

# Tic-Tac-Toe Game Project Explanation

## Source Code :

Here is the source code to implement and solve sudoku program in C.

```
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package Java_TicTacToe;

import java.awt.Color;
import javax.swing.JFrame;
import javax.swing.JOptionPane;

/**
 *
 * @author md momin
 */
public class Java_TicTacToe extends javax.swing.JFrame {

    private String StartGame="X";
    private int Xcount=0;
    private int Ocount=0;
    boolean check;

    public Java_TicTacToe() {
        initComponents();
    }

    private void GameScore()
    {
        lblPlayerX.setText(String.valueOf(Xcount));
        lblPlayerO.setText(String.valueOf(Ocount));
    }

    private void ChoosePlayer()
    {

```

```

    if(StartGame.equalsIgnoreCase("X"))
    {
        StartGame="O";
    }
    else
    {
        StartGame="X";
    }
}

private void WinningGame()
{
    String b1=jbtn1.getText();
    String b2=jbtn2.getText();
    String b3=jbtn3.getText();
    String b4=jbtn4.getText();
    String b5=jbtn5.getText();
    String b6=jbtn6.getText();
    String b7=jbtn7.getText();
    String b8=jbtn8.getText();
    String b9=jbtn9.getText();

    if(b1.equals("X") && b2.equals("X") && b3.equals("X"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.GREEN);
        jbtn2.setBackground(Color.GREEN);
        jbtn3.setBackground(Color.GREEN);
        Xcount++;
        GameScore();
    }

    else if(b4.equals("X") && b5.equals("X") && b6.equals("X"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn4.setBackground(Color.BLUE);
        jbtn5.setBackground(Color.BLUE);

```

```

        jbtn6.setBackground(Color.BLUE);
        Xcount++;
        GameScore();
    }

    else if(b7.equals("X") && b8.equals("X") && b9.equals("X"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn7.setBackground(Color.CYAN);
        jbtn8.setBackground(Color.CYAN);
        jbtn9.setBackground(Color.CYAN);
        Xcount++;
        GameScore();
    }

    else if(b1.equals("X") && b4.equals("X") && b7.equals("X"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.DARK_GRAY);
        jbtn4.setBackground(Color.DARK_GRAY);
        jbtn7.setBackground(Color.DARK_GRAY);
        Xcount++;
        GameScore();
    }

    else if(b1.equals("X") && b5.equals("X") && b9.equals("X"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.GRAY);
        jbtn5.setBackground(Color.GRAY);
        jbtn9.setBackground(Color.GRAY);
        Xcount++;
        GameScore();
    }

```

```

else if(b3.equals("X") && b6.equals("X") && b9.equals("X"))
{
    JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

    jbtn3.setBackground(Color.LIGHT_GRAY);
    jbtn6.setBackground(Color.LIGHT_GRAY);
    jbtn9.setBackground(Color.LIGHT_GRAY);
    Xcount++;
    GameScore();
}

else if(b3.equals("X") && b5.equals("X") && b7.equals("X"))
{
    JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

    jbtn3.setBackground(Color.MAGENTA);
    jbtn5.setBackground(Color.MAGENTA);
    jbtn7.setBackground(Color.MAGENTA);
    Xcount++;
    GameScore();
}

else if(b2.equals("X") && b5.equals("X") && b8.equals("X"))
{
    JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

    jbtn2.setBackground(Color.ORANGE);
    jbtn5.setBackground(Color.ORANGE);
    jbtn8.setBackground(Color.ORANGE);
    Xcount++;
    GameScore();
}

else if(b1.equals("O") && b2.equals("O") && b3.equals("O"))
{

```

```

        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.GREEN);
        jbtn2.setBackground(Color.GREEN);
        jbtn3.setBackground(Color.GREEN);
        Ocount++;
        GameScore();
    }

    else if(b4.equals("O") && b5.equals("O") && b6.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn4.setBackground(Color.BLUE);
        jbtn5.setBackground(Color.BLUE);
        jbtn6.setBackground(Color.BLUE);
        Ocount++;
        GameScore();
    }

    else if(b7.equals("O") && b8.equals("O") && b9.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn7.setBackground(Color.CYAN);
        jbtn8.setBackground(Color.CYAN);
        jbtn9.setBackground(Color.CYAN);
        Ocount++;
        GameScore();
    }

    else if(b1.equals("O") && b4.equals("O") && b7.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player X Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.DARK_GRAY);

