import java.util.Date;

public class Triangle extends SimpleGeometricObject {

private double side1 = 1.0;

private double side2 = 1.0;

private double side3 = 1.0;

public Triangle() {

super();

}

public Triangle(double side1, double side2, double side3) {

super();

this.side1 = side1;

this.side2 = side2;

this.side3 = side3;

}

public double getSide1() {

return side1;

}

public void setSide1(double side1) {

this.side1 = side1;

}

public double getSide2() {

return side2;

}

public void setSide2(double side2) {

this.side2 = side2;

}

public double getSide3() {

return side3;

}

public void setSide3(double side3) {

this.side3 = side3;

}

public double getArea() {

double s = (side1 + side2 + side3) / 2;

return Math.sqrt(s \* (s - side1) \* (s - side2) \* (s - side3));

}

public double getPerimeter() {

return side1 + side2 + side3;

}

public String toString() {

return "Triangle: side1 = " + side1 + " side2 = " + side2 + " side3 = " + side3 +

"\n" + super.toString();

}

}

import java.util.Scanner;

public class TestTriangle {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter three sides of the triangle: ");

double side1 = input.nextDouble();

double side2 = input.nextDouble();

double side3 = input.nextDouble();

// System.out.print("Enter side1: ");

// double side1 = input.nextDouble();

// System.out.print("Enter side2: ");

// double side2 = input.nextDouble();

// System.out.print("Enter side3: ");

// double side3 = in234put.nextDouble();

System.out.print("Enter the color: ");

String color = input.next();

System.out.print("Is the triangle filled (true / false)? ");

boolean filled = input.nextBoolean();

Triangle triangle = new Triangle(side1, side2, side3);

triangle.setColor(color);

triangle.setFilled(filled);

System.out.println("The sides of the triangle are: " + triangle.getSide1() + " " +

triangle.getSide2() + " " + triangle.getSide3());

System.out.println("The area of the triangle is: " + triangle.getArea());

System.out.println("The perimeter of the triangle is: " + triangle.getPerimeter());

System.out.println("The color of the triangle is: " + triangle.getColor());

System.out.println("The triangle is filled: " + triangle.isFilled());

System.out.println("The date the triangle was created is: " + triangle.getDateCreated());

}

}

|  |
| --- |
| SimpleGeometricObject |
| -color: String  -filled: boolean  -dateCreated: Date |
| +SimpleGeometricObject()  +SimpleGeometricObject(color: String, filled: boolean)  +getColor(): String  +setColor(color: String)  +isFilled(): boolean  +setFilled(filled: boolean)  +getDateCreated(): Date  +toString(): String |

|  |
| --- |
| Triangle |
| -side1: double  -side2: double  -side3: double |
| +Triangle()  +Triangle(side1: double, side2: double, side3: double)  +getSide1(): double  +setSide1(side1: double)  +getSide2(): double  +setSide2(side2: double)  +getSide3(): double  +setSide3(side3: double)  +getArea(): double  +getPerimeter(): double  +toString(): String |

Text

Description automatically generated