

```
1
2
3 //Name: David Lim
4 //Date: 9/29/22
5 /*
6  * Checkerboard
7  */
8
9
10
11 import javax.imageio.ImageIO;
12 import javax.swing.*;
13
14 import java.awt.*;
15 import java.awt.event.ActionListener;
16 import java.awt.event.ActionEvent;
17 import java.awt.image.BufferedImage;
18 import java.io.File;
19 import java.io.IOException;
20
21
22 import java.awt.event.*;
23
24
25
26 public class Main extends JFrame implements ActionListener{
27
28
29
30     //timer buttons
31     JButton btnStart = new JButton("Start");
32     JButton btnStop = new JButton("Stop");
33
34     //Location variables for circle
35     // int intX = 50;
36     // int intY = 200;
37
38     JTextField txtfieldRows = new JTextField("5", 5);
39     JTextField txtfieldCols = new JTextField("5", 5);
40     JLabel lblRows = new JLabel("# of rows");
41     JLabel lblCols = new JLabel("# of columns");
42     JButton btnDraw = new JButton("Draw");
43
44     int columns = 5;
45     int rows = 5;
46
47
48
49
50
51
52
53     //create the init method
54     //the init is the first method to run
55
56     public Main(){
57
```

```
58
59     super("Button Test");
60     setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
61     setLayout(new FlowLayout());
62     //pnlInput.setLayout(new GridLayout(0,2));
63
64     add(lblCols);
65         add(txtfieldCols);
66     add(lblRows);
67     add(txtfieldRows);
68     add(btnDraw);
69
70     btnDraw.addActionListener(this);
71         repaint();
72
73
74
75
76 }
77
78
79
80 public static void main(String[] args){
81
82     //Place components on the applet panel
83     final int FRAME_WIDTH = 800;
84     final int FRAME_HEIGHT = 800;
85
86     Main frame = new Main();
87     frame.setSize(FRAME_WIDTH, FRAME_HEIGHT);
88     frame.setVisible(true);
89
90
91
92 }
93 //when you push the button it comes this method
94 public void actionPerformed(ActionEvent event){
95
96     //declare variable to hold which button is called
97     Object objSource = event.getSource();
98     //requestFocus();
99     if(objSource == btnDraw){
100         repaint();
101         System.out.println("PAINT");
102     }
103
104
105
106
107
108
109
110
111 }
112
113
114
```

```
115
116 //create the paint method to show graphics
117 public void paint(Graphics g){
118     rows = Integer.parseInt(txtfieldRows.getText());
119     columns = Integer.parseInt(txtfieldCols.getText());
120
121     super.paint(g);
122     for(int x = 1; x <= columns; x++){
123         for(int y = 1; y <= rows; y++){
124             if (y % 2 == 1 && x % 2 == 1){
125                 g.setColor(Color.black);
126                 g.fillRect(x*50 + 50, y*50 + 50,50,50);
127             }
128             else if (y % 2 == 0 && x % 2 == 0){
129                 g.setColor(Color.black);
130                 g.fillRect(x*50 + 50, y*50 + 50,50,50);
131             }
132             if (y % 2 == 0 && x % 2 == 1){
133                 g.setColor(Color.white);
134                 g.fillRect(x*50 + 50, y*50 + 50,50,50);
135             }
136             else if (y % 2 == 1 && x % 2 == 0){
137                 g.setColor(Color.white);
138                 g.fillRect(x*50 + 50, y*50 + 50,50,50);
139             }
140
141         }
142     }
143
144 }
145 public void Update(Graphics gr){
146
147     //call the paint method
148     paint(gr);
149 }
150
151
152
153
154 }
155
156
157
158
```