

Exp No: 5

## Creating Radio Buttons and Checkboxes with Action Listeners

Date:

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## **SOURCE CODE**

### activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="32dp"
        android:layout_marginRight="32dp"
        android:layout_marginLeft="32dp"
        android:text="What is the capital of Spain ?"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <RadioGroup
        android:id="@+id/radiogrp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        app:layout_constraintStart_toStartOf="@id/textView"
        app:layout_constraintTop_toBottomOf="@id/textView">

        <RadioButton
            android:id="@+id/rb1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Barcelona"
            android:layout_marginTop="0dp"
            app:layout_constraintStart_toStartOf="@id/textView"
            app:layout_constraintTop_toBottomOf="@id/textView" />

        <RadioButton
            android:id="@+id/rb2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Madrid"
```

```

        android:layout_marginTop="10dp"
        app:layout_constraintStart_toStartOf="@+id/textView"
        app:layout_constraintTop_toBottomOf="@id/rb1" />

<RadioButton
    android:id="@+id/rb3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Sevilla"
    android:layout_marginTop="10dp"
    app:layout_constraintStart_toStartOf="@+id/textView"
    app:layout_constraintTop_toBottomOf="@id/rb2" />

</RadioGroup>

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:onClick="submitFirst"
    android:layout_marginTop="20dp"
    app:layout_constraintStart_toStartOf="@+id/textView"
    app:layout_constraintTop_toBottomOf="@+id/radiogrp" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="32dp"
    android:layout_marginRight="32dp"
    android:layout_marginTop="40dp"
    android:text="Which of the following are programming languages?"
    android:textSize="20sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button" />

<CheckBox
    android:id="@+id/check1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Java"
    android:layout_marginTop="20dp"
    app:layout_constraintStart_toStartOf="@+id/textView2"
    app:layout_constraintTop_toBottomOf="@+id/textView2" />

<CheckBox
    android:id="@+id/check2"

```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Python"
    android:layout_marginTop="10dp"
    app:layout_constraintStart_toStartOf="@+id/textView2"
    app:layout_constraintTop_toBottomOf="@+id/check1" />
```

<CheckBox

```
    android:id="@+id/check3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="HTML"
    android:layout_marginTop="10dp"
    app:layout_constraintStart_toStartOf="@+id/textView2"
    app:layout_constraintTop_toBottomOf="@+id/check2" />
```

<Button

```
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:onClick="submitSecond"
    android:layout_marginTop="20dp"
    app:layout_constraintStart_toStartOf="@+id/textView2"
    app:layout_constraintTop_toBottomOf="@+id/check3" />
```

<TextView

```
    android:id="@+id/feedback1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="13dp"
    android:text=""
    app:layout_constraintEnd_toEndOf="@+id/textView"
    app:layout_constraintTop_toTopOf="@+id/button" />
```

<TextView

```
    android:id="@+id/feedback2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="13dp"
    android:text=""
    app:layout_constraintEnd_toEndOf="@+id/textView"
    app:layout_constraintTop_toTopOf="@+id/button2" />
```

</androidx.constraintlayout.widget.ConstraintLayout>

### MainActivity.java

```
package com.example.lab5;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    RadioGroup radiogrp;
    RadioButton r1, r2, r3;
    CheckBox check1, check2, check3;
    TextView feedback1, feedback2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);

        radiogrp = findViewById(R.id.radiogrp);
        r1 = findViewById(R.id.rb1);
        r2 = findViewById(R.id.rb2);
        r3 = findViewById(R.id.rb3);
        check1 = findViewById(R.id.check1);
        check2 = findViewById(R.id.check2);
        check3 = findViewById(R.id.check3);
        feedback1 = findViewById(R.id.feedback1);
        feedback2 = findViewById(R.id.feedback2);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
(v, insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top,
systemBars.right, systemBars.bottom);
            return insets;
        });
    }
}
```

```

    });
}

public void disableFirst() {
    r1.setEnabled(false);
    r2.setEnabled(false);
    r3.setEnabled(false);
}

public void disableSecond() {
    check1.setEnabled(false);
    check2.setEnabled(false);
    check3.setEnabled(false);
}

public void submitFirst(View v) {

    int selectedId = radiogrp.getCheckedRadioButtonId();
    if (selectedId != -1) {
        RadioButton selectedRadioButton = findViewById(selectedId);
        String selectedText =
selectedRadioButton.getText().toString();

        if (selectedText.equals("Madrid")) {
            selectedRadioButton.setTextColor(Color.rgb(0, 255, 0));
            Toast.makeText(this, "Correct Answer",
Toast.LENGTH_SHORT).show();
            feedback1.setText("Correct Ans");
            feedback1.setTextColor(Color.rgb(0, 255, 0));
        } else {
            selectedRadioButton.setTextColor(Color.rgb(255, 0, 0));
            Toast.makeText(this, "Wrong Answer",
Toast.LENGTH_SHORT).show();
            feedback1.setText("Wrong Ans");
            feedback1.setTextColor(Color.rgb(255, 0, 0));
        }

        ((Button) v).setEnabled(false);
        disableFirst();

    } else {
        Toast.makeText(this, "Please select an option",
Toast.LENGTH_SHORT).show();
    }

}

public void submitSecond(View v) {

    if (check1.isChecked() || check2.isChecked() ||

