RIZVI COLLEGE OF ENGINEERING

Department of Computer Engineering

Mini Project Report

On

TIC TAC TOE GAME

Second Year of Engineering

BY

ARBAZ ANSARI (05)

AMMAR ANWAR (07)

SIDDHESH GHADIGAONKAR (13)

Guide:

Prof. Shaikh Mohd. Ashfaque

University of Mumbai (2019-20)

ABSTRACT

An early variant of Tic-tac-toe was played in the Roman Empire, around the first century BC. It was called Terni Lapilli and instead of having any number of pieces, each player only had three, thus they had to move them around to empty spaces to keep playing. The game's grid markings have been found chalked all over Rome.

However, according to Claudia Zaslavsky's book Tic Tac Toe: And Other Three-In-A Row Games from Ancient Egypt to the Modern Computer, Tic-Tac-Toe could originate back to ancient Egypt.[1]

The different names of the game are more recent. The first print reference to "noughts and crosses", the British name, appeared in 1864. The first print reference to a game called "tick-tack-toe" occurred in 1884, but referred to "a children's game played on a slate, consisting in trying with the eyes shut to bring the pencil down on one of the numbers of a set, the number hit being scored". "Tic-tac-toe" may also derive from "tick-tack", the name of an old version of backgammon first described in 1558. The U.S. renaming of noughts and crosses as tic-tac-toe occurred in the 20th century.[2]

In 1952, OXO (or Noughts and Crosses) for the EDSAC computer became one of the first known video games. The computer player could play perfect games of tic-tac-toe against a human opponent.

In 1975, Tic-Tac-Toe was also used by MIT students to demonstrate the computational power of Tinkertoy elements. The Tinkertoy computer, made out of (almost) only Tinkertoys, is able to play Tic-Tac-Toe perfectly[3]. It is currently on display at the Museum of Science, Boston.

Rizvi College of Engineering,

Department of Computer Engineering

Off Carter Road, Bandra (W), Mumbai - 400050.

Certificate

This is to certify that the project report entitled " **TIC TAC TOE GAME "** has been submitted by **ARBAZ ANSARI, AMMAR ANWAR and SIDDHESH GHADIGAONKAR** under the guidance of **Prof. Shaikh Mohd. Ashfaque** in partial fulfilment of the requirement for the award of the second year of Engineering in **Computer Engineering** from **University of Mumbai.**

Certified By

Prof.MohdAshfaque Shaikh

Project Guide

Index

Chapter 1: Introduction

TIC TAC TOE GAME :

Tic-tac-toe (also known as noughts and crosses or Xs and Os) is a paper and pencil game for two players, X and O, who take turns marking the spaces in a 3×3 grid. The player who achieves Placing three of your marks in a horizontal, vertical or diagonal row wins the game.

Players soon discover that the best game on both sides leads to a draw. Therefore, tic-tac-toe is most often played by young children.

Due to the simplicity of the tic-tac-toe, it is often used as a pedagogical tool to teach the concepts of good sportsmanship and the branch of artificial intelligence that deals with the search for game trees. It is easy to write a computer program to play perfectly to tic-tac-toe, to list the 765 essentially different positions (the spatial complexity of the state), or the 26,830 possible games to rotations and reflections (the complexity of the game tree) in this Space.

The game can be generalized to a m, n, k-game in which two players alternate placing stones of their own color on a m $\times$ n board, in order to get k of their own color in a row. Tic-tac-toe is the (3,3,3) -game. Harary's generalized tic-tac-toe is an even wider generalization of tic tac toe. It can also be generalized as a nd game. Tic-tac-toe is the game where n is equal to 3 and d is equal

to 2. If played correctly, the game will end in a tie by tic-tac-toe a intellectual game.

Chapter 2: Requirements

2.1 Hardware Requirements:

2.1.1 PC (Monitor/Laptop)

      2.1.2 RAM

      2.1.3 Mouse

      2.1.4 Keyboard

2.2 Software Requirements:

      2.2.1 JDK 12.0.2

      2.2.2 NETBEANS IDE

3.2 Algorithm:

1. Step 1: start

2. Step 2: Open JFrame Form in Netbeans

3. Step 3: Design layout of the application in Design Tab.

               Variables declaration will be done by IDE itself

4. Step 4: Set Size of JFrame and Colour of Frame, Panel and Buttons

5. Step 5:   Set Actions for JButtons and Jlabel

6. Step 6: Create GameScore,choose_a_player ang winningGame methods

7. Step 7: Determine winner or losser

         If   "X" comes consecutively three times

              Player X : winner

         If   "O" comes consecutively three times

Player O : winner

8. Step 8:According to ActionPerformed of Buttons

Reset or Exit Application

9. Step 9: Stop

3.4 Program and Output:

package tictactoe;

