

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,  
SILIGURI: 734 009  
Department of Computer Science and Engineering  
2020 – 2021  
B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem /PCC CS 593  
Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*

**NAME:RAHUL JHA**

**ROLL NO:26100118024**

---

**Answer any one of the following**

**Q1. Write the Question**

Write a program to create an Interface name shape to calculate the area of a Circle.

**Answer.**

**ALGORITHM:**

- 1.Start
- 2.Set  $Pi = 3.14$
- 3.Take the Value Of radius of circle (x)
- 4.Calculate Area(area) =  $Pi * (pow(x,2))$
- 5.print area
- 6.Stop

**Programming Code:**

```
package assignmentQuestion5;

import java.util.Scanner;

interface Area{
    double pi=3.14;
    double calculation(double x);
}
```

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,  
SILIGURI: 734 009**

**Department of Computer Science and Engineering**

**2020 – 2021**

B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem /PCC CS 593

**Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*

```
class circle implements Area{

    @Override
    public double calculation(double x) {
        return (pi*Math.pow(x, 2));
    }

}

public class AreaOfCircle {

    public static void main(String[] args) {
        circle cr = new circle();

        Scanner sc= new Scanner(System.in);
        System.out.println("Enter Radius Of A circle:");

        double radius=sc.nextDouble();
        System.out.println("Area Of Circle Is "+cr.calculation(radius));
        ;

    }

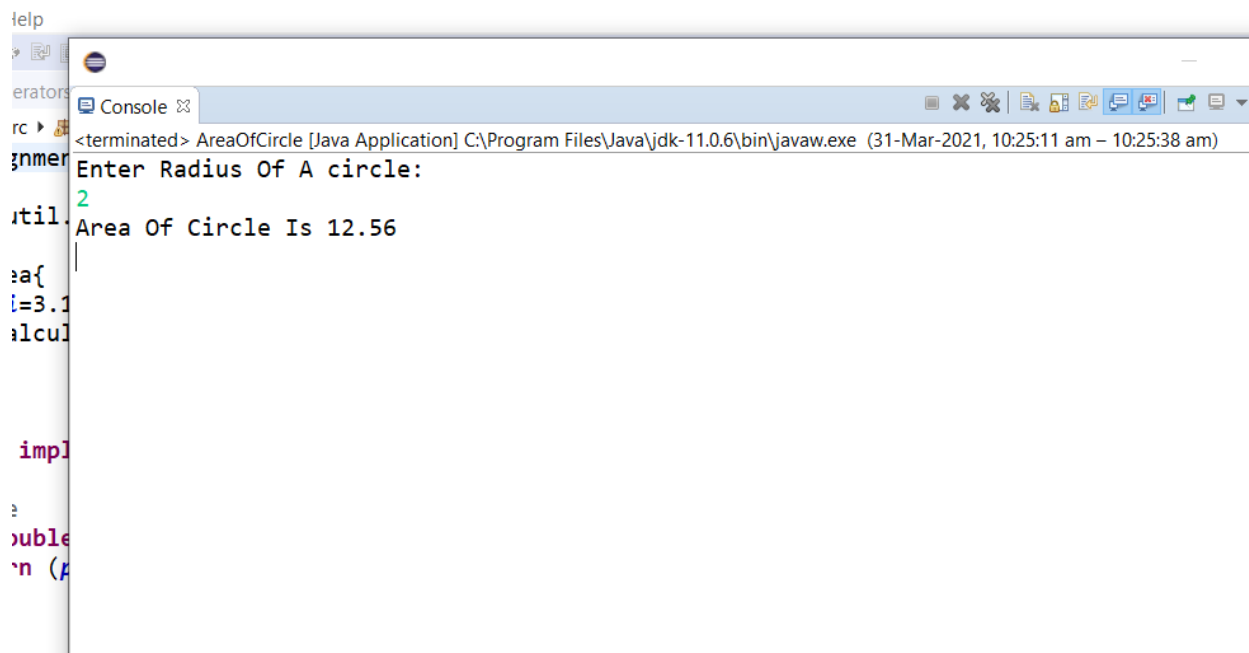
}
```

**Output:**

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,**  
**SILIGURI: 734 009**  
**Department of Computer Science and Engineering**  
**2020 – 2021**  
B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem /PCC CS 593  
**Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*



The screenshot shows a Java IDE window with a console pane. The console title is "Console". The output text in the console is as follows:

```
<terminated> AreaOfCircle [Java Application] C:\Program Files\Java\jdk-11.0.6\bin\javaw.exe (31-Mar-2021, 10:25:11 am – 10:25:38 am)
Enter Radius Of A circle:
2
Area Of Circle Is 12.56
```

