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import java.util.Scanner;

import static java.lang.Double.parseDouble;

abstract class Shape {
    public abstract double calculateArea();

    public abstract double calculateVolume();
}

abstract class Triangle extends Shape {
    private double base;
    private double height;

    public Triangle(double base, double height) {
        this.base = base;
        this.height = height;
    }

    @Override
    public double calculateArea() {
        return 0.5 * base * height;
    }
}

abstract class Circle extends Shape {
    private double radius;

    public Circle(double radius) {
        this.radius = radius;
    }

    @Override
    public double calculateArea() {
        return Math.PI * (radius * radius);
    }
}

abstract class Rectangle extends Shape {
    private double length;
    private double breadth;

    public Rectangle(double length, double breadth) {
        this.length = length;
        this.breadth = breadth;
    }

    @Override
    public double calculateArea() {
        return length * breadth;
    }
}
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class Sphere extends Shape {
    private double radius;

    public Sphere(double radius) {
        this.radius = radius;
    }

    @Override
    public double calculateArea() {
        return 4 * Math.PI * (radius * radius);
    }

    public double calculateVolume() {
        return 4.0/3.0 * Math.PI * (radius * radius * radius);
    }
}

class Cube extends Shape {
    private double side;

    public Cube(double side) {
        this.side = side;
    }

    @Override
    public double calculateArea() {
        return 6 * side * side;
    }

    public double calculateVolume() {
        return side * side * side;
    }
}

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the shape type: ");
        String shapeType = scanner.nextLine();
        Shape shape;
        if (shapeType.equalsIgnoreCase("Triangle")) {
            System.out.println("Enter the base and height: ");
            String[] props = scanner.nextLine().split(" ");
            shape = new Triangle(parseDouble(props[0]), parseDouble(props[1])) {
                @Override
                public double calculateVolume() {
                    return 0;
                }
            };
        } else if (shapeType.equalsIgnoreCase("Circle")) {
            System.out.println("Enter the radius: ");

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        String prop = scanner.nextLine();
        shape = new Circle(parseDouble(prop)) {
            @Override
            public double calculateVolume() {
                return 0;
            }
        };
    } else if (shapeType.equalsIgnoreCase("Rectangle")) {
        System.out.println("Enter the length and breadth: ");
        String[] props = scanner.nextLine().split(" ");
        shape = new Rectangle(parseDouble(props[0]), parseDouble(props[1])) {
            @Override
            public double calculateVolume() {
                return 0;
            }
        };
    } else if (shapeType.equalsIgnoreCase("Sphere")) {
        System.out.println("Enter the radius: ");
        String prop = scanner.nextLine();
        shape = new Sphere(parseDouble(prop));
    } else if (shapeType.equalsIgnoreCase("Cube")) {
        System.out.println("Enter the side: ");
        String prop = scanner.nextLine();
        shape = new Cube(parseDouble(prop));
    } else {
        System.out.println("Invalid shape type");
        return;
    }
    double area = shape.calculateArea();
    if (shape instanceof Sphere || shape instanceof Cube) {
        double volume = ((Shape) shape).calculateVolume();
        System.out.println("Area: " + area + ", Volume: " + volume);
    } else {
        System.out.println("Area: " + area);
    }
}
}

```