```

```

        jbtn4.setBackground(Color.DARK_GRAY);
        jbtn7.setBackground(Color.DARK_GRAY);
        Ocount++;
        GameScore();
    }

    else if(b1.equals("O") && b5.equals("O") && b9.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn1.setBackground(Color.GRAY);
        jbtn5.setBackground(Color.GRAY);
        jbtn9.setBackground(Color.GRAY);
        Ocount++;
        GameScore();
    }

    else if(b3.equals("O") && b6.equals("O") && b9.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn3.setBackground(Color.LIGHT_GRAY);
        jbtn6.setBackground(Color.LIGHT_GRAY);
        jbtn9.setBackground(Color.LIGHT_GRAY);
        Ocount++;
        GameScore();
    }

    else if(b3.equals("O") && b5.equals("O") && b7.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn3.setBackground(Color.MAGENTA);
        jbtn5.setBackground(Color.MAGENTA);
        jbtn7.setBackground(Color.MAGENTA);
        Ocount++;
        GameScore();
    }

```

```

    }

    else if(b2.equals("O") && b5.equals("O") && b8.equals("O"))
    {
        JOptionPane.showMessageDialog(this, "Player O Wins", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);

        jbtn2.setBackground(Color.ORANGE);
        jbtn5.setBackground(Color.ORANGE);
        jbtn8.setBackground(Color.ORANGE);
        Ocount++;
        GameScore();
    }

    // Check for a draw
    if (!jbtn1.getText().isEmpty() &&
        !jbtn2.getText().isEmpty() &&
        !jbtn3.getText().isEmpty() &&
        !jbtn4.getText().isEmpty() &&
        !jbtn5.getText().isEmpty() &&
        !jbtn6.getText().isEmpty() &&
        !jbtn7.getText().isEmpty() &&
        !jbtn8.getText().isEmpty() &&
        !jbtn9.getText().isEmpty()) {
        JOptionPane.showMessageDialog(this, "It's a Draw!", "Tic Tac Toe",
JOptionPane.INFORMATION_MESSAGE);
        resetBoard();
    }

}

private void resetBoard() {
jbtn1.setText("");
jbtn2.setText("");
jbtn3.setText("");
jbtn4.setText("");
jbtn5.setText("");

