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**Batch: MCA B**

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**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 6**

**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.Scanner;

interface calculation{

void input();

void area();

void perimeter();

}

class Circle implements calculation

{

int r;

final double pi=3.14,ar,pr;

public void input()

{

Scanner sc1=new Scanner(System.in);

System.out.println("Enter radius:");

r=sc1.nextInt();

}

public void area()

{

ar=pi\*r\*r;

System.out.println("Area of the circle:"+ar);

}

public void perimeter()

{

pr=2\*pi\*r;

System.out.println("Perimeter of the circle:"+pr);

}

}

class Rectangle extends Circle{

int l,b;

double ar,pr;

public void input()

{

super.input();

Scanner sc2=new Scanner(System.in);

System.out.println("Enter length:");

l=sc2.nextInt();

System.out.println("Enter breadth:");

b=sc2.nextInt();

}

public void area()

{

super.area();

ar=l\*b;

System.out.println("Area of rectangle:"+ar);

}

public void perimeter()

{

super.perimeter();

pr=(2\*l)+(2\*b);

System.out.println("Perimeter of rectangle:"+pr);

}

}

public class Calcu

{

public static void main(String args[])

{

int choice;

Rectangle obj=new Rectangle();

while(true)

{

Scanner sc3=new Scanner(System.in);

System.out.println("\n" + "1.Input the values"+"\n" + "2.Find area" + "\n" + "3. Find perimeter" + "\n" + "4.Exit");

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

choice=sc3.nextInt();

switch(choice)

{

case 1:

obj.input();

break;

case 2:

obj.area();

break;

case 3:

obj.perimeter();

break;

case 4:

return;

default:

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

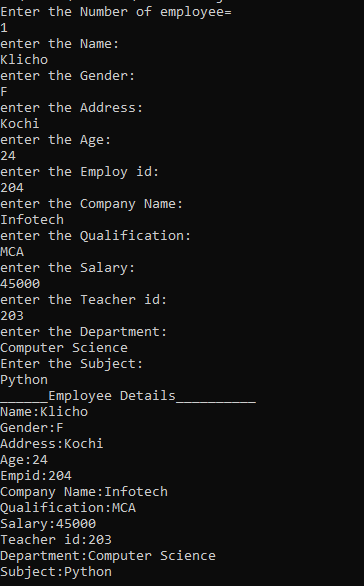
}

}

}

}

**Output Screenshot**

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