

java\tp4ex2.java

```
1 public class MainActivity extends AppCompatActivity
2     implements MatchFragment.OnMatchResultListener, WinnerFragment.OnDateSubmittedListener {
3     private FrameLayout fragmentContainer;
4     @Override
5     protected void onCreate(Bundle savedInstanceState) {
6         super.onCreate(savedInstanceState);
7         setContentView(R.layout.activity_main);
8         fragmentContainer = findViewById(R.id.fragment_container);
9         // Load the initial match fragment
10        loadFragment(new MatchFragment());
11    }
12    private void loadFragment(Fragment fragment) {
13        FragmentTransaction transaction = getSupportFragmentManager().beginTransaction();
14        transaction.replace(R.id.fragment_container, fragment);
15        transaction.addToBackStack(null);
16        transaction.commit();
17    }
18    @Override
19    public void onMatchResult(String winnerName) { // Called when a player wins both sets
20        loadFragment(WinnerFragment.newInstance(winnerName));
21    }
22    @Override
23    public void onDateSubmitted(String winnerName, String date) { // Called when date is submitted
24        loadFragment(FinalGameFragment.newInstance(winnerName, date));
25    }
26 }
```

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27
28 <?xml version="1.0" encoding="utf-8"?>
29 <FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
30     xmlns:tools="http://schemas.android.com/tools" android:id="@+id/fragment_container"
    android:layout_width="match_parent" android:layout_height="match_parent"
    tools:context=".RolandGarrosActivity" />
31
32
33 public class MatchFragment extends Fragment {
34     private EditText etPlayer1Name, etPlayer2Name;
35     private EditText etPlayer1Set1, etPlayer1Set2;
36     private EditText etPlayer2Set1, etPlayer2Set2;
37     private Button btnResult;
38     private OnMatchResultListener listener;
39     public interface OnMatchResultListener {
40         void onMatchResult(String winnerName);
41     }
42     @Override
43     public void onCreate(Bundle savedInstanceState) {
44         super.onCreate(savedInstanceState);
45         if (getActivity() instanceof OnMatchResultListener) {
46             listener = (OnMatchResultListener) getActivity();
47         }
48     }
49     @Override
50     public View onCreateView(LayoutInflater inflater, ViewGroup container,
51         Bundle savedInstanceState) {
52         View view = inflater.inflate(R.layout.fragment_match, container, false);
53         etPlayer1Name = view.findViewById(R.id.et_player1_name);

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54     etPlayer2Name = view.findViewById(R.id.et_player2_name);
55     etPlayer1Set1 = view.findViewById(R.id.et_player1_set1);
56     etPlayer1Set2 = view.findViewById(R.id.et_player1_set2);
57     etPlayer2Set1 = view.findViewById(R.id.et_player2_set1);
58     etPlayer2Set2 = view.findViewById(R.id.et_player2_set2);
59     btnResult = view.findViewById(R.id.btn_result);
60     btnResult.setOnClickListener(v -> checkResult());
61     return view;
62 }
63 private void checkResult() {
64     String player1Name = etPlayer1Name.getText().toString().trim();
65     String player2Name = etPlayer2Name.getText().toString().trim();
66     if (etPlayer1Set1.getText().toString().trim().isEmpty() ||
67         etPlayer1Set2.getText().toString().trim().isEmpty() ||
68         etPlayer2Set1.getText().toString().trim().isEmpty() ||
69         etPlayer2Set2.getText().toString().trim().isEmpty() ||
70         player1Name.isEmpty() || player2Name.isEmpty()) {
71         Toast.makeText(getActivity(), "All fields are required", Toast.LENGTH_SHORT).show();
72         return;
73     }
74     int player1Set1 = Integer.parseInt(etPlayer1Set1.getText().toString());
75     int player1Set2 = Integer.parseInt(etPlayer1Set2.getText().toString());
76     int player2Set1 = Integer.parseInt(etPlayer2Set1.getText().toString());
77     int player2Set2 = Integer.parseInt(etPlayer2Set2.getText().toString());
78     boolean player1WinsSet1 = player1Set1 > player2Set1;
79     boolean player1WinsSet2 = player1Set2 > player2Set2;
80     boolean player1DrawsSet1 = player1Set1 == player2Set1;
81     boolean player2DrawsSet1 = player1Set2 == player2Set2;

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82     if (player1DrawsSet1 || player2DrawsSet1) {
83         Toast.makeText(getActivity(), "It's a draw in one of the sets!", Toast.LENGTH_SHORT).show();
84         return;
85     }
86     if (player1WinsSet1 && player1WinsSet2) {
87         listener.onMatchResult(player1Name);
88     } else if (!player1WinsSet1 && !player1WinsSet2) {
89         listener.onMatchResult(player2Name);
90     } else {
91         Toast.makeText(getActivity(), "Only one Player must win", Toast.LENGTH_SHORT).show();
92     }
93 }
94 }
95
96 <?xml version="1.0" encoding="utf-8"?>
97 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
98     android:layout_width="match_parent" android:layout_height="match_parent"
99     android:orientation="vertical" android:padding="16dp">
100     <TableLayout android:layout_width="match_parent" android:layout_height="wrap_content">
101         <TableRow>
102             <TextView android:layout_width="0dp" android:layout_weight="1" android:text="Player
103 Name" />
104             <TextView android:layout_width="0dp" android:layout_weight="1" android:text="Set 1" />
105             <TextView android:layout_width="0dp" android:layout_weight="1" android:text="Set 2" />
106         </TableRow>
107         <TableRow>
108             <EditText android:id="@+id/et_player1_name" android:layout_width="0dp"
109 android:layout_height="40dp" android:layout_weight="1" android:hint="Player 1" />