```

```
jbtn6.setText("");  
jbtn7.setText("");  
jbtn8.setText("");  
jbtn9.setText("");
```

```
jbtn1.setBackground(Color.LIGHT_GRAY);  
jbtn2.setBackground(Color.LIGHT_GRAY);  
jbtn3.setBackground(Color.LIGHT_GRAY);  
jbtn4.setBackground(Color.LIGHT_GRAY);  
jbtn5.setBackground(Color.LIGHT_GRAY);  
jbtn6.setBackground(Color.LIGHT_GRAY);  
jbtn7.setBackground(Color.LIGHT_GRAY);  
jbtn8.setBackground(Color.LIGHT_GRAY);  
jbtn9.setBackground(Color.LIGHT_GRAY);
```

```
enableButtons(true);  
}
```

```
private void enableButtons(boolean enable) {  
    jbtn1.setEnabled(enable);  
    jbtn2.setEnabled(enable);  
    jbtn3.setEnabled(enable);  
    jbtn4.setEnabled(enable);  
    jbtn5.setEnabled(enable);  
    jbtn6.setEnabled(enable);  
    jbtn7.setEnabled(enable);  
    jbtn8.setEnabled(enable);  
    jbtn9.setEnabled(enable);  
}
```

```
/**  
 * This method is called from within the constructor to initialize the form.  
 * WARNING: Do NOT modify this code. The content of this method is always  
 * regenerated by the Form Editor.  
 */  
@SuppressWarnings("unchecked")
```



```
// <editor-fold defaultstate="collapsed" desc="Generated Code">//GEN-BEGIN: initComponents
```

```
private void initComponents() {
```

```
    jPanel1 = new javax.swing.JPanel();
    jPanelLeft = new javax.swing.JPanel();
    jbtn3 = new javax.swing.JButton();
    jbtn6 = new javax.swing.JButton();
    jbtn2 = new javax.swing.JButton();
    jbtn1 = new javax.swing.JButton();
    jbtn5 = new javax.swing.JButton();
    jbtn9 = new javax.swing.JButton();
    jbtn4 = new javax.swing.JButton();
    jbtn7 = new javax.swing.JButton();
    jbtn8 = new javax.swing.JButton();
    jPanelRight = new javax.swing.JPanel();
    jPanelPlayers = new javax.swing.JPanel();
    jLabelPlayerO = new javax.swing.JLabel();
    jLabelPlayerX = new javax.swing.JLabel();
    jLabelPlayerO = new javax.swing.JLabel();
    jLabelPlayerX = new javax.swing.JLabel();
    jPanelOther = new javax.swing.JPanel();
    jButton11 = new javax.swing.JButton();
    jbtnExit = new javax.swing.JButton();
    jbtnReset = new javax.swing.JButton();
    jbtnNewGame = new javax.swing.JButton();
    jPanelTitle = new javax.swing.JPanel();
    jTitle_Label = new javax.swing.JLabel();
```

```
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    getContentPane().setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());
```

```
    jPanel1.setBackground(new java.awt.Color(95, 158, 160));
    jPanel1.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());
```

```
    jPanelLeft.setBackground(new java.awt.Color(95, 158, 160));
```

```
    jPanelLeft.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.b
order.BevelBorder.LOWERED));
```

```

jPanelLeft.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jbtn3.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn3.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn3.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn3.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn3ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn3,
org.netbeans.lib.awtextra.AbsoluteConstraints(420, 10, 190, -1));

jbtn6.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn6.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn6.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn6.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn6.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn6ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn6,
org.netbeans.lib.awtextra.AbsoluteConstraints(420, 170, 190, -1));

jbtn2.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn2.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn2.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn2.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn2ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn2,
org.netbeans.lib.awtextra.AbsoluteConstraints(220, 10, 190, -1));

jbtn1.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn1.setMaximumSize(new java.awt.Dimension(200, 150));

```

```

jbtn1.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn1.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn1ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn1, new org.netbeans.lib.awtextra.AbsoluteConstraints(20,
10, 190, -1));

```

```

jbtn5.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn5.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn5.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn5.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn5.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn5ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn5,
org.netbeans.lib.awtextra.AbsoluteConstraints(220, 170, 190, -1));

```

```

jbtn9.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn9.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn9.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn9.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn9.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn9ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn9,
org.netbeans.lib.awtextra.AbsoluteConstraints(420, 340, 190, -1));

```

```

jbtn4.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn4.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn4.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn4.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn4.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {

```

```

        jbtn4ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn4, new org.netbeans.lib.awtextra.AbsoluteConstraints(20,
170, 190, -1));

jbtn7.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn7.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn7.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn7.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn7.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn7ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn7, new org.netbeans.lib.awtextra.AbsoluteConstraints(20,
340, 190, -1));

jbtn8.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtn8.setMaximumSize(new java.awt.Dimension(200, 150));
jbtn8.setMinimumSize(new java.awt.Dimension(200, 140));
jbtn8.setPreferredSize(new java.awt.Dimension(200, 150));
jbtn8.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtn8ActionPerformed(evt);
    }
});
jPanelLeft.add(jbtn8,
org.netbeans.lib.awtextra.AbsoluteConstraints(220, 340, 190, -1));

jPanel1.add(jPanelLeft,
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 120, 630, 510));

jPanelRight.setBackground(new java.awt.Color(95, 158, 160));

jPanelRight.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.
border.BevelBorder.LOWERED));
jPanelRight.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jPanelPlayers.setBackground(new java.awt.Color(95, 158, 160));

