

```

1  package com.example.tictactoe;
2
3  import android.graphics.drawable.Drawable;
4  import android.os.Bundle;
5
6  import androidx.core.content.res.ResourcesCompat;
7  import androidx.fragment.app.Fragment;
8  import androidx.fragment.app.FragmentTransaction;
9
10 import android.view.LayoutInflater;
11 import android.view.View;
12 import android.view.ViewGroup;
13 import android.widget.ImageButton;
14 import android.widget.Toast;
15
16 import java.util.Arrays;
17
18
19 public class StartingFragment extends Fragment {
20
21     ImageButton button1;
22     ImageButton button2;
23     ImageButton button3;
24     ImageButton button4;
25     ImageButton button5;
26     ImageButton button6;
27     ImageButton button7;
28     ImageButton button8;
29     ImageButton button9;
30
31     String player1States = "";
32     String player2States = "";
33     Players currentPlayer = Players.PLAYER1;
34     Drawable drawable_x;
35     Drawable drawable_o;
36
37     final String[] WINNING_STATES = {"123", "147", "159", "258", "357", "369", "456", "789"};
38
39     public StartingFragment() {
40         // Required empty public constructor
41     }
42
43
44     @Override
45     public void onCreate(Bundle savedInstanceState) {
46         super.onCreate(savedInstanceState);
47     }
48
49     @Override
50     public View onCreateView(LayoutInflater inflater, ViewGroup container,
51                             Bundle savedInstanceState) {
52         View view = inflater.inflate(R.layout.fragment_starting, container, false);
53
54         drawable_x = ResourcesCompat.getDrawable(getResources(), R.drawable.x, null);
55         drawable_o = ResourcesCompat.getDrawable(getResources(), R.drawable.o, null);
56
57         button1 = view.findViewById(R.id.button1);
58         button2 = view.findViewById(R.id.button2);
59         button3 = view.findViewById(R.id.button3);
60         button4 = view.findViewById(R.id.button4);
61         button5 = view.findViewById(R.id.button5);
62         button6 = view.findViewById(R.id.button6);
63         button7 = view.findViewById(R.id.button7);
64         button8 = view.findViewById(R.id.button8);
65         button9 = view.findViewById(R.id.button9);
66
67         button1.setOnClickListener(v -> handleClickButton(button1));
68         button2.setOnClickListener(v -> handleClickButton(button2));
69         button3.setOnClickListener(v -> handleClickButton(button3));
70         button4.setOnClickListener(v -> handleClickButton(button4));
71         button5.setOnClickListener(v -> handleClickButton(button5));
72         button6.setOnClickListener(v -> handleClickButton(button6));
73         button7.setOnClickListener(v -> handleClickButton(button7));

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74         button8.setOnClickListener(v -> handleClickButton(button8));
75         button9.setOnClickListener(v -> handleClickButton(button9));
76
77         return view;
78     }
79
80     private void handleClickButton(ImageButton button){
81         String idAsString = button.getResources().getResourceEntryName(button.getId());
82         String state = idAsString.split("button")[1];
83
84         if(!player1States.contains(state) && !player2States.contains(state)){
85             if(currentPlayer == Players.PLAYER1){
86                 player1States = player1States + state;
87
88                 checkWinningState();
89
90                 currentPlayer = Players.PLAYER2;
91                 changeBackgroundOfClickedButton(button,drawable_x);
92             }else{
93                 player2States = player2States + state;
94
95                 checkWinningState();
96
97                 currentPlayer = Players.PLAYER1;
98                 changeBackgroundOfClickedButton(button,drawable_o);
99             }
100         }
101     }
102
103     private void checkWinningState(){
104
105         for(String allStates : WINNING_STATES){
106             int player1WinStateCount = 0;
107             int player2WinStateCount = 0;
108             for(char state : allStates.toCharArray()){
109                 if(player1States.contains(String.valueOf(state))) player1WinStateCount++;
110                 else if(player2States.contains(String.valueOf(state))) player2WinStateCount++;
111
112                 if(player1WinStateCount == 3){
113                     FragmentTransaction fragmentTransaction = this.
114                         getParentFragmentManager().beginTransaction();
115                     fragmentTransaction.replace(R.id.frameLayoutMain, new
116                         ScoreFragment(Players.PLAYER1));
117                     fragmentTransaction.commit();
118                 } else if (player2WinStateCount == 3) {
119                     FragmentTransaction fragmentTransaction = this.
120                         getParentFragmentManager().beginTransaction();
121                     fragmentTransaction.replace(R.id.frameLayoutMain, new
122                         ScoreFragment(Players.PLAYER2));
123                     fragmentTransaction.commit();
124                 }
125             }
126         }
127     }
128
129     private String sortString(String inputString)
130     {
131         char[] tempArray = inputString.toCharArray();
132         Arrays.sort(tempArray);
133         return new String(tempArray);
134     }
135
136     private void changeBackgroundOfClickedButton(ImageButton button, Drawable drawable
137     ){
138         button.setImageDrawable(drawable);
139     }

```

