

01\Code01\Eight.java

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1  /*
2  Write a Java program to create a class called Shape with methods called getPerimeter()
3  and getArea(). Create a subclass called Circle that overrides the getPerimeter() and
4  getArea() methods to calculate the area and perimeter of a circle. Consider, Radius=5.
5  Expected Output:
6  Calculating perimeter in Shape class
7  Generic Shape Perimeter: 0.0
8  Calculating area in Shape class
9  Generic Shape Area: 0.0
10 Circle Perimeter: 31.41592653589793
11 Circle Area: 78.53981633974483
12 */
13
14 import java.util.Scanner;
15
16 class Shape {
17     double getPerimeter(){
18         System.out.println("Calculating perimeter in Shape class");
19         return 0.0;
20     }
21     double getArea() {
22         System.out.println("Calculating area in Shape class");
23         return 0.0;
24     }
25 }
26 class Circle extends Shape{
27     double radius;
28
29     Circle(double radius){
30         this.radius = radius;
31     }
32     double getPerimeter(){
33         return 2 * Math.PI * radius;
34     }
35     double getArea(){
36         return Math.PI * radius * radius;
37     }
38 }
39
40 public class Eight {
41     public static void main(String[] args) {
42         Scanner scan = new Scanner(System.in);
43         Shape sh = new Shape();
44         System.out.println("Generic Shape Perimeter: " + sh.getPerimeter());
45         System.out.println("Generic Shape Area: " + sh.getArea());
46
47         System.out.print("Enter the radius: ");
48         double r = scan.nextDouble();
```

```
49     Circle crcl = new Circle(r);
50     System.out.println("Circle Perimeter: " + crcl.getPerimeter());
51     System.out.println("Circle Area: " + crcl.getArea());
52
53     scan.close();
54 }
55 }
56 }
```