import java.awt.Color;

import javax.swing.JFrame;

import javax.swing.JOptionPane;

public class Game extends javax.swing.JFrame {

    private String StartGame="X";

    private int xCount=0;

    private int oCount=0;

```java
    public Game() {

        initComponents();

        setSize(1200,600);

        setLocationRelativeTo(null);

    }

    private void GameScore(){

        jblPlayerX.setText(String.valueOf(xCount));

        jblPlayerO.setText(String.valueOf(oCount));

    }

    private void choose_a_Player()

    {

        if(StartGame.equalsIgnoreCase("X"))

        { StartGame="O";   }

        else

        { StartGame="X"; }

    }

    private void winningGame()

    {
```

```java
String b1=jButton1.getText();

String b2=jButton2.getText();

String b3=jButton3.getText();

String b4=jButton4.getText();

String b5=jButton5.getText();

String b6=jButton6.getText();

String b7=jButton7.getText();

String b8=jButton8.getText();

String b9=jButton9.getText();

if (b1==("X") && b2==("X") && b3==("X"))

{   xCount++;

    GameScore();

    jButton1.setEnabled(true);

    jButton2.setEnabled(true);

    jButton3.setEnabled(true);

    jButton1.setBackground(Color.YELLOW);

    jButton2.setBackground(Color.YELLOW);

    jButton3.setBackground(Color.YELLOW);

    JOptionPane.showMessageDialog(this,"Player  X  Won","Tic  Tac
```

```java
Toe",JOptionPane.INFORMATION_MESSAGE);

        }

    if (b4==("X") && b5==("X") && b6==("X"))

    {

         xCount++;

        GameScore();

        jButton4.setEnabled(true);

        jButton5.setEnabled(true);

        jButton6.setEnabled(true);

        jButton4.setBackground(Color.YELLOW);

        jButton5.setBackground(Color.YELLOW);

        jButton6.setBackground(Color.YELLOW);

        JOptionPane.showMessageDialog(this,"Player X Won","Tic Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

     }

    if(b7==("X") && b8==("X") && b9==("X"))

    {                    xCount++;

        GameScore();

        jButton7.setEnabled(true);
```

```java
                jButton8.setEnabled(true);

                jButton9.setEnabled(true);

                jButton7.setBackground(Color.YELLOW);

                jButton8.setBackground(Color.YELLOW);

                jButton9.setBackground(Color.YELLOW);

                JOptionPane.showMessageDialog(this,"Player X Won","Tic Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

            }
            if(b1==("X") && b4==("X") && b7==("X"))

            {                          xCount++;

                GameScore();

                jButton1.setEnabled(true);

                jButton4.setEnabled(true);

                jButton7.setEnabled(true);

                jButton1.setBackground(Color.YELLOW);

                jButton4.setBackground(Color.YELLOW);

                jButton7.setBackground(Color.YELLOW);

                JOptionPane.showMessageDialog(this,"Player X Won","Tic Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

            }
```

```java
if(b2==("X") && b5==("X") && b8==("X"))

{                    xCount++;

    GameScore();

    jButton2.setEnabled(true);

    jButton5.setEnabled(true);

    jButton8.setEnabled(true);

    jButton2.setBackground(Color.YELLOW);

    jButton5.setBackground(Color.YELLOW);

    jButton8.setBackground(Color.YELLOW);

     JOptionPane.showMessageDialog(this,"Player X Won","Tic Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

 }

 if(b3==("X") && b6==("X") && b9==("X"))

{            xCount++;

    GameScore();

    jButton3.setEnabled(true);

    jButton6.setEnabled(true);

    jButton9.setEnabled(true);

    jButton3.setBackground(Color.YELLOW);
```

```java
            jButton6.setBackground(Color.YELLOW);

            jButton9.setBackground(Color.YELLOW);

            JOptionPane.showMessageDialog(this,"Player  X  Won","Tic  Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

        }

        if(b1==("X") && b5==("X") && b9==("X"))

    {           xCount++;

        GameScore();

        jButton1.setEnabled(true);

        jButton5.setEnabled(true);

        jButton9.setEnabled(true);

        jButton1.setBackground(Color.YELLOW);

        jButton5.setBackground(Color.YELLOW);

        jButton9.setBackground(Color.YELLOW);

            JOptionPane.showMessageDialog(this,"Player  X  Won","Tic  Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

        }

        if(b3==("X") && b5==("X") && b7==("X"))

    {           xCount++;

        GameScore();
```

```java
        jButton3.setEnabled(true);

        jButton5.setEnabled(true);

        jButton7.setEnabled(true);

        jButton3.setBackground(Color.YELLOW);

        jButton5.setBackground(Color.YELLOW);

        jButton7.setBackground(Color.YELLOW);

        JOptionPane.showMessageDialog(this,"Player  X  Won","Tic  Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

    }
   if(b1==("O") && b2==("O") && b3==("O"))

{           oCount++;

    GameScore();

    jButton1.setEnabled(true);

    jButton2.setEnabled(true);

    jButton3.setEnabled(true);

    jButton1.setBackground(Color.CYAN);

    jButton2.setBackground(Color.CYAN);

    jButton3.setBackground(Color.CYAN);

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

