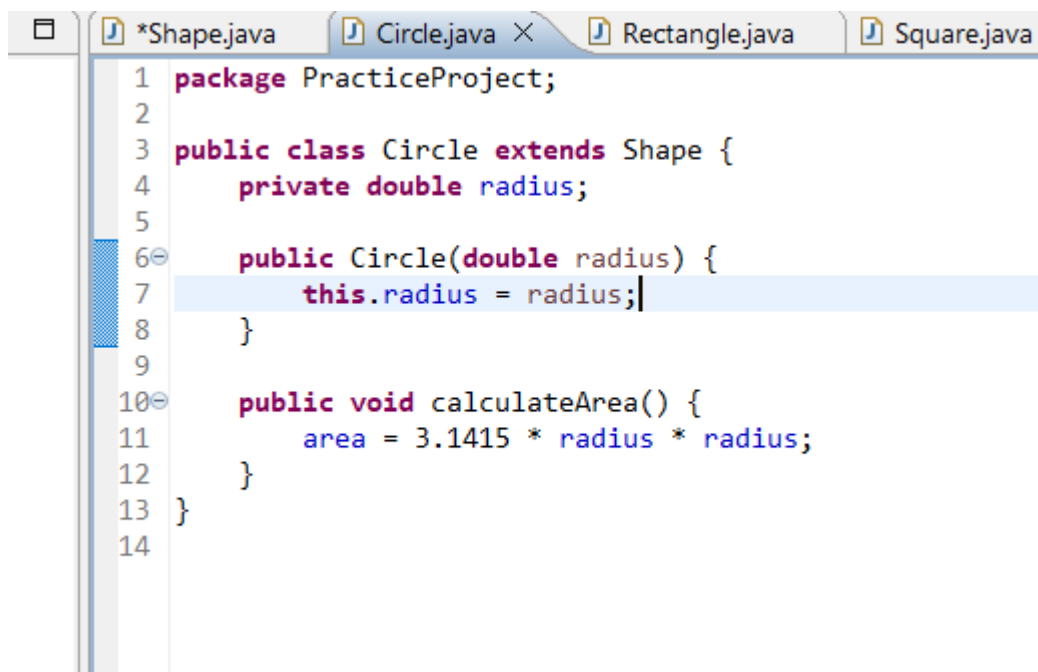


```
1 package PracticeProject;
2
3 public class Shape {
4
5     double area;
6
7     public void displayArea() {
8         System.out.println("Area is : " + area);
9     }
10
11 }
12
```



```
1 package PracticeProject;
2
3 public class Circle extends Shape {
4     private double radius;
5
6     public Circle(double radius) {
7         this.radius = radius;
8     }
9
10    public void calculateArea() {
11        area = 3.1415 * radius * radius;
12    }
13 }
14
```

```

1 package PracticeProject;
2
3 public class Rectangle extends Shape {
4     private double length;
5     private double width;
6
7     public Rectangle(double length, double width) {
8         this.length = length;
9         this.width = width;
10    }
11
12    public void calculateArea() {
13        area = length * width;
14    }
15 }

```

```

*Shape.java  Circle.java  Rectangle.java  Square.java
1 package PracticeProject;
2
3 public class Square extends Shape{
4     private double side;
5
6     public Square(double side) {
7         this.side = side;
8     }
9
10    public void calculateArea() {
11        area = side * side;
12    }
13 }
14
15

```

```

1 package PracticeProject;
2
3 public class Tringle extends Shape{
4     private double base;
5     private double height;
6
7     public Tringle(double base, double height) {
8         this.base = base;
9         this.height = height;
10    }
11
12    public void calculateArea() {
13        area = .5 * base * height;
14    }
15 }
16

```

```

1 package PracticeProject;
2
3 import java.util.ArrayList;
4
5 public class AreaOfShapes {
6     public static void main(String[] args) {
7         ArrayList<Shape> shapes = new ArrayList<>();
8
9         Circle circle = new Circle(10);
10        circle.calculateArea();
11        shapes.add(circle);
12
13        Rectangle rectangle = new Rectangle(4,6);
14        rectangle.calculateArea();
15        shapes.add(rectangle);
16
17        Square square = new Square(10);
18        square.calculateArea();
19        shapes.add(square);
20
21        Tringle tringle = new Tringle(10,20);
22        tringle.calculateArea();
23        shapes.add(tringle);
24
25
26
27        try {
28            for (Shape t : shapes) {
29                t.displayArea();
30            }
31        } catch (Exception e) {
32            System.out.println("An Exception occurred: ");
33        } finally {
34            System.out.println("Calculation Completed.");
35        }
36    }
37 }

```

//OUTPUT

```
Problems | Javadoc | Declaration |  
<terminated> AreaOfShapes [Java Applicat  
Area: 314.15000000000003  
Area: 24.0  
Area: 100.0  
Area: 100.0  
Calculation Completed.
```