

Question_4\DrawLines.java

```
1 import java.awt.*;
2 import javax.swing.*;
3
4 public class DrawLines extends JPanel {
5     private int numIncrements = 15;
6
7     public void paintComponent(Graphics g) {
8         super.paintComponent(g);
9         int width = getWidth();
10        int height = getHeight();
11        int xIncrement = width / numIncrements;
12        int yIncrement = height / numIncrements;
13
14        // Drawing lines from top-left to bottom-right
15        for (int i = 0; i < numIncrements; i++) {
16            int x1 = 0;
17            int y1 = i * yIncrement;
18            int x2 = (i + 1) * xIncrement;
19            int y2 = height;
20            g.drawLine(x1, y1, x2, y2);
21        }
22
23        // Drawing lines from top-right to bottom-left
24        for (int i = 0; i < numIncrements; i++) {
25            int x1 = width;
26            int y1 = i * yIncrement;
27            int x2 = width - (i + 1) * xIncrement;
28            int y2 = height;
29            g.drawLine(x1, y1, x2, y2);
30        }
31
32        // Drawing lines from bottom-left to top-right
33        for (int i = 0; i < numIncrements; i++) {
34            int x1 = i * xIncrement;
35            int y1 = 0;
36            int x2 = width;
37            int y2 = (i + 1) * yIncrement;
38            g.drawLine(x1, y1, x2, y2);
39        }
40
41        // Drawing lines from bottom-right to top-left
42        for (int i = 0; i < numIncrements; i++) {
43            int x1 = width - i * xIncrement;
44            int y1 = 0;
45            int x2 = 0;
46            int y2 = (i + 1) * yIncrement;
47            g.drawLine(x1, y1, x2, y2);
48        }
49    }
50
51    public static void main(String[] args) {
52        JFrame frame = new JFrame("Draw Lines");
53        DrawLines lines = new DrawLines();
54        frame.add(lines);
55        frame.setSize(400, 400);
56        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
57        frame.setVisible(true);
58    }
59 }
```

```
58     }  
59 }  
60
```