```java
        }

    if(b4==("O") && b5==("O") && b6==("O"))

    { oCount++;

        GameScore();

        jButton5.setEnabled(true);

        jButton4.setEnabled(true);

        jButton6.setEnabled(true);

        jButton4.setBackground(Color.CYAN);

        jButton5.setBackground(Color.CYAN);

        jButton6.setBackground(Color.CYAN);

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

        }

    if(b7==("O") && b8==("O") && b9==("O"))

    { oCount++;

        GameScore();

        jButton7.setEnabled(true);

        jButton8.setEnabled(true);

        jButton9.setEnabled(true);
```

```java
        jButton7.setBackground(Color.CYAN);

        jButton8.setBackground(Color.CYAN);

        jButton9.setBackground(Color.CYAN);

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

    }
   if(b1==("O") && b4==("O") && b7==("O"))

   { oCount++;

        GameScore();

        jButton1.setEnabled(true);

        jButton4.setEnabled(true);

        jButton7.setEnabled(true);

        jButton1.setBackground(Color.CYAN);

        jButton4.setBackground(Color.CYAN);

        jButton7.setBackground(Color.CYAN);

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

    }
   if(b2==("O") && b5==("O") && b8==("O"))

   { oCount++;
```

```java
        GameScore();

        jButton8.setEnabled(true);

        jButton5.setEnabled(true);

        jButton2.setEnabled(true);

        jButton2.setBackground(Color.CYAN);

        jButton5.setBackground(Color.CYAN);

        jButton8.setBackground(Color.CYAN);

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

    }

     if(b3==("O") && b6==("O") && b9==("O"))

   { oCount++;

        GameScore();

        jButton3.setEnabled(true);

        jButton6.setEnabled(true);

        jButton9.setEnabled(true);

        jButton3.setBackground(Color.CYAN);

        jButton6.setBackground(Color.CYAN);

        jButton9.setBackground(Color.CYAN);
```

```java
        JOptionPane.showMessageDialog(this,"Player  O  Won","Tic  Tac
Toe",JOptionPane.INFORMATION_MESSAGE);

     }

     if(b1==("O") && b5==("O") && b9==("O"))

    { oCount++;

        GameScore();

        jButton1.setEnabled(true);

        jButton5.setEnabled(true);

        jButton9.setEnabled(true);

        jButton1.setBackground(Color.CYAN);

        jButton5.setBackground(Color.CYAN);

        jButton9.setBackground(Color.CYAN);

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

     }

     if(b3==("O") && b5==("O") && b7==("O"))

    { oCount++;

        GameScore();

        jButton3.setEnabled(true);

        jButton5.setEnabled(true);
```

```java
            jButton7.setEnabled(true);

            jButton3.setBackground(Color.CYAN);

            jButton5.setBackground(Color.CYAN);

            jButton7.setBackground(Color.CYAN);

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

        }

    }

    @SuppressWarnings("unchecked")

