**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 10**

**Name: Sreelakshmi Madhusoodhanan**

**Roll No:39**

**Batch:RMCA B**

**Date:17/05/2022**

**Aim**

Area of different shapes using overloaded functions

**Procedure**

import java.util.Scanner;

interface prop

{

void getdata();

void area();

void perimeter();

}

class Circle implements prop

{

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("Perimeter of the circle: "+(pi\*r\*r));

}

}

class Rectangle implements prop

{

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("Perimeter of a rectangle: "+(l\*b));

}

public void perimeter()

{

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

}

}

public class Area

{

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);

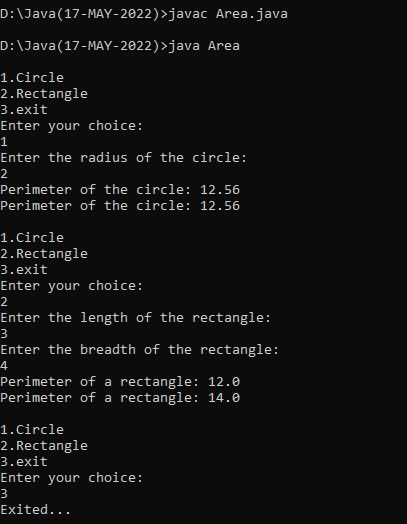
}

}while(true);

}

}

**Output Screenshot**



**Experiment No.: 11**

**Name: Sreelakshmi Madhusoodhanan**

**Roll No:39**

**Batch:RMCA B**

**Date:17/05/2022**

**Aim**

Create a class ‘Person’ with data members Name, Gender, Address, Age and a constructor

to initialize the data members and another class ‘Employee’ that inherits the properties of

class Person and also contains its own data members like Empid, Company\_name,

Qualification, Salary and its own constructor. Create another class ‘Teacher’ that inherits

the properties of class Employee and contains its own data members like Subject,

Department, Teacherid and also contain constructors and methods to display the data

members. Use array of objects to display details of N teachers.

**Procedure**

import java.util.Scanner;

class person{

String Name;

String Gender;

String Address;

int Age;

person(String name,String gender,String address, int age) {

this.Name = name;

this.Gender = gender;

this.Address = address;

this.Age = age;

}

}

class Employee extends person

{

int Empid;

String Company\_name;

String Qualification;

long Salary;

Employee(String name,String gender,String address, int age,int empid, String company\_name, String qualification,long salary)

{

super(name,gender,address,age);

this.Empid= empid;

this.Company\_name=company\_name;

this.Qualification=qualification;

this.Salary=salary;

}

}

public class Teacher2 extends Employee{

String Subject;

String Department;

String Teacherid;

Teacher2(String name,String gender,String address, int age,int empid, String company\_name, String qualification,long salary, String subject, String department, String teacherid){

super(name,gender,address,age,empid,company\_name,qualification,salary);

this.Subject=subject;

this.Department=department;

this.Teacherid=teacherid;

}

void display(){

System.out.println("Name: "+Name);

System.out.println("Gender: "+Gender);

System.out.println("Address: "+Address);

System.out.println("Age: "+Age);

System.out.println("Employee id: "+Empid);

System.out.println("Company Name: "+Company\_name);

System.out.println("Qualification: "+Qualification);

System.out.println("Salary: "+Salary);

System.out.println("Subject: "+Subject);

System.out.println("Department: "+Department);

System.out.println("Teacher id: "+Teacherid);

}

public static void main(String[] args) {

System.out.println("\nEnter the No.of Teacher's");

Scanner sc1 = new Scanner(System.in);

int num = sc1.nextInt();

Teacher2 arr[]=new Teacher2[num];

System.out.println("\n Enter the Teacher Details\n");

int x =0,j=0;

Scanner sc =new Scanner(System.in);

for(int i=0;i<num;i++)

{

x = i+1;

System.out.println("\n"+x+").");

System.out.println("\n Name: ");

String a =sc.next();

System.out.println("\n Gender: ");

String b =sc.next();

System.out.println("\n Address: ");

String c =sc.next();

System.out.println("\n Age: ");

int d =sc.nextInt();

System.out.println("\n Employee id: ");

int e =sc.nextInt();

System.out.println("\n Company name: ");

String f =sc.next();

System.out.println("\n Qualification: ");

String g =sc.next();

System.out.println("\n Salary: ");

long h =sc.nextLong();

System.out.println("\n Subject: ");

String k =sc.next();

System.out.println("\n Department: ");

String l =sc.next();

System.out.println("\n Teacher Id: ");

String n =sc.next();

arr[i]=new Teacher2(a,b,c,d,e,f,g,h,k,l,n);

}

sc.close();

System.out.println("\n\*\*\*\*\*\*\*\*Informations of all the Teacher's\*\*\*\*\*\*\*\*\*\*\*\*");

for(int i=0;i<num;i++){

j=i+1;

System.out.println("\n"+j+").");

arr[i].display();

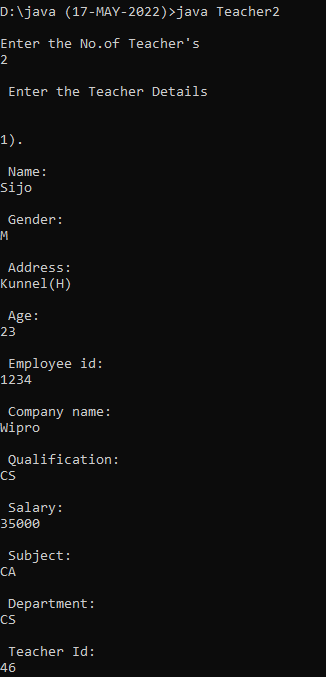
}

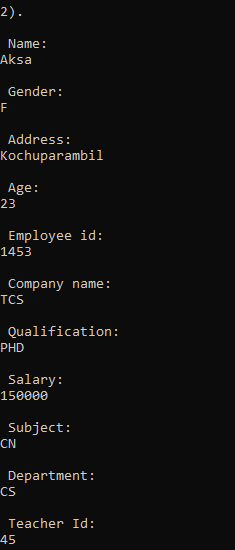
sc1.close();

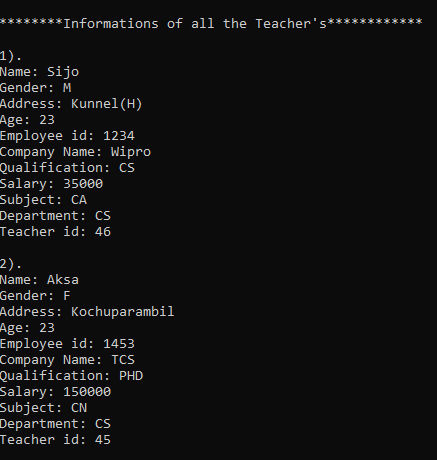
}

}

**Output Screenshot**

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