package shapes;

public class Shape {

public void displayArea() {

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

}

}

public class Circle extends Shape {

private double radius;

public Circle(double radius) {

this.radius = radius;

}

@Override

public void displayArea() {

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

}

public double calculateArea() {

return Math.PI \* radius \* radius;

}

}

public class Rectangle extends Shape {

private double length;

private double width;

public Rectangle(double length, double width) {

this.length = length;

this.width = width;

}

@Override

public void displayArea() {

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

}

public double calculateArea() {

return length \* width;

}

}

import shapes.Circle;

import shapes.Rectangle;

public class Main {

public static void main(String[] args) {

Circle circle = new Circle(5.0);

Rectangle rectangle = new Rectangle(4.0, 6.0);

}

}

import java.util.ArrayList;

public class Main {

public static void main(String[] args) {

Circle circle = new Circle(5.0);

Rectangle rectangle = new Rectangle(4.0, 6.0);

ArrayList<Shape> shapesList = new ArrayList<>();

shapesList.add(circle);

shapesList.add(rectangle);

}

}

import java.util.ArrayList;

public class Main {

public static void main(String[] args) {

Circle circle = new Circle(5.0);

Rectangle rectangle = new Rectangle(4.0, 6.0);

ArrayList<Shape> shapesList = new ArrayList<>();

shapesList.add(circle);

shapesList.add(rectangle);

try {

for (Shape shape : shapesList) {

shape.displayArea();

}

} catch (Exception e) {

System.err.println("An error occurred: ");

} finally {

System.out.println("Calculation complete.");

}

}

}