    // <editor-fold defaultstate="collapsed" desc="Generated Code">

    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();

        jLabel2 = new javax.swing.JLabel();

        jPanel3 = new javax.swing.JPanel();

        jPanel7 = new javax.swing.JPanel();

        jButton1 = new javax.swing.JButton();

        jPanel2 = new javax.swing.JPanel();

        jButton2 = new javax.swing.JButton();

        jPanel4 = new javax.swing.JPanel();
```

```java
jButton3 = new javax.swing.JButton();

jPanel5 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jPanel6 = new javax.swing.JPanel();

jblPlayerX = new javax.swing.JLabel();

jPanel8 = new javax.swing.JPanel();

jButton4 = new javax.swing.JButton();

jPanel9 = new javax.swing.JPanel();

jButton5 = new javax.swing.JButton();

jPanel10 = new javax.swing.JPanel();

jButton6 = new javax.swing.JButton();

jPanel11 = new javax.swing.JPanel();

jLabel4 = new javax.swing.JLabel();

jPanel12 = new javax.swing.JPanel();

jblPlayerO = new javax.swing.JLabel();

jPanel13 = new javax.swing.JPanel();

jButton7 = new javax.swing.JButton();

jPanel14 = new javax.swing.JPanel();

jButton8 = new javax.swing.JButton();
```

```java
        jPanel15 = new javax.swing.JPanel();

        jButton9 = new javax.swing.JButton();

        jPanel16 = new javax.swing.JPanel();

        jbtnReset = new javax.swing.JButton();

        jPanel17 = new javax.swing.JPanel();

        jbtnExit = new javax.swing.JButton();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE
);

        setTitle("Tic Tac Toe");

        jPanel1.setBackground(new java.awt.Color(130, 130, 174));

        jPanel1.setBorder(javax.swing.BorderFactory.createLineBorder(new
java.awt.Color(0, 0, 0), 3));

        jPanel1.setLayout(new java.awt.BorderLayout());

        jLabel2.setFont(new java.awt.Font("Tahoma", 1, 100)); // NOI18N


jLabel2.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

        jLabel2.setText("Tic Tac Toe");

        jLabel2.setAlignmentX(300.0F);

        jPanel1.add(jLabel2, java.awt.BorderLayout.CENTER);
```

```java
jPanel3.setBackground(new java.awt.Color(0, 0, 0));

jPanel3.setMaximumSize(new java.awt.Dimension(327677, 32767));

jPanel3.setPreferredSize(new java.awt.Dimension(1194, 420));

jPanel3.setLayout(new java.awt.GridLayout(3, 5, 2, 2));

jPanel7.setBackground(new java.awt.Color(255, 255, 255));

jPanel7.setLayout(new java.awt.BorderLayout());

jButton1.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

jButton1.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        jButton1ActionPerformed(evt);

    }

});

jPanel7.add(jButton1, java.awt.BorderLayout.CENTER);

jPanel3.add(jPanel7);

jPanel2.setBackground(new java.awt.Color(255, 255, 255));

jPanel2.setLayout(new java.awt.BorderLayout());

jButton2.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

jButton2.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```java
                jButton2ActionPerformed(evt);

        }

    });

    jPanel2.add(jButton2, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel2);

    jPanel4.setBackground(new java.awt.Color(255, 255, 255));

    jPanel4.setLayout(new java.awt.BorderLayout());

    jButton3.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

    jButton3.addActionListener(new java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

            jButton3ActionPerformed(evt);

        }

    });

    jPanel4.add(jButton3, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel4);

    jPanel5.setBackground(new java.awt.Color(255, 255, 255));

    jPanel5.setLayout(new java.awt.BorderLayout());

    jLabel1.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N

    jLabel1.setText("Player X:");
```

```java
        jPanel5.add(jLabel1, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel5);

        jPanel6.setBackground(new java.awt.Color(255, 255, 255));

        jPanel6.setLayout(new java.awt.BorderLayout());

        jblPlayerX.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N


jblPlayerX.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

        jPanel6.add(jblPlayerX, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel6);

        jPanel8.setBackground(new java.awt.Color(255, 255, 255));

        jPanel8.setLayout(new java.awt.BorderLayout());

        jButton4.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

        jButton4.addActionListener(new java.awt.event.ActionListener() {

            public void actionPerformed(java.awt.event.ActionEvent evt) {

                jButton4ActionPerformed(evt);

            }

        });

        jPanel8.add(jButton4, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel8);
```

```java
jPanel9.setBackground(new java.awt.Color(255, 255, 255));

jPanel9.setLayout(new java.awt.BorderLayout());

jButton5.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

jButton5.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        jButton5ActionPerformed(evt);

