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import java.awt.Dimension;
import java.awt.Graphics;
import javax.swing.JPanel;
import javax.swing.JFrame;

public class LineArt extends JPanel {

    // Unique version ID for this class to ensure saved objects can be loaded
safely
    private static final long serialVersionUID = 1L;

    // Initial width of height of the starting rectangle
    private static int width = 980;
    private static int height = 630;

    // main method to launch the program as a standalone application - no need to
    // modify
    public static void main(String[] args) {
        LineArt panel = new LineArt();
        panel.setPreferredSize(new Dimension(width + 20, height + 20)); //
content size window dimensions

        JFrame frame = new JFrame("Line Art"); // Title of frame
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.add(panel);
        frame.pack();
        frame.setVisible(true);
    }

    /**
    * Draw the four corners of line art. Line art displays straight lines
inside a rectangle from one side to
    * a perpendicular side. The lines must be drawn in such a way that both the
starting points of the lines on
    * one side and the ending points on the other side are equi-distant along
the sides. The size of the rectangle
    * is 980 pixels wide by 630 pixels high.
    *
    * @param g the Graphics object used for drawing shapes, text, and images
    */
    public void drawLineArt(Graphics g) {

        // Draw the initial rectangle
        g.drawRect(10, 10, width, height);

        // Draw bottom-left corner
        for (int i = 0; i <= 63; i++) {
            g.drawLine(width+10, 10+10*i, width+10-15*i, height+10);}
        // Draw bottom-right corner
        for (int j = 0; j <= 63; j++) {
            g.drawLine(10, 10+10*j, 10+15*j, height+10);
        }
        // Draw top-right corner
        for (int k = 0; k <= 63; k++) {
            g.drawLine(10, height+10-10*k, 10+15*k, 10);
        }
        // Draw top-left corner
        for (int l = 0; l <= 63; l++) {
            g.drawLine(width+10, height+10-10*l, width+10-15*l, 10);
        }
    }
}

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    }

    //Draw extra-credit
    int widthSmall = 510;
    int heightSmall = 313;
    g.drawRect(245, 168, widthSmall, heightSmall);
    // Draw bottom-left corner
        for (int i =0; i<=62; i++) {
            g.drawLine(widthSmall+245, 168+5*i, widthSmall+245-
8*i, heightSmall+168);}
        // Draw bottom-right corner
        for (int j =0; j<=62; j++) {
            g.drawLine(245, 168+5*j, 245+8*j, heightSmall+168);
            }
        // Draw top-right corner
        for (int k =0; k<=62; k++) {
            g.drawLine(245, heightSmall+168-5*k, 245+8*k, 168);
            }
        // Draw top-left corner
        for (int l =0; l<=62; l++) {
            g.drawLine(widthSmall+245, heightSmall+168-5*l,
widthSmall+245-8*l, 168);
        }
    }

    /**
     * Overrides JPanel's paintComponent method to perform custom drawing.
     *
     * @param g the Graphics object used for drawing shapes, text, and images
     */
    @Override
    protected void paintComponent(Graphics g) {
        super.paintComponent(g); // Clears the panel before drawing
        drawLineArt(g);
    }
}

```