```

```

jPanelPlayers.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.
border.BevelBorder.LOWERED));
    jPanelPlayers.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jLabelPlayerO.setFont(new java.awt.Font("Tahoma", 1, 60)); // NOI18N
    jLabelPlayerO.setText("Player O :");
    jPanelPlayers.add(jLabelPlayerO,                                     new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 120, 300, 90));

    jLabelPlayerX.setFont(new java.awt.Font("Tahoma", 1, 60)); // NOI18N
    jLabelPlayerX.setText("Player X :");
    jPanelPlayers.add(jLabelPlayerX,                                     new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 300, 90));

    jlblPlayerO.setFont(new java.awt.Font("Tahoma", 1, 60)); // NOI18N
    jlblPlayerO.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
    jlblPlayerO.setText("O");
    jlblPlayerO.setOpaque(true);
    jPanelPlayers.add(jlblPlayerO,                                     new
org.netbeans.lib.awtextra.AbsoluteConstraints(310, 120, 280, 90));

    jlblPlayerX.setFont(new java.awt.Font("Tahoma", 1, 60)); // NOI18N
    jlblPlayerX.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
    jlblPlayerX.setText("X");
    jlblPlayerX.setOpaque(true);
    jPanelPlayers.add(jlblPlayerX,                                     new
org.netbeans.lib.awtextra.AbsoluteConstraints(310, 10, 280, 90));

    jPanelRight.add(jPanelPlayers,                                     new
org.netbeans.lib.awtextra.AbsoluteConstraints(20, 10, 600, 240));

    jPanelOther.setBackground(new java.awt.Color(95, 158, 160));

jPanelOther.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.
border.BevelBorder.LOWERED));
    jPanelOther.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jButton11.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
    jButton11.setMaximumSize(new java.awt.Dimension(200, 150));

```

```
jButton11.setMinimumSize(new java.awt.Dimension(200, 140));
jButton11.setPreferredSize(new java.awt.Dimension(200, 150));
jPanelOther.add(jButton11,
org.netbeans.lib.awtextra.AbsoluteConstraints(420, 340, 190, -1));
```

new

```
jbtnExit.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtnExit.setText("Exit");
jbtnExit.setMaximumSize(new java.awt.Dimension(200, 150));
jbtnExit.setMinimumSize(new java.awt.Dimension(200, 140));
jbtnExit.setPreferredSize(new java.awt.Dimension(200, 150));
jbtnExit.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtnExitActionPerformed(evt);
    }
});
jPanelOther.add(jbtnExit,
org.netbeans.lib.awtextra.AbsoluteConstraints(290, 130, 300, 100));
```

new

```
jbtnReset.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtnReset.setText("Reset");
jbtnReset.setMaximumSize(new java.awt.Dimension(200, 150));
jbtnReset.setMinimumSize(new java.awt.Dimension(200, 140));
jbtnReset.setPreferredSize(new java.awt.Dimension(200, 150));
jbtnReset.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtnResetActionPerformed(evt);
    }
});
jPanelOther.add(jbtnReset,
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 130, 270, 100));
```

new

```
jbtnNewGame.setFont(new java.awt.Font("Tahoma", 1, 80)); // NOI18N
jbtnNewGame.setText("New Game");
jbtnNewGame.setMaximumSize(new java.awt.Dimension(200, 150));
jbtnNewGame.setMinimumSize(new java.awt.Dimension(200, 140));
jbtnNewGame.setPreferredSize(new java.awt.Dimension(200, 150));
jbtnNewGame.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jbtnNewGameActionPerformed(evt);
    }
});
```

```

    });
    jPanelOther.add(jbtnNewGame,
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 580, 110));

    jPanelRight.add(jPanelOther,
org.netbeans.lib.awtextra.AbsoluteConstraints(20, 260, 600, 240));

    jPanel1.add(jPanelRight,
org.netbeans.lib.awtextra.AbsoluteConstraints(660, 120, 630, 510));

    jPanelTitle.setBackground(new java.awt.Color(95, 158, 160));

jPanelTitle.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.b
order.BevelBorder.LOWERED));
    jPanelTitle.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

    jTitle_Label.setFont(new java.awt.Font("Tahoma", 1, 60)); // NOI18N
    jTitle_Label.setForeground(new java.awt.Color(255, 255, 255));
    jTitle_Label.setText("Java Advanced Tic Tac Toe Game");
    jPanelTitle.add(jTitle_Label,
org.netbeans.lib.awtextra.AbsoluteConstraints(110, 10, 1050, 90));

    jPanel1.add(jPanelTitle,
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 1280, 100));

    getContentPane().add(jPanel1,
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1390, 690));

    pack();
    setLocationRelativeTo(null);
} // </editor-fold> // GEN-END: initComponents

private void jbtnResetActionPerformed(java.awt.event.ActionEvent evt)
{ // GEN-FIRST: event_jbtnResetActionPerformed
    jbtn1.setEnabled(true);
    jbtn2.setEnabled(true);
    jbtn3.setEnabled(true);
    jbtn4.setEnabled(true);
    jbtn5.setEnabled(true);
    jbtn6.setEnabled(true);