    }

});

jPanel9.add(jButton5, java.awt.BorderLayout.CENTER);

jPanel3.add(jPanel9);

jPanel10.setBackground(new java.awt.Color(255, 255, 255));

jPanel10.setLayout(new java.awt.BorderLayout());

jButton6.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

jButton6.addActionListener(new java.awt.event.ActionListener() {

    public void actionPerformed(java.awt.event.ActionEvent evt) {

        jButton6ActionPerformed(evt);

    }

});

jPanel10.add(jButton6, java.awt.BorderLayout.CENTER);
```

```java
        jPanel3.add(jPanel10);

        jPanel11.setBackground(new java.awt.Color(255, 255, 255));

        jPanel11.setLayout(new java.awt.BorderLayout());

        jLabel4.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N

        jLabel4.setText("Player O:");

        jPanel11.add(jLabel4, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel11);

        jPanel12.setBackground(new java.awt.Color(255, 255, 255));

        jPanel12.setLayout(new java.awt.BorderLayout());

        jblPlayerO.setFont(new java.awt.Font("Tahoma", 1, 30)); // NOI18N

jblPlayerO.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);

        jPanel12.add(jblPlayerO, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel12);

        jPanel13.setBackground(new java.awt.Color(255, 255, 255));

        jPanel13.setLayout(new java.awt.BorderLayout());

        jButton7.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

        jButton7.addActionListener(new java.awt.event.ActionListener() {

            public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```java
            jButton7ActionPerformed(evt);

        }

    });

    jPanel13.add(jButton7, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel13);

    jPanel14.setBackground(new java.awt.Color(255, 255, 255));

    jPanel14.setLayout(new java.awt.BorderLayout());

    jButton8.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

    jButton8.addActionListener(new java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

            jButton8ActionPerformed(evt);

        }

    });

    jPanel14.add(jButton8, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel14);

    jPanel15.setBackground(new java.awt.Color(255, 255, 255));

    jPanel15.setLayout(new java.awt.BorderLayout());

    jButton9.setFont(new java.awt.Font("Tahoma", 1, 96)); // NOI18N

    jButton9.addActionListener(new java.awt.event.ActionListener() {
```

```java
        public void actionPerformed(java.awt.event.ActionEvent evt) {

            jButton9ActionPerformed(evt);

        }

    });

    jPanel15.add(jButton9, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel15);

    jPanel16.setBackground(new java.awt.Color(255, 255, 255));

    jPanel16.setLayout(new java.awt.BorderLayout());

    jbtnReset.setFont(new java.awt.Font("Tahoma", 1, 48)); // NOI18N

    jbtnReset.setText("Reset");

    jbtnReset.addActionListener(new java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

            jbtnResetActionPerformed(evt);

        }

    });

    jPanel16.add(jbtnReset, java.awt.BorderLayout.CENTER);

    jPanel3.add(jPanel16);

    jPanel17.setBackground(new java.awt.Color(255, 255, 255));

    jPanel17.setLayout(new java.awt.BorderLayout());
```

```java
        jbtnExit.setFont(new java.awt.Font("Tahoma", 1, 48)); // NOI18N

        jbtnExit.setText("Exit");

        jbtnExit.addActionListener(new java.awt.event.ActionListener() {

            public void actionPerformed(java.awt.event.ActionEvent evt) {

                jbtnExitActionPerformed(evt);

            }

        });

        jPanel17.add(jbtnExit, java.awt.BorderLayout.CENTER);

        jPanel3.add(jPanel17);

        jPanel1.add(jPanel3, java.awt.BorderLayout.PAGE_END);

        getContentPane().add(jPanel1,     java.awt.BorderLayout.CENTER);
pack();

        setLocationRelativeTo(null);

    }// </editor-fold>

    private JFrame frame;

    private void jbtnExitActionPerformed(java.awt.event.ActionEvent evt) {

        frame=new JFrame("Exit");

        if(JOptionPane.showConfirmDialog(frame, "Confirm If You Want
To Exit", "Tic Tac Toe",

                JOptionPane.YES_NO_OPTION)                              ==
```

```java
JOptionPane.YES_NO_OPTION)

