# Exercise 02:

## Answer

abstract class Shape {

public abstract double calculateArea();

public void display() {

System.out.println("Shape: " + this.getClass().getSimpleName());

System.out.println("Area: " + calculateArea());

}

}

class Circle extends Shape {

private double radius;

public Circle(double radius) {

this.radius = radius;

}

public double calculateArea() {

return Math.PI \* radius \* radius;

}

}

class Rectangle extends Shape {

private double length,width;

public Rectangle(double length, double width) {

this.length = length;

this.width = width;

}

public double calculateArea() {

return length \* width;

}

}

public class Main {

public static void main(String[] args) {

Circle circle = new Circle(8);

Rectangle rectangle = new Rectangle(3, 2);

circle.display();

rectangle.display();

}

}

Output:

Shape: Circle

Area: 201.06

Shape: Rectangle

Area: 6.0