```



```
jbtn7.setEnabled(true);  
jbtn8.setEnabled(true);  
jbtn9.setEnabled(true);
```

```
jbtn1.setText("");  
jbtn2.setText("");  
jbtn3.setText("");  
jbtn4.setText("");  
jbtn5.setText("");  
jbtn6.setText("");  
jbtn7.setText("");  
jbtn8.setText("");  
jbtn9.setText("");
```

```
jbtn1.setBackground(Color.LIGHT_GRAY);  
jbtn2.setBackground(Color.LIGHT_GRAY);  
jbtn3.setBackground(Color.LIGHT_GRAY);  
jbtn4.setBackground(Color.LIGHT_GRAY);  
jbtn5.setBackground(Color.LIGHT_GRAY);  
jbtn6.setBackground(Color.LIGHT_GRAY);  
jbtn7.setBackground(Color.LIGHT_GRAY);  
jbtn8.setBackground(Color.LIGHT_GRAY);  
jbtn9.setBackground(Color.LIGHT_GRAY);
```

```
//GEN-LAST:event_jbtnResetActionPerformed
```

```
private JFrame frame;
```

```
private void jbtnExitActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtnExitActionPerformed
```

```
    frame=new JFrame("Exit");
```

```
    if(JOptionPane.showConfirmDialog(frame, "Confirm if you want to exit", "Tic Tac Toe", JOptionPane.YES_NO_OPTION)==JOptionPane.YES_NO_OPTION)
```

```
    {
```

```
        System.exit(0);
```

```
    }
```

```
//GEN-LAST:event_jbtnExitActionPerformed
```

```
private void jbtnNewGameActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtnNewGameActionPerformed
```

```
    jbtn1.setText("");
```



```
jbtn2.setText("");
jbtn3.setText("");
jbtn4.setText("");
jbtn5.setText("");
jbtn6.setText("");
jbtn7.setText("");
jbtn8.setText("");
jbtn9.setText("");
```

```
jlblPlayerX.setText("X");
jlblPlayerO.setText("O");
```

```
jbtn1.setBackground(Color.LIGHT_GRAY);
jbtn2.setBackground(Color.LIGHT_GRAY);
jbtn3.setBackground(Color.LIGHT_GRAY);
jbtn4.setBackground(Color.LIGHT_GRAY);
jbtn5.setBackground(Color.LIGHT_GRAY);
jbtn6.setBackground(Color.LIGHT_GRAY);
jbtn7.setBackground(Color.LIGHT_GRAY);
jbtn8.setBackground(Color.LIGHT_GRAY);
jbtn9.setBackground(Color.LIGHT_GRAY);
```

```
//GEN-LAST:event_jbtnNewGameActionPerformed
```

```
private void jbtn1ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn1ActionPerformed
```

```
    jbtn1.setText(StartGame);
```

```
    if(StartGame.equalsIgnoreCase("X"))
    {
        check=false;
    }
```

```
    else
    {
        check=true;
    }
```

```
    ChoosePlayer();
    WinningGame();
```

```
}//GEN-LAST:event_jbtn1ActionPerformed
```

```
private void jbtn2ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn2ActionPerformed
```

```
    jbtn2.setText(StartGame);
```

```
    if(StartGame.equalsIgnoreCase("X"))  
    {  
        check=false;  
    }
```

```
    else  
    {  
        check=true;  
    }  
    ChoosePlayer();  
    WinningGame();
```

```
}//GEN-LAST:event_jbtn2ActionPerformed
```

```
private void jbtn3ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn3ActionPerformed
```

```
    jbtn3.setText(StartGame);
```

```
    if(StartGame.equalsIgnoreCase("X"))  
    {  
        check=false;  
    }
```

```
    else  
    {  
        check=true;  
    }  
    ChoosePlayer();  
    WinningGame();
```

```
}//GEN-LAST:event_jbtn3ActionPerformed
```

```
private void jbtn4ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn4ActionPerformed
```

```
jbtn4.setText(StartGame);
```

```
if(StartGame.equalsIgnoreCase("X"))  
{  
    check=false;  
}
```

```
else  
{  
    check=true;  
}  
ChoosePlayer();  
WinningGame();
```

```
//GEN-LAST:event_jbtn4ActionPerformed
```

```
private void jbtn5ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn5ActionPerformed
```

```
jbtn5.setText(StartGame);
```

```
if(StartGame.equalsIgnoreCase("X"))  
{  
    check=false;  
}
```

```
else  
{  
    check=true;  
}  
ChoosePlayer();  
WinningGame();
```

```
//GEN-LAST:event_jbtn5ActionPerformed
```

```
private void jbtn6ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-FIRST:event_jbtn6ActionPerformed
```

```

jbtn6.setText(StartGame);

if(StartGame.equalsIgnoreCase("X"))
{
    check=false;
}

else
{
    check=true;
}
ChoosePlayer();
WinningGame();

} //GEN-LAST:event_jbtn6ActionPerformed

private void jbtn7ActionPerformed(java.awt.event.ActionEvent evt) { //GEN-FIRST:event_jbtn7ActionPerformed

jbtn7.setText(StartGame);

if(StartGame.equalsIgnoreCase("X"))
{
    check=false;
}

else
{
    check=true;
}
ChoosePlayer();
WinningGame();

} //GEN-LAST:event_jbtn7ActionPerformed

private void jbtn8ActionPerformed(java.awt.event.ActionEvent evt) { //GEN-FIRST:event_jbtn8ActionPerformed

jbtn8.setText(StartGame);

