

## gkiHSL\_to\_RGB.java

```
package gobalkrishnan_v_18_06_1995.color;

public class gkiHSL_to_RGB {
    int red,green,blue;
    double hue,saturation,light,c,x,m,r,g,b;
    private double c_255_to_1(int i){
        return i/255d;
    }
    private int c_1_to_255(double i){
        return (int) Math.round(i*255);
    }

    public void setHSL(double hue,double saturation,double light){
        setHue(hue);
        setSaturation(saturation);
        setLight(light);
    }

    private double mag(double d){
        return Math.sqrt(d*d);
    }

    public void setHue(double h){
        hue=h;
        process();
    }

    public void setSaturation(double s){
        saturation=s;
        process();
    }

    public void setLight(double a){
        light=a;
        process();
    }

    private void process(){
        c = (1-mag((2*light)-1))*saturation;
        m = light - (c/2d);
        x = c*(1-mag(((hue/60d)%2)-1));

        if(hue>=0 && hue<60){
            r=c;
            g=x;
            b=0;
        }
        if(hue>=60 && hue<120){
```

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```
        r=x;
        g=c;
        b=0;
    }
    if(hue>=120 && hue<180){
        r=0;
        g=c;
        b=x;
    }
    if(hue>=180 && hue<240){
        r=0;
        g=x;
        b=c;
    }
    if(hue>=240 && hue<300){
        r=x;
        g=0;
        b=c;
    }
    if(hue>=300 && hue<360){
        r=c;
        g=0;
        b=x;
    }

    red= c_1_to_255(r+m);
    green=c_1_to_255(g+m);
    blue=c_1_to_255(b+m);
}
@Override
public String toString() {
    return "gkiHSL_to_RGB [red=" + red + ", green=" + green + ", blue=" + blue
        + "]";
}

}
```