```java
package javaapplication2;

import java.awt.Color;
import java.awt.Component;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javafx.scene.AccessibleRole;
import javax.swing.JButton;

/**
 *
 * @author 1bestcsharp.blogspot.com
 */
public class Java_tic_tac_toe extends javax.swing.JFrame {

    /**
     * Creates new form Java_tic_tac_toe
     */
    public Java_tic_tac_toe() {
        initComponents();
        addAction();
    }

    public void winEffect(JButton b1, JButton b2, JButton b3)
    {
        b1.setBackground(Color.BLACK);
        b2.setBackground(Color.BLACK);
        b3.setBackground(Color.BLACK);

        b1.setForeground(Color.WHITE);
        b2.setForeground(Color.WHITE);
        b3.setForeground(Color.WHITE);

        String msg = b1.getText() + " Is The Winner";
        jLabelMSG.setText(msg);

    }

    boolean win = false;
    public void getTheWinner(){

        if(!jButton1.getText().equals("") &&
    jButton1.getText().equals(jButton2.getText()) &&
    jButton1.getText().equals(jButton3.getText())){
            winEffect(jButton1, jButton2, jButton3);
            win = true;
        }

        if(!jButton4.getText().equals("") &&
    jButton4.getText().equals(jButton5.getText()) &&
    jButton4.getText().equals(jButton6.getText())){
            winEffect(jButton4, jButton5, jButton6);
            win = true;
        }

        if(!jButton7.getText().equals("") &&
    jButton7.getText().equals(jButton8.getText()) &&
    jButton7.getText().equals(jButton9.getText())){
            winEffect(jButton7, jButton8, jButton9);
```

```
 54            win = true;
 55        }
 56
 57        if(!jButton1.getText().equals("") &&
    jButton1.getText().equals(jButton4.getText()) &&
    jButton1.getText().equals(jButton7.getText())){
 58            winEffect(jButton1, jButton4, jButton7);
 59            win = true;
 60        }
 61
 62        if(!jButton2.getText().equals("") &&
    jButton2.getText().equals(jButton5.getText()) &&
    jButton2.getText().equals(jButton8.getText())){
 63            winEffect(jButton2, jButton5, jButton8);
 64            win = true;
 65        }
 66
 67        if(!jButton3.getText().equals("") &&
    jButton3.getText().equals(jButton6.getText()) &&
    jButton3.getText().equals(jButton9.getText())){
 68            winEffect(jButton3, jButton6, jButton9);
 69            win = true;
 70        }
 71
 72        if(!jButton1.getText().equals("") &&
    jButton1.getText().equals(jButton5.getText()) &&
    jButton1.getText().equals(jButton9.getText())){
 73            winEffect(jButton1, jButton5, jButton9);
 74            win = true;
 75        }
 76
 77        if(!jButton3.getText().equals("") &&
    jButton3.getText().equals(jButton5.getText()) &&
    jButton3.getText().equals(jButton7.getText())){
 78            winEffect(jButton3, jButton5, jButton7);
 79            win = true;
 80        }
 81
 82        else if(allButtonsTextLength() == 9 && win == false){
 83            jLabelMSG.setText("No One Win");
 84        }
 85    }
 86
 87    // if no one win
 88    public int allButtonsTextLength(){
 89
 90        // all buttons text length mean if
 91        // all buttons text length = 9
 92        // all buttons with text on them
 93
 94        String txt = "";
 95
 96        Component[] comps = jPanel1.getComponents();
 97
 98        for(Component comp : comps){
 99            if(comp instanceof JButton){
100                JButton button = (JButton)comp;
101                txt = txt + button.getText();
102            }
103        }
```

```
104            return txt.length();
105        }
106
107
108        // create action
109        // x_or_o => to display X or O
110        int x_or_o = 0;
111
112        public ActionListener createAction(JButton button)
113        {
114            ActionListener al = new ActionListener() {
115                @Override
116                public void actionPerformed(ActionEvent e) {
117
118                    if(button.getText().equals("")){
119                        if((x_or_o % 2) == 0)
120                            {
121                                button.setText("X");
122                                button.setForeground(Color.BLUE);
123                               jLabelMSG.setText("O turn now");
124                                getTheWinner();
125                            }else{
126                                button.setText("O");
127                                button.setForeground(Color.RED);
128                                jLabelMSG.setText("X turn now");
129                                getTheWinner();
130                            }
131
132                            x_or_o ++;
133                    }
134
135                }
136
137            };
138            return al;
139        }
140
141        // function to add action to the buttons
142        public void addAction(){
143
144            Component[] comps = jPanel1.getComponents();
145
146            for(Component comp : comps){
147                if(comp instanceof JButton){
148                    JButton button = (JButton)comp;
149                    button.addActionListener(createAction(button));
150                }
151            }
152
153        }
154
155
156
157        @SuppressWarnings("unchecked")
158        // <editor-fold defaultstate="collapsed" desc="Generated Code">
159        private void initComponents() {
160
161            jPanel1 = new javax.swing.JPanel();
162            jButton1 = new javax.swing.JButton();
```

```
163        jButton2 = new javax.swing.JButton();
164        jButton3 = new javax.swing.JButton();
165        jButton4 = new javax.swing.JButton();
166        jButton5 = new javax.swing.JButton();
167        jButton6 = new javax.swing.JButton();
168        jButton7 = new javax.swing.JButton();
169        jButton8 = new javax.swing.JButton();
170        jButton9 = new javax.swing.JButton();
171        jPanel2 = new javax.swing.JPanel();
172        jLabelMSG = new javax.swing.JLabel();
173        jButtonReplay = new javax.swing.JButton();
174
175        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
176
177        jButton1.setBackground(new java.awt.Color(255, 255, 255));
178        jButton1.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