```

```

        if(StartGame.equalsIgnoreCase("X"))
        {
            check=false;
        }

        else
        {
            check=true;
        }
        ChoosePlayer();
        WinningGame();

    }//GEN-LAST:event_jbtn8ActionPerformed

    private void jbtn9ActionPerformed(java.awt.event.ActionEvent evt) {GEN-FIRST:event_jbtn9ActionPerformed

        jbtn9.setText(StartGame);

        if(StartGame.equalsIgnoreCase("X"))
        {
            check=false;
        }

        else
        {
            check=true;
        }
        ChoosePlayer();
        WinningGame();

    }//GEN-LAST:event_jbtn9ActionPerformed
    /**
     * @param args the command line arguments
     */
    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code
(optional) ">

```

*/\* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.*

*\* For details see  
<http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html>  
\*/*

```
try {  
    for (javax.swing.UIManager.LookAndFeelInfo info :  
        javax.swing.UIManager.getInstalledLookAndFeels()) {  
        if ("Nimbus".equals(info.getName())) {  
            javax.swing.UIManager.setLookAndFeel(info.getClassName());  
            break;  
        }  
    }  
} catch (ClassNotFoundException ex) {
```

```
    java.util.logging.Logger.getLogger(Java_TicTacToe.class.getName()).log(java.util.lo  
gging.Level.SEVERE, null, ex);  
} catch (InstantiationException ex) {
```

```
    java.util.logging.Logger.getLogger(Java_TicTacToe.class.getName()).log(java.util.lo  
gging.Level.SEVERE, null, ex);  
} catch (IllegalAccessException ex) {
```

```
    java.util.logging.Logger.getLogger(Java_TicTacToe.class.getName()).log(java.util.lo  
gging.Level.SEVERE, null, ex);  
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
```

```
    java.util.logging.Logger.getLogger(Java_TicTacToe.class.getName()).log(java.util.lo  
gging.Level.SEVERE, null, ex);  
}  
//</editor-fold>
```

