OBJECT ORIENTED PROGRAMMING LAB

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Roll No: 55

Batch: MCA -B

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Experiment No.: 10

Aim

Area of different shapes using overloaded functions

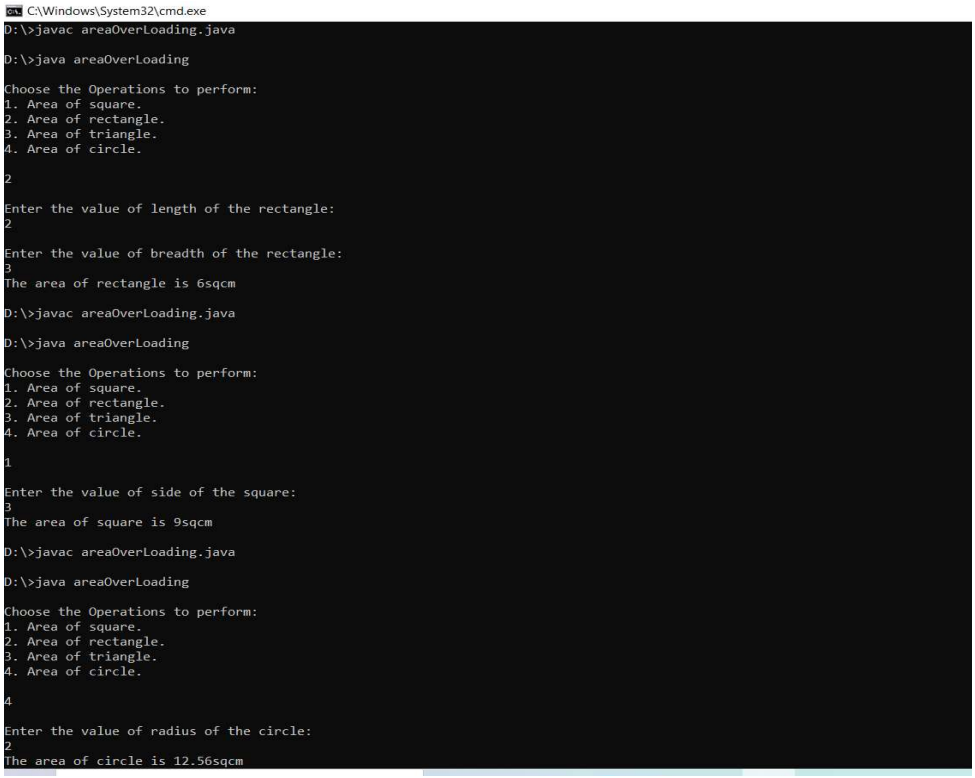
Program

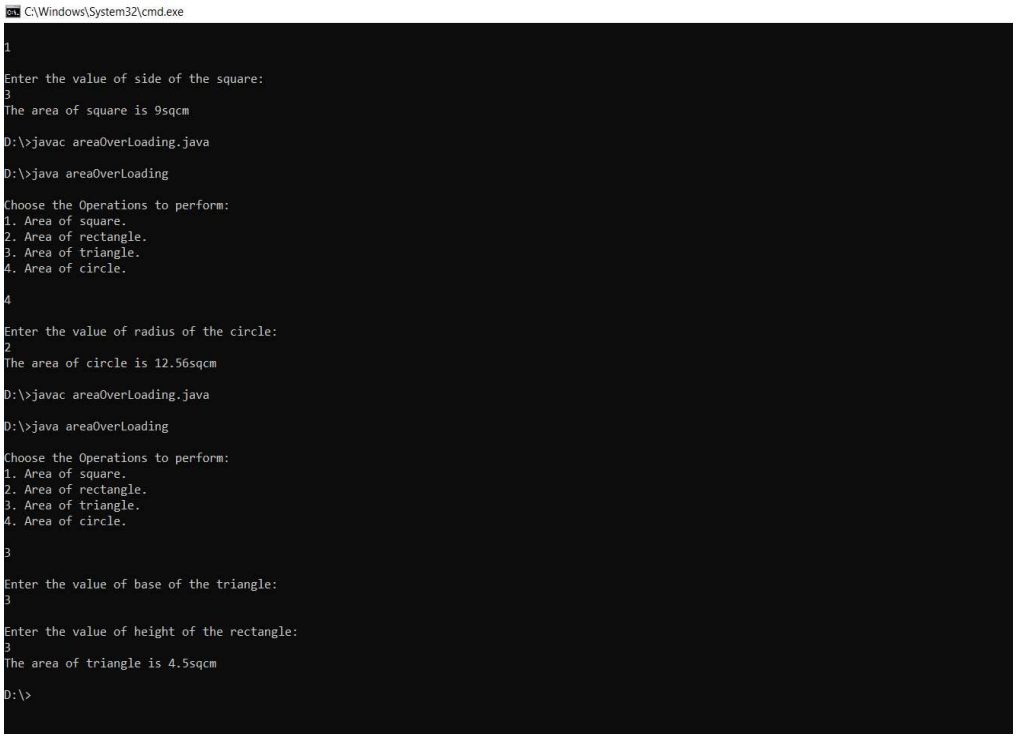
```
import java.util.*;

class areaOverLoading{

    private void area(int side){
        int area= side*side;
        System.out.println("The area of square is "+area+"sqcm");
    }

    private void area(int length, int breadth){
        int area= length*breadth;
        System.out.println("The area of rectangle is "+area+"sqcm");
    }

    private void area(double length, double breadth){
        double area= (length*breadth)/2;
        System.out.println("The area of triangle is "+area+"sqcm");
    }

    private void area(double radius){
```

```
        double area= 3.14*radius*radius;
        System.out.println("The area of circle is "+area+"sqcm");
    }

    public static void main(String[] args){
        Scanner sc= new Scanner(System.in);

        int length1,breadth1,side;
        double radius,length2,breadth2;
        areaOverLoading area= new areaOverLoading();

        System.out.println("\nChoose the Operations to perform:\n1. Area of
square.\n2. Area of rectangle.\n3. Area of triangle.\n4. Area of circle.\n");
        int ch= sc.nextInt();

      switch(ch){
          case 1:{
              System.out.println("\nEnter the value of side of the square: ");
                  side= sc.nextInt();
                  area.area(side);
                  break;
              }

          case 2:{
              System.out.println("\nEnter the value of length of the rectangle: ");
                  length1= sc.nextInt();
             System.out.println("\nEnter the value of breadth of the rectangle: ");
```

```
                    breadth1= sc.nextInt();
                    area.area(length1, breadth1);
                    break;
                }

                case 3:{
