

Alanna Hupe

```
package javaapplication1;

import java.util.Scanner;
public class JavaApplication1 {
    private double side1 = 1.0;
    private double side2 = 1.0;
    private double side3 = 1.0;

    public static void main(String[] args) throws Exception {
        Scanner input = new Scanner(System.in);

        System.out.println("Enter three sides of the Triangle: ");
        double side1 = input.nextDouble();
        double side2 = input.nextDouble();
        double side3 = input.nextDouble();

        Triangle triangle = new Triangle(side1, side2, side3);
        System.out.println("Enter the color of the Triangle: ");
        String color = input.next();
        triangle.setColor(color);

        System.out.println("Is the Triangle filled? Reply with 'True' or 'False': ");
        boolean filled = input.nextBoolean();
        triangle.setFilled(filled);

        System.out.println("The Triangle Sides are \nSide 1: "
+ triangle.getSide1() + "\nSide 2: " + triangle.getSide2()
+ "\nSide 3: " + triangle.getSide3());

        System.out.println("The Triangle's Area is: " + triangle.getArea());

        System.out.println("The Triangle's Perimeter is: " + triangle.getPerimeter());

        System.out.println("The Triangle's Color is " + triangle.getColor());
        System.out.println("Is the Triangle filled? " + triangle.isFilled());

    }

    public static class GeometricObject {
        private String color = " white ";
```

```

private boolean filled;
private java.util.Date dateCreated;

public GeometricObject() {
    dateCreated = new java.util.Date();
}

public GeometricObject(String color, boolean filled) {
    dateCreated = new java.util.Date();
    this.color = color;
    this.filled = filled;
}

public String getColor() {
    return color;
}

public void setColor(String color) {
    this.color = color;
}

public boolean isFilled() {
    return filled;
}

public void setFilled(boolean filled) {
    this.filled = filled;
}

public java.util.Date getDateCreated() {
    return dateCreated;
}

public String toString() {
    return "Created on " + dateCreated + "\n color: " + color + " and filled ";
}
}

public static class Triangle extends GeometricObject {
    private double side1 = 1.0;
    private double side2 = 1.0;
    private double side3 = 1.0;
    private double area;

```

```

private double perimeter;

public Triangle() {
}

public Triangle(double side1, double side2, double side3) {
    this.side1 = side1;
    this.side2 = side2;
    this.side3 = side3;
}

public double getSide1() {
    return side1;
}

public double getSide2() {
    return side2;
}

public double getSide3() {
    return side3;
}

public double getArea(){
    double s = 0.5 * (side1 + side2 +
side3);
    area =
Math.sqrt(s*(s-side1)*(s-side2)*(s-side3));
    return area;
}

public double getPerimeter(){
    perimeter = (side1+side2+side3);
    return perimeter;
}

public void setSide1(double side1) {
    this.side1 = side1;
}

public void setSide2(double side2) {
    this.side2 = side2;
}

public void setSide3(double side3) {
    this.side3 = side2;
}
}
}

```

```

run:
Enter three sides of the Triangle:
4.0 5.0 6.0
Enter the color of the Triangle:
Red
Is the Triangle filled? Reply with 'True' or 'False':
True
The Triangle Sides are
Side 1: 4.0
Side 2: 5.0
Side 3: 6.0
The Triangle's Area is: 9.921567416492215
The Triangle's Perimeter is: 15.0
The Triangle's Color is Red
Is the Triangle filled? true
BUILD SUCCESSFUL (total time: 10 seconds)

```

```

run:
Enter three sides of the Triangle:
2 7 6
Enter the color of the Triangle:
green
Is the Triangle filled? Reply with 'True' or 'False':
False
The Triangle Sides are
Side 1: 2.0
Side 2: 7.0
Side 3: 6.0
The Triangle's Area is: 5.562148865321747
The Triangle's Perimeter is: 15.0
The Triangle's Color is green
Is the Triangle filled? false
BUILD SUCCESSFUL (total time: 16 seconds)

```