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package classes;

import java.util.Date;

public abstract class GeometricObject {
    protected GeometricObject() {
        this.date_created = new Date();
        this.color = "White";
        this.is_filled = false;
    }

    protected GeometricObject(String color, boolean is_filled) {
        this.date_created = new Date();
        this.color = color;
        this.is_filled = is_filled;
    }

    @Override
    public String toString() {
        return "Created on: " + this.date_created + "\n" +
            "\t- Color: " + this.color + "\n" +
            "\t- Filled: " + this.is_filled + "\n";
    }

    public static void displayObject(Object object) {
        if (object instanceof Triangle triangle) {
            System.out.println("Side1: " + triangle.getSide1());
            System.out.println("Side2: " + triangle.getSide2());
            System.out.println("Side3: " + triangle.getSide3());
            System.out.println("Area: " + triangle.getArea());
            System.out.println("Perimeter: " + triangle.getPerimeter());
        } else if (object instanceof Rectangle rectangle) {
            System.out.println("Width: " + rectangle.getWidth());
            System.out.println("Height: " + rectangle.getHeight());
            System.out.println("Area: " + rectangle.getArea());
            System.out.println("Perimeter: " + rectangle.getPerimeter());
        } else if (object instanceof Circle circle) {
            System.out.println("Diameter: " + circle.getDiameter());
            System.out.println("Area: " + circle.getArea());
            System.out.println("Perimeter: " + circle.getPerimeter());
        } else {
            System.out.println("ERROR: invalid object");
        }
    }

    abstract public double getArea();

    abstract public double getPerimeter();

    protected String color;
    protected boolean is_filled;
    protected final Date date_created;

    public String getColor() {
        return color;
    }

```

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}

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

public boolean isFilled() {
    return is_filled;
}

public void setIsFilled(boolean is_filled) {
    this.is_filled = is_filled;
}

public Date getDateCreated() {
    return date_created;
}
}
```