                    System.out.println("\nEnter the value of base of the triangle: ");
                    length2= sc.nextDouble();
                System.out.println("\nEnter the value of height of the rectangle: ");
                    breadth2= sc.nextDouble();
                    area.area(length2, breadth2);
                    break;
                }

                case 4:{
                    System.out.println("\nEnter the value of radius of the circle: ");
                    radius= sc.nextDouble();
                    area.area(radius);
                    break;
                }
            }

        }
}
```

Output Screenshot


C:\Windows\System32\cmd.exe
D:\>javac areaOverLoading.java
D:\>java areaOverLoading
Choose the Operations to perform:
1. Area of square.
2. Area of rectangle.
3. Area of triangle.
4. Area of circle.
2
Enter the value of length of the rectangle:
2
Enter the value of breadth of the rectangle:
3
The area of rectangle is 6sqcm
D:\>javac areaOverLoading.java
D:\>java areaOverLoading
Choose the Operations to perform:
1. Area of square.
2. Area of rectangle.
3. Area of triangle.
4. Area of circle.
1
Enter the value of side of the square:
3
The area of square is 9sqcm
D:\>javac areaOverLoading.java
D:\>java areaOverLoading
Choose the Operations to perform:
1. Area of square.
2. Area of rectangle.
3. Area of triangle.
4. Area of circle.
4
Enter the value of radius of the circle:
2
The area of circle is 12.56sqcm


C:\Windows\System32\cmd.exe
1
Enter the value of side of the square:
3
The area of square is 9sqcm
D:\>javac areaOverLoading.java
D:\>java areaOverLoading
Choose the Operations to perform:
1. Area of square.
2. Area of rectangle.
3. Area of triangle.
4. Area of circle.
4
Enter the value of radius of the circle:
2
The area of circle is 12.56sqcm
D:\>javac areaOverLoading.java
D:\>java areaOverLoading
Choose the Operations to perform:
1. Area of square.
2. Area of rectangle.
3. Area of triangle.
4. Area of circle.
3
Enter the value of base of the triangle:
3
Enter the value of height of the rectangle:
3
The area of triangle is 4.5sqcm
D:\>