On the left side of the IDE, parts of the source code are visible, including the following lines:

```
rc >
3nmer
util
{
    pi=3.14
    alcu
}

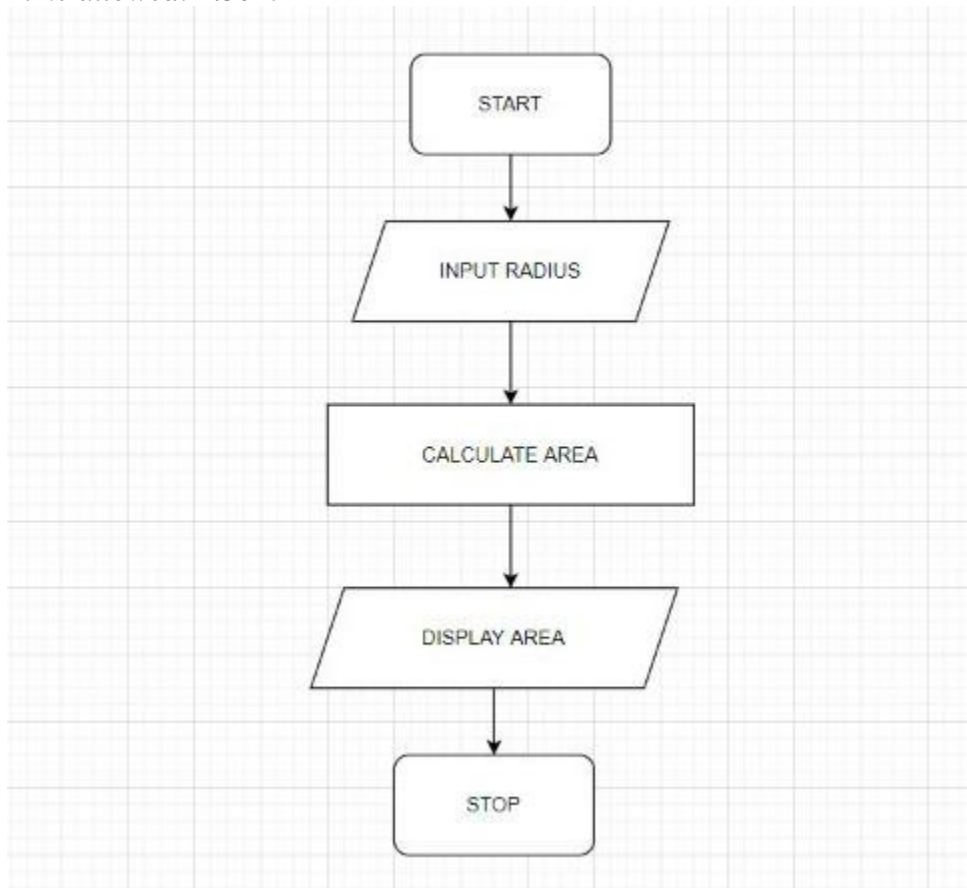
impl
{
    public
    n (p
```

**FLOWCHART:**

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,**  
**SILIGURI: 734 009**  
**Department of Computer Science and Engineering**  
**2020 – 2021**  
B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup>Sem /PCC CS 593  
**Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*



**Q2. Write the Question**

There are two interface person, admin. Admin interface contains qualification and experience and person interface contain Emp\_code and Name. Now create a new class teacher which should be Followed multiple inherited by the above interface to show the details information of a teacher.

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,  
SILIGURI: 734 009**

**Department of Computer Science and Engineering**

**2020 – 2021**

B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem / PCC CS 593

**Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*

**Answer.**

**ALGORITHM:**

- 1.Start*
- 2.Take interface Person*
- 3.Take emp\_code.emp\_name inside interface person*
- 4. Take interface admin*
- 5. Take emp\_exp.emp\_qual inside interface admin*
- 6.Take a Class Teacher which will implements person and admin*
- 7.Print emp\_name,emp\_code,emp\_exp,emp\_qualification*

**Programming Code:**

```
package assignmentQuestion6;

interface person{
    int emp_code=1;
    String emp_name="Rahul Jha";
}

interface admin{
    int emp_exp=5;
    String emp_qual="Btech";
}

class teacher implements person,admin{
    teacher(){
        System.out.println("Employee Code :"+emp_code);
        System.out.println("Employee Name :"+emp_name);

        System.out.println("Employee Experience :"+emp_exp);

        System.out.println("Employee Qualification :"+emp_qual);
    }
}
```

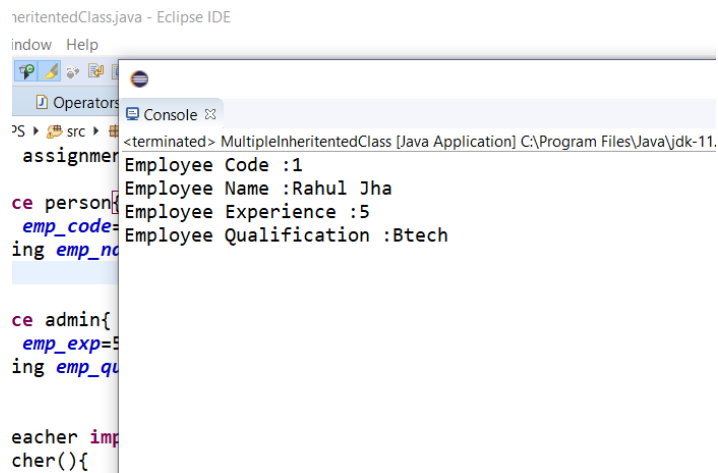
**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,  
SILIGURI: 734 009  
Department of Computer Science and Engineering  
2020 – 2021  
B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem /PCC CS 593  
Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*

```
    }  
  
}  
  
public class MultipleInheritedClass {  
    public static void main(String[] args) {  
new teacher();  
    }  
  
}
```

**Output:**



```
MultipleInheritedClass.java - Eclipse IDE  
Window Help  
Operators Console  
PS > src > <terminated> MultipleInheritedClass [Java Application] C:\Program Files\Java\jdk-11.  
assignment  
Employee Code :1  
Employee Name :Rahul Jha  
Employee Experience :5  
Employee Qualification :Btech  
  
ce admin{  
emp_exp=5  
ing emp_qu  
  
eacher imp  
cher(){
```

**FLOWCHART:**

**SURENDRA INSTITUTE OF ENGINEERING & MANAGEMENT,  
SILIGURI: 734 009  
Department of Computer Science and Engineering  
2020 – 2021  
B. Tech/ 3<sup>rd</sup> Yr / 5<sup>th</sup> Sem / PCC CS 593  
Object Oriented Programming**

*Time allowed: 1.30 hr*

*Full Marks: 60*

