

Programowanie w języku JAVA

Laboratorium 3

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Color.java

```
record Color(int red, int green, int blue, int alpha) implements
Comparable<Color> {

    public Color {
        if (red < 0 || red > 255 || green < 0 || green > 255 || blue < 0 ||
blue > 255 || alpha < 0 || alpha > 255) {
            throw new IllegalArgumentException("Wartości kolorów muszą być
w zakresie 0 - 255");
        }
    }

    Color(int red, int green, int blue) {
        this(red, green, blue, 0);
    }

    @Override
    public int compareTo(Color other) {
        double thisLuminance = 0.2126 * this.red + 0.7152 * this.green +
0.0722 * this.blue;
        double otherLuminance = 0.2126 * other.red + 0.7152 * other.green +
0.0722 * other.blue;
        return Double.compare(thisLuminance, otherLuminance);
    }
}
```

Main.java

```
import java.util.Arrays;

public class Main {
    public static void main(String[] args) {
        Color color1 = new Color(255, 33, 6);
        Color color2 = new Color(0, 0, 7);
        Color color3 = new Color(55, 60, 255, 128);

        System.out.println(color1);
        System.out.println("Red: " + color1.red());
        System.out.println("Green: " + color1.green());
        System.out.println("Blue: " + color1.blue());

        Color[] colors = {color1, color2, color3};
        Arrays.sort(colors);

        for (Color color : colors) {
            System.out.println(color);
        }
    }
}
```