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import java.awt.Color;
import java.awt.Graphics;
import java.applet.Applet;
import java.util.Random;

public class Stars extends Applet {
    public void paint (Graphics g) {
        int starNum = 10;
        Random r = new Random();
        for (int i = 0; i < starNum; i++) {
            int red = r.nextInt(256);
            int green = r.nextInt(256);
            int blue = r.nextInt(256);
            int radius = r.nextInt(26) + 25;
            int xstart = r.nextInt(901) + 50;
            int ystart = r.nextInt(551) + 50;
            Color c = new Color(red, green, blue);
            g.setColor(c);
            int[] xcoords = new int[10];
            int[] ycoords = new int[10];
            int x = 0;
            int y = 0;
            // Equation for calculating star points from
            (https://math.stackexchange.com/questions/3582342/coordinates-of-the-vertices-of-a-five-pointed-star)
            for (int k = 0; k < 10; k++) {
                if (k % 2 == 0) {
                    x = xstart + (int) (radius * Math.cos((2*Math.PI * (double) (k/2) ) / 5 + 5 * Math.PI
                    / 10));
                    y = ystart + (int) (radius * Math.sin((2*Math.PI * (double) (k/2) ) / 5 + 5 * Math.PI
                    / 10));
                } else {
                    x = xstart + (int) (3 * radius * Math.cos((2*Math.PI * (double) (k/2) ) / 5 + 7 *
                    Math.PI / 10));
                    y = ystart + (int) (3 * radius * Math.sin((2*Math.PI * (double) (k/2) ) / 5 + 7 *
                    Math.PI / 10));
                }
                xcoords[k] = x;
                ycoords[k] = y;
            }
            g.fillPolygon(xcoords, ycoords, 10);
        }
    }
}

```