

**Cylinder.java**

```
1 public class Cylinder extends Shape implements Volume {
2     private double radius, height;
3
4     public Cylinder(double radius, double height) {
5         super("Cylinder");
6         this.radius = radius;
7         this.height = height;
8     }
9
10    @Override
11    public double calculateArea() {
12        return 2 * Math.PI * radius * (radius + height);
13    }
14
15    @Override
16    public double calculatePerimeter() {
17        return 0; // Perimeter is not applicable for Cylinder
18    }
19
20    @Override
21    public double calculateVolume() {
22        return Math.PI * radius * radius * height;
23    }
24 }
25
```