        { System.exit(0); }

    }

    private void jbtnResetActionPerformed(java.awt.event.ActionEvent evt)
{

        jButton1.setText(null);

        jButton1.setEnabled(true);

        jButton2.setText(null);

        jButton2.setEnabled(true);

        jButton3.setText(null);

        jButton3.setEnabled(true);

        jButton4.setText(null);

        jButton4.setEnabled(true);

        jButton5.setText(null);

        jButton5.setEnabled(true);

        jButton6.setText(null);

        jButton6.setEnabled(true);

        jButton7.setText(null);

        jButton7.setEnabled(true);
```

```java
        jButton8.setText(null);

        jButton8.setEnabled(true);

        jButton9.setText(null);

        jButton9.setEnabled(true);

        jButton1.setBackground(Color.LIGHT_GRAY);

        jButton2.setBackground(Color.LIGHT_GRAY);

        jButton3.setBackground(Color.LIGHT_GRAY);

        jButton4.setBackground(Color.LIGHT_GRAY);

        jButton5.setBackground(Color.LIGHT_GRAY);

        jButton6.setBackground(Color.LIGHT_GRAY);

        jButton7.setBackground(Color.LIGHT_GRAY);

        jButton8.setBackground(Color.LIGHT_GRAY);

        jButton9.setBackground(Color.LIGHT_GRAY);

        StartGame="X";

    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

        jButton1.setText(StartGame);

        if( StartGame.equalsIgnoreCase("X"))

        {
```

```java
            jButton1.setForeground(Color.GREEN);

    }

    else{

            jButton1.setForeground(Color.RED);

    }

     choose_a_Player();

     winningGame();

     jButton1.setEnabled(false);

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

   jButton2.setText(StartGame);

   if( StartGame.equalsIgnoreCase("X"))

   {

        jButton2.setForeground(Color.GREEN);

   }

   else{

        jButton2.setForeground(Color.RED);

   }

    choose_a_Player();
```

```java
        winningGame();

        jButton2.setEnabled(false);

    }

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

        jButton3.setText(StartGame);

        if(   StartGame.equalsIgnoreCase("X"))

        {

            jButton3.setForeground(Color.GREEN);

        }

        else

        {

            jButton3.setForeground(Color.RED);

        }

        choose_a_Player();

        winningGame();

        jButton3.setEnabled(false);

    }

    private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {

        jButton4.setText(StartGame);
```

```java
    if(   StartGame.equalsIgnoreCase("X"))

    {

        jButton4.setForeground(Color.GREEN);

    }

    else{

        jButton4.setForeground(Color.RED);

    }

     choose_a_Player();

     winningGame();

     jButton4.setEnabled(false);

}

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {

    jButton5.setText(StartGame);

    if(   StartGame.equalsIgnoreCase("X"))

    {

        jButton5.setForeground(Color.GREEN);

    }

    else{

        jButton5.setForeground(Color.RED);
```

```java
        }

        choose_a_Player();

        winningGame();

        jButton5.setEnabled(false);

    }

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {

        jButton6.setText(StartGame);

        if(   StartGame.equalsIgnoreCase("X"))

        {

            jButton6.setForeground(Color.GREEN);

        }

        else{

            jButton6.setForeground(Color.RED);

        }

        choose_a_Player();

        winningGame();

        jButton6.setEnabled(false);

    }

    private void jButton7ActionPerformed(java.awt.event.ActionEvent evt) {
```

```java
jButton7.setText(StartGame);

if(   StartGame.equalsIgnoreCase("X"))

{

    jButton7.setForeground(Color.GREEN);

}

else{

    jButton7.setForeground(Color.RED);

}

 choose_a_Player();

 winningGame();

 jButton7.setEnabled(false);

}

private void jButton8ActionPerformed(java.awt.event.ActionEvent evt) {

jButton8.setText(StartGame);

if(   StartGame.equalsIgnoreCase("X"))

{

    jButton8.setForeground(Color.GREEN);

}

else{
```

```java
        jButton8.setForeground(Color.RED);

    }

     choose_a_Player();

     winningGame();

     jButton8.setEnabled(false);

}

private void jButton9ActionPerformed(java.awt.event.ActionEvent evt) {

    jButton9.setText(StartGame);

    if(   StartGame.equalsIgnoreCase("X"))

    {

        jButton9.setForeground(Color.GREEN);

    }

    else{

        jButton9.setForeground(Color.RED);

    }

     choose_a_Player();

     winningGame();

     jButton9.setEnabled(false);