179        jButton1.setBorder(null);
180
181        jButton2.setBackground(new java.awt.Color(255, 255, 255));
182        jButton2.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
183        jButton2.setBorder(null);
184
185        jButton3.setBackground(new java.awt.Color(255, 255, 255));
186        jButton3.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
187        jButton3.setBorder(null);
188
189        jButton4.setBackground(new java.awt.Color(255, 255, 255));
190        jButton4.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
191        jButton4.setBorder(null);
192
193        jButton5.setBackground(new java.awt.Color(255, 255, 255));
194        jButton5.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
195        jButton5.setBorder(null);
196
197        jButton6.setBackground(new java.awt.Color(255, 255, 255));
198        jButton6.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
199        jButton6.setBorder(null);
200
201        jButton7.setBackground(new java.awt.Color(255, 255, 255));
202        jButton7.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
203        jButton7.setBorder(null);
204
205        jButton8.setBackground(new java.awt.Color(255, 255, 255));
206        jButton8.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
207        jButton8.setBorder(null);
208
209        jButton9.setBackground(new java.awt.Color(255, 255, 255));
210        jButton9.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N
211        jButton9.setBorder(null);
212
213        javax.swing.GroupLayout jPanel1Layout = new
    javax.swing.GroupLayout(jPanel1);
214        jPanel1.setLayout(jPanel1Layout);
215        jPanel1Layout.setHorizontalGroup(
216
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
217            .addGroup(jPanel1Layout.createSequentialGroup()
218                .addContainerGap()
219
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADIN
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    G)
220                        .addGroup(jPanel1Layout.createSequentialGroup()
221                            .addComponent(jButton1,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
222
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
223                            .addComponent(jButton2,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
224
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
225                            .addComponent(jButton3,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE))
226                        .addGroup(jPanel1Layout.createSequentialGroup()
227                            .addComponent(jButton4,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
228
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
229                            .addComponent(jButton5,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
230
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
231                            .addComponent(jButton6,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE))
232                        .addGroup(jPanel1Layout.createSequentialGroup()
233                            .addComponent(jButton7,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
234
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
235                            .addComponent(jButton8,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65, javax.swing.GroupLayout.PREFERRED_SIZE)
236
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
237                            .addComponent(jButton9,
    javax.swing.GroupLayout.PREFERRED_SIZE, 65,
    javax.swing.GroupLayout.PREFERRED_SIZE)))
238                    .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
    Short.MAX_VALUE))
239            );
240            jPanel1Layout.setVerticalGroup(
241
     jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
242            .addGroup(jPanel1Layout.createSequentialGroup()
243                .addContainerGap()
244
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILI
    NG)
245                        .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE,
    60, javax.swing.GroupLayout.PREFERRED_SIZE)
246                        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE,
    60, javax.swing.GroupLayout.PREFERRED_SIZE)
247                        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE,
    60, javax.swing.GroupLayout.PREFERRED_SIZE))
248                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
249
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILI
    NG)
250                        .addComponent(jButton6, javax.swing.GroupLayout.PREFERRED_SIZE,
    60, javax.swing.GroupLayout.PREFERRED_SIZE)
251                        .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE,
    60, javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
252                    .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE,
      60, javax.swing.GroupLayout.PREFERRED_SIZE))
253                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
254
      .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILI
      NG)
255                    .addComponent(jButton9, javax.swing.GroupLayout.PREFERRED_SIZE,
      60, javax.swing.GroupLayout.PREFERRED_SIZE)
256                    .addComponent(jButton8, javax.swing.GroupLayout.PREFERRED_SIZE,
      60, javax.swing.GroupLayout.PREFERRED_SIZE)
257                    .addComponent(jButton7, javax.swing.GroupLayout.PREFERRED_SIZE,
      60, javax.swing.GroupLayout.PREFERRED_SIZE))
258                        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
      Short.MAX_VALUE))
259            );
260
261            jPanel2.setBackground(new java.awt.Color(255, 0, 51));
262
263            jLabelMSG.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
264            jLabelMSG.setForeground(new java.awt.Color(255, 255, 255));
265            jLabelMSG.setText("Play");
266
267            javax.swing.GroupLayout jPanel2Layout = new
      javax.swing.GroupLayout(jPanel2);
268            jPanel2.setLayout(jPanel2Layout);
269            jPanel2Layout.setHorizontalGroup(
270
       jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
