out.println("\n Perimeter of the rectangle: "+r1.peri());

}

}

while(opt!=3);

}

catch(Exception e)

{

}

}

}

**OUTPUT:**