}
```

```java
public static void main(String args[]) {

    java.awt.EventQueue.invokeLater(new Runnable() {

        public void run() {

            new Game().setVisible(true);

        }

    });

}

// Variables declaration - do not modify

private javax.swing.JButton jButton1;

private javax.swing.JButton jButton2;

private javax.swing.JButton jButton3;

private javax.swing.JButton jButton4;

private javax.swing.JButton jButton5;

private javax.swing.JButton jButton6;

private javax.swing.JButton jButton7;

private javax.swing.JButton jButton8;

private javax.swing.JButton jButton9;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;
```

```java
private javax.swing.JLabel jLabel4;

private javax.swing.JPanel jPanel1;

private javax.swing.JPanel jPanel10;

private javax.swing.JPanel jPanel11;

private javax.swing.JPanel jPanel12;

private javax.swing.JPanel jPanel13;

private javax.swing.JPanel jPanel14;

private javax.swing.JPanel jPanel15;

private javax.swing.JPanel jPanel16;

private javax.swing.JPanel jPanel17;

private javax.swing.JPanel jPanel2;

private javax.swing.JPanel jPanel3;

private javax.swing.JPanel jPanel4;

private javax.swing.JPanel jPanel5;

private javax.swing.JPanel jPanel6;

private javax.swing.JPanel jPanel7;

private javax.swing.JPanel jPanel8;

private javax.swing.JPanel jPanel9;

private javax.swing.JLabel jblPlayerO;
```
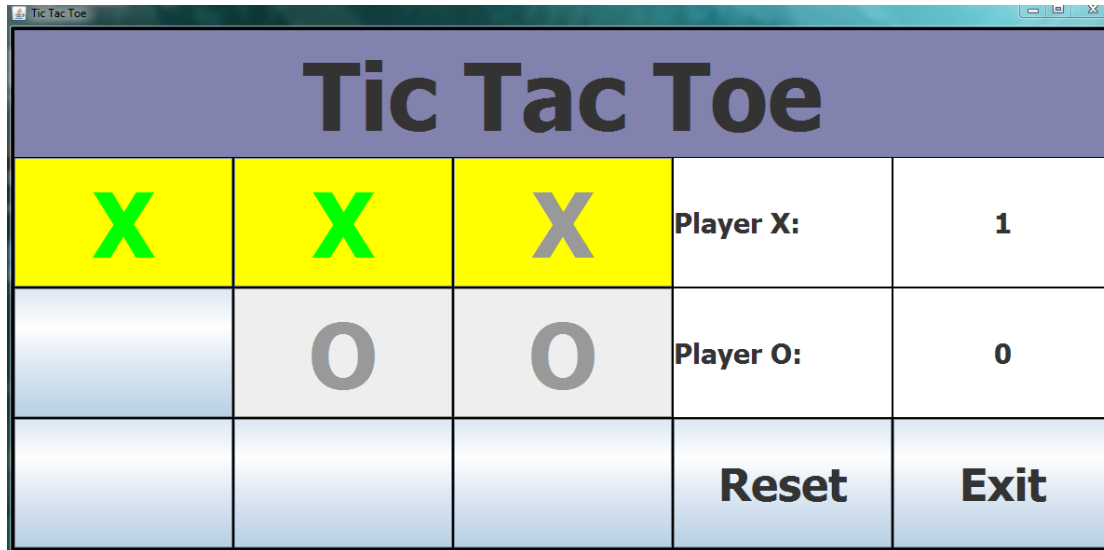
private javax.swing.JLabel jblPlayerX;

private javax.swing.JButton jbtnExit;

private javax.swing.JButton jbtnReset;

}

3.5 Conclusion:

  In the conclusion of this project, We would like to say JAVA is fun and easy progrmming language while creating a project like this,it has not just been a good experience but it also help in development of my creativity and logic thinking the program is working and I hope, it's also bug-free

3.5 Future Scope:

- Generally, we have seen that **java programming language is extensively used for web**

development, application development, system administration, developing games etc.

- But do you know there are some future technologies that are relying on java? As a matter of fact, Java has become the core language as far as the success of these technologies is concerned. Let's dive into the technologies which use java as a core element for research, production and further developments.

References:

[1] BOOKS: Inventory on Computer Games with Java

[2] BOOKS: Java Programming: An Introduction to Computer Science

[3] Java program https://youtu.be/f9QjIhWSFFc

[4] https://youtu.be/f9QjIhWSFFc