*/\* Create and display the form \*/*

```
java.awt.EventQueue.invokeLater(new Runnable() {  
    public void run() {  
        new Java_TicTacToe().setVisible(true);  
    }  
});  
}
```

```

// Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JButton jButton11;
private javax.swing.JLabel jLabelPlayerO;
private javax.swing.JLabel jLabelPlayerX;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanelLeft;
private javax.swing.JPanel jPanelOther;
private javax.swing.JPanel jPanelPlayers;
private javax.swing.JPanel jPanelRight;
private javax.swing.JPanel jPanelTitle;
private javax.swing.JLabel jLabelTitle_Label;
private javax.swing.JButton jbtn1;
private javax.swing.JButton jbtn2;
private javax.swing.JButton jbtn3;
private javax.swing.JButton jbtn4;
private javax.swing.JButton jbtn5;
private javax.swing.JButton jbtn6;
private javax.swing.JButton jbtn7;
private javax.swing.JButton jbtn8;
private javax.swing.JButton jbtn9;
private javax.swing.JButton jbtnExit;
private javax.swing.JButton jbtnNewGame;
private javax.swing.JButton jbtnReset;
private javax.swing.JLabel jLabelPlayerO;
private javax.swing.JLabel jLabelPlayerX;
// End of variables declaration//GEN-END:variables
}

```

**Project Explanation :** This program is a simple implementation of a Tic Tac Toe game in Java using Swing. It's a graphical user interface (GUI) application where users can play Tic Tac Toe against each other.

Let's break down the program :

**Package and Imports :**

```

package Java_TicTacToe;
import java.awt.Color;
import javax.swing.JFrame;
import javax.swing.JOptionPane;

```

This program is organized in a package named **Java\_TicTacToe**. It imports necessary classes from the **java.awt** and **javax.swing** packages for creating graphical components and handling user interface elements.

### Class Declaration :

```
public class Java_TicTacToe extends javax.swing.JFrame {  
    // class content...  
}
```

The class **Java\_TicTacToe** extends **JFrame**, indicating that it's a graphical frame for the Tic Tac Toe game.

### Class Variables :

```
private String StartGame = "X";  
private int Xcount = 0;  
private int Ocount = 0;  
private boolean check;
```

These variables are used to keep track of the current player (**StartGame**), the count of X wins (**Xcount**), the count of O wins (**Ocount**), and a boolean flag (**check**) to determine the current player.

### Constructor :

```
public Java_TicTacToe() {  
    initComponents();  
}
```

This is the constructor of the class. It initializes the components of the GUI using the **initComponents** method.

### Methods :

- **private void GameScore()** : Updates the displayed scores for X and O.
- **private void ChoosePlayer()** : Switches the player for the next turn.
- **private void WinningGame()**: Checks for a winning condition after each move.

### GUI Components :

The program uses Swing components to create the graphical user interface. Key components include buttons (**jbtn1** to **jbtn9**), labels (**jlblPlayerX** and **jlblPlayerO**), and buttons for actions like reset, new game, and exit.



The GUI layout is organized into panels (**jPanelLeft**, **jPanelRight**, **jPanelPlayers**, **jPanelOther**, and **jPanelTitle**), each serving a specific purpose in organizing the UI elements.

### Action Listeners :

Action listeners are implemented for the buttons to respond to user clicks. For example :

```
private void jbtn1ActionPerformed(java.awt.event.ActionEvent evt) {  
    jbtn1.setText(StartGame);  
  
    if (StartGame.equalsIgnoreCase("X")) {  
        check = false;  
    } else {  
        check = true;  
    }  
    ChoosePlayer();  
    WinningGame();  
}
```

### Event Handling :

The program handles events like button clicks to update the game state, check for a win, and update scores accordingly.

### Additional Features :

- Player scores are displayed.
- Buttons change color when a player wins.

### Menu Options :

The program has options to reset the game, start a new game, and exit.

### Main Method :

```
public static void main(String args[]) {  
    java.awt.EventQueue.invokeLater(new Runnable() {  
        public void run() {  
            new Java_TicTacToe().setVisible(true);  
        }  
    });  
}
```

The **main** method starts the application by creating an instance of the **Java\_TicTacToe** class and setting it to be visible.

Overall, this program provides a functional Tic Tac Toe game with a graphical user interface. Players can take turns, and the program checks for a winning condition after each move.