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106 <EditText android:id="@+id/et_player1_set1" android:layout_width="0dp"
    android:layout_weight="1" android:inputType="number" />
107 <EditText android:id="@+id/et_player1_set2" android:layout_width="0dp"
    android:layout_weight="1" android:inputType="number" />
108 </TableRow>
109 <TableRow>
110 <EditText android:id="@+id/et_player2_name" android:layout_width="0dp"
    android:layout_weight="1" android:hint="Player 2" />
111 <EditText android:id="@+id/et_player2_set1" android:layout_width="0dp"
    android:layout_weight="1" android:inputType="number" />
112 <EditText android:id="@+id/et_player2_set2" android:layout_width="0dp"
    android:layout_weight="1" android:inputType="number" />
113 </TableRow>
114 </TableLayout>
115 <Button android:id="@+id/btn_result" android:layout_width="wrap_content"
    android:layout_height="wrap_content" android:layout_gravity="center" android:layout_marginTop="16dp"
    android:text="RESULT" />
116 </LinearLayout>
117
118
119 public class WinnerFragment extends Fragment {
120     private static final String ARG_WINNER_NAME = "winner_name";
121     public static WinnerFragment newInstance(String winnerName) {
122         WinnerFragment fragment = new WinnerFragment();
123         Bundle args = new Bundle();
124         args.putString(ARG_WINNER_NAME, winnerName);
125         fragment.setArguments(args);
126         return fragment;
127     }

```

@Override

```
129 public View onCreateView(LayoutInflater inflater, ViewGroup container,
130     Bundle savedInstanceState) {
131     View view = inflater.inflate(R.layout.fragment_winner, container, false);
132     String winnerName = getArguments().getString(ARG_WINNER_NAME);
133     TextView tvWinner = view.findViewById(R.id.tv_winner);
134     EditText etDate = view.findViewById(R.id.et_date);
135     Button btnOk = view.findViewById(R.id.btn_ok);
136     tvWinner.setText("The winner is " + winnerName);
137     btnOk.setOnClickListener(v -> {
138         String date = etDate.getText().toString().trim();
139         if (date.isEmpty()) {
140             etDate.setError("Please enter a date");
141             return;
142         }
143         if (getActivity() instanceof OnDateSubmittedListener) {
144             ((OnDateSubmittedListener) getActivity()).onDateSubmitted(winnerName, date);
145         }
146     });
147     return view;
148 }
149 public interface OnDateSubmittedListener {
150     void onDateSubmitted(String winnerName, String date);
151 }
152 }
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent" android:layout_height="match_parent"
```

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android:orientation="vertical" android:padding="16dp">
156     <TextView android:id="@+id/tv_winner" android:layout_width="wrap_content"
android:layout_height="wrap_content" android:textSize="18sp" />
157     <TextView android:layout_width="wrap_content" android:layout_height="wrap_content"
android:text="The Date of the final game is:" android:layout_marginTop="16dp" />
158     <EditText android:id="@+id/et_date" android:layout_width="match_parent"
android:layout_height="wrap_content" android:layout_marginTop="8dp" android:hint="Enter date" />
159     <Button android:id="@+id/btn_ok" android:layout_width="wrap_content"
android:layout_height="wrap_content" android:layout_gravity="center" android:layout_marginTop="16dp"
android:text="Ok" />
160 </LinearLayout>
161
162
163 public class FinalGameFragment extends Fragment {
164     private static final String ARG_WINNER_NAME = "winner_name";
165     private static final String ARG_DATE = "date";
166     public static FinalGameFragment newInstance(String winnerName, String date) {
167         FinalGameFragment fragment = new FinalGameFragment();
168         Bundle args = new Bundle();
169         args.putString(ARG_WINNER_NAME, winnerName);
170         args.putString(ARG_DATE, date);
171         fragment.setArguments(args);
172         return fragment;
173     }
174     @Override
175     public View onCreateView(LayoutInflater inflater, ViewGroup container,
176         Bundle savedInstanceState) {
177         View view = inflater.inflate(R.layout.fragment_final_game, container, false);
178         String winnerName = getArguments().getString(ARG_WINNER_NAME);

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179     String date = getArguments().getString(ARG_DATE);
180     TextView tvFinalGame = view.findViewById(R.id.tv_final_game);
181     tvFinalGame.setText(winnerName + " plays the final game on " + date);
182     return view;
183 }
184 }
185
186 <?xml version="1.0" encoding="utf-8"?>
187 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
188     android:layout_width="match_parent" android:layout_height="match_parent"
189     android:orientation="vertical" android:padding="16dp">
190     <TextView android:id="@+id/tv_final_game" android:layout_width="wrap_content"
191     android:layout_height="wrap_content" android:textSize="18sp" />
192 </LinearLayout>
```