

## Bridge

```
// Implementation
public interface Color {
    public void setBlueColor(Shape shape);
    public void setRedColor(Shape shape);
}

public class ColoredCircle implements Color {
    private Circle circle = new Circle("circle");
    @Override
    public void setBlueColor(Shape shape) {
        if(shape.getShapeName().equals(circle.getShapeName())) {
            shape.setShapeColor("blue");
        }
    }
    @Override
    public void setRedColor(Shape shape) {
        if(shape.getShapeName().equals(circle.getShapeName())) {
            shape.setShapeColor("red");
        }
    }
    @Override
    public boolean equals(Object obj) {
        if(this == obj) {
            return true;
        }
        if(obj == null || getClass() != obj.getClass()) {
            return false;
        }
        Circle otherCircle = (Circle) obj;
        return circle.getShapeName().equals(otherCircle.getShapeName());
    }
}

public class ColoredSquare implements Color {
    private Square square = new Square("square");
    @Override
    public void setBlueColor(Shape shape) {
        if(shape.getShapeName().equals(square.getShapeName())) {
            shape.setShapeColor("blue");
        }
    }
    @Override
    public void setRedColor(Shape shape) {
        if(shape.getShapeName().equals(square.getShapeName())) {
            shape.setShapeColor("red");
        }
    }
    @Override
    public boolean equals(Object obj) {
        if(this == obj) return true;
        if(obj == null || getClass() != obj.getClass()) return false;
        Square otherSquare = (Square) obj;
        return square.getShapeName().equals(otherSquare.getShapeName());
    }
}
```

```

public abstract class Shape {
    private String shapeName;
    private String shapeColor;
    protected Color color;
    public Shape(String name) {
        this.setShapeName(name);
        this.shapeColor = "none";
    }
    public String getShapeName() {
        return shapeName;
    }
    public void setShapeName(String shapeName) {
        this.shapeName = shapeName;
    }
    public String getShapeColor() {
        return shapeColor;
    }
    public void setShapeColor(String shapeColor) {
        this.shapeColor = shapeColor;
    }
    public abstract void draw();
}

public class Square extends Shape {
    public Square(String name) {
        super(name);
    }
    @Override
    public void draw() {
        System.out.println("[DRAWING]: " + getShapeName() + " with " + getShapeColor() + " color");
    }
}

public class Circle extends Shape {
    public Circle(String name) {
        super(name);
    }
    @Override
    public void draw() {
        System.out.println("[DRAWING]: " + getShapeName() + " with " + getShapeColor() + " color");
    }
}

public class Client {
    public static void main(String[] args) {
        new Client().go();
    }
    void go() {
        Shape circle = new Circle("circle");
        circle.draw();
        new ColoredCircle().setBlueColor(circle);
        circle.draw();
        new ColoredCircle().setRedColor(circle);
        circle.draw();
        Shape square = new Square("square");
        square.draw();
        new ColoredSquare().setBlueColor(square);
        square.draw();
    }
}

```