**Android app to convert between Celsius (°C) and Fahrenheit (°F).**

**Step 1: Set up the Android Project**

1. Open Android Studio and create a new Android project.
2. Choose an appropriate project name and package name.
3. Select the "Empty Activity" template for your app.
4. Click "Finish" to create the project.

**Step 2: Design the User Interface**

1. Open the **activity\_main.xml** file located in the **res/layout** folder.
2. Replace the default XML code with the following code for a simple UI with two EditText fields for input and two buttons for conversion:
3. <?xml version="1.0" encoding="utf-8"?>  
   <RelativeLayout 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:layout\_width="match\_parent"  
    android:layout\_height="match\_parent"  
    android:padding="16dp"  
    tools:context=".MainActivity">  
     
    <EditText  
    android:id="@+id/