```

```

check3.isChecked()) {
    if (check1.isChecked() && check2.isChecked() &&
!check3.isChecked()) {
        Toast.makeText(this, "Correct Answer",
Toast.LENGTH_SHORT).show();
        feedback2.setText("Correct Ans");
        feedback2.setTextColor(Color.rgb(0, 255, 0));
    } else {
        Toast.makeText(this, "Wrong Answer",
Toast.LENGTH_SHORT).show();
        feedback2.setText("Wrong Ans");
        feedback2.setTextColor(Color.rgb(255, 0, 0));
    }

    check1.setTextColor(Color.rgb(0, 255, 0));
    check2.setTextColor(Color.rgb(0, 255, 0));
    check3.setTextColor(Color.rgb(255, 0, 0));

    ((Button) v).setEnabled(false);
    disableSecond();

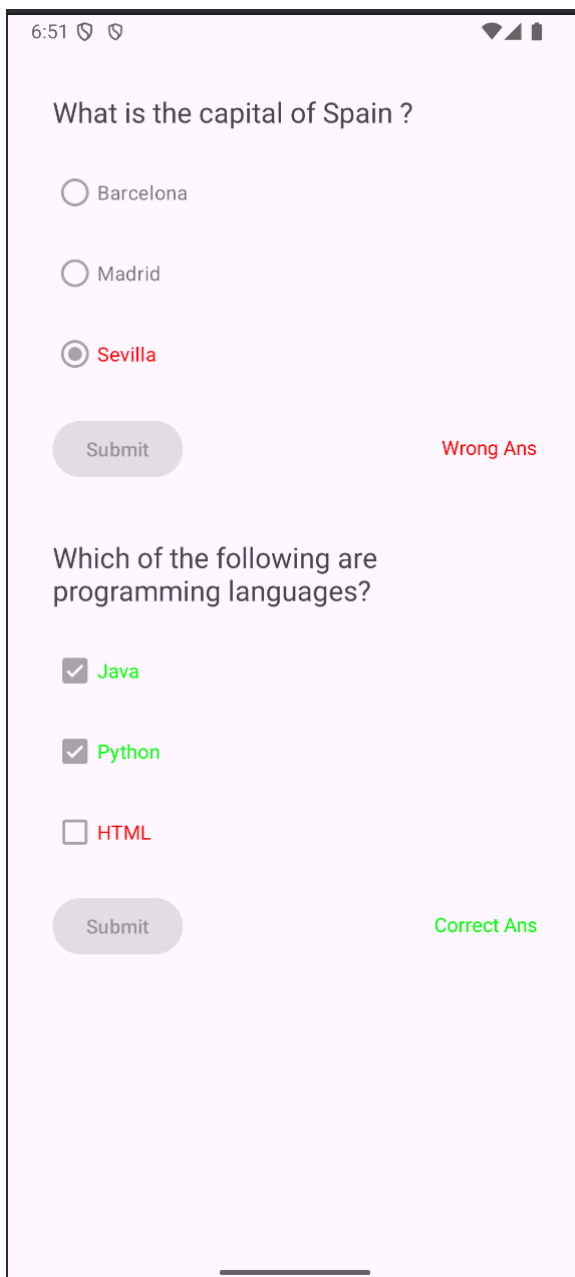
} else {
    Toast.makeText(this, "Please select an option",
Toast.LENGTH_SHORT).show();
}

}

}

```

## OUTPUT



6:51

What is the capital of Spain ?

☐ Barcelona

☐ Madrid

☒ Sevilla

Submit

Wrong Ans

Which of the following are programming languages?

☒ Java

☒ Python

☐ HTML

Submit

Correct Ans

## RESULT