271            .addGroup(jPanel2Layout.createSequentialGroup()
272                .addContainerGap()
273                .addComponent(jLabelMSG, javax.swing.GroupLayout.DEFAULT_SIZE, 191,
      Short.MAX_VALUE))
274            );
275            jPanel2Layout.setVerticalGroup(
276
       jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
277            .addComponent(jLabelMSG, javax.swing.GroupLayout.Alignment.TRAILING,
      javax.swing.GroupLayout.DEFAULT_SIZE, 51, Short.MAX_VALUE)
278            );
279
280            jButtonReplay.setBackground(new java.awt.Color(46, 204, 113));
281            jButtonReplay.setFont(new java.awt.Font("Tahoma", 0, 24)); // NOI18N
282            jButtonReplay.setForeground(new java.awt.Color(255, 255, 255));
283            jButtonReplay.setText("Replay");
284            jButtonReplay.addActionListener(new java.awt.event.ActionListener() {
285                public void actionPerformed(java.awt.event.ActionEvent evt) {
286                    jButtonReplayActionPerformed(evt);
287                }
288            });
289
290            javax.swing.GroupLayout layout = new
      javax.swing.GroupLayout(getContentPane());
291            getContentPane().setLayout(layout);
292            layout.setHorizontalGroup(
293            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
294            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
      layout.createSequentialGroup()
295                .addContainerGap(23, Short.MAX_VALUE)
296                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
      javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
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297                     .addGap(18, 18, 18))
298                 .addGroup(layout.createSequentialGroup()

    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
300                     .addGroup(layout.createSequentialGroup()
301                         .addGap(33, 33, 33)
302                         .addComponent(jPanel2,
    javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
    javax.swing.GroupLayout.PREFERRED_SIZE))
303                     .addGroup(layout.createSequentialGroup()
304                         .addGap(61, 61, 61)
305                         .addComponent(jButtonReplay,
    javax.swing.GroupLayout.PREFERRED_SIZE, 157,
    javax.swing.GroupLayout.PREFERRED_SIZE)))
306                 .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
    Short.MAX_VALUE))
307         );
308         layout.setVerticalGroup(
309             layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
310             .addGroup(layout.createSequentialGroup()
311                 .addContainerGap()
312                 .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
    javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
314                 .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
    javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
316                 .addComponent(jButtonReplay, javax.swing.GroupLayout.DEFAULT_SIZE,
    41, Short.MAX_VALUE)
317                 .addContainerGap())
318         );

320         pack();
321     }// </editor-fold>

323     private void jButtonReplayActionPerformed(java.awt.event.ActionEvent evt) {

324         win = false;
325         Component[] comps = jPanel1.getComponents();

327         for(Component comp : comps){
328             if(comp instanceof JButton){
329                 JButton button = (JButton)comp;
330                 button.setText("");
331                 button.setBackground(Color.WHITE);
332                 jLabelMSG.setText("Play");
333             }
334         }

336     }

338     /**
339      * @param args the command line arguments
340      */
341     public static void main(String args[]) {
342         /* Set the Nimbus look and feel */
343         //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code
    (optional) ">
```

```
344            /* If Nimbus (introduced in Java SE 6) is not available, stay with the
      default look and feel.
345             * For details see
      http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
346            */
347        try {
348            for (javax.swing.UIManager.LookAndFeelInfo info :
      javax.swing.UIManager.getInstalledLookAndFeels()) {
349                if ("Nimbus".equals(info.getName())) {
350                    javax.swing.UIManager.setLookAndFeel(info.getClassName());
351                    break;
352                }
353            }
354        } catch (ClassNotFoundException ex) {

       java.util.logging.Logger.getLogger(Java_tic_tac_toe.class.getName()).log(java.util.
355    logging.Level.SEVERE, null, ex);
356        } catch (InstantiationException ex) {

       java.util.logging.Logger.getLogger(Java_tic_tac_toe.class.getName()).log(java.util.
357    logging.Level.SEVERE, null, ex);
358        } catch (IllegalAccessException ex) {

       java.util.logging.Logger.getLogger(Java_tic_tac_toe.class.getName()).log(java.util.
359    logging.Level.SEVERE, null, ex);
360        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

       java.util.logging.Logger.getLogger(Java_tic_tac_toe.class.getName()).log(java.util.
361    logging.Level.SEVERE, null, ex);
362        }
363        //</editor-fold>
364
365        /* Create and display the form */
366        java.awt.EventQueue.invokeLater(new Runnable() {
367            public void run() {
368                new Java_tic_tac_toe().setVisible(true);
369            }
370        });
371    }
372
373    // Variables declaration - do not modify
374    private javax.swing.JButton jButton1;
375    private javax.swing.JButton jButton2;
376    private javax.swing.JButton jButton3;
377    private javax.swing.JButton jButton4;
378    private javax.swing.JButton jButton5;
379    private javax.swing.JButton jButton6;
380    private javax.swing.JButton jButton7;
381    private javax.swing.JButton jButton8;
382    private javax.swing.JButton jButton9;
383    private javax.swing.JButton jButtonReplay;
384    private javax.swing.JLabel jLabelMSG;
385    private javax.swing.JPanel jPanel1;
386    private javax.swing.JPanel jPanel2;
387    // End of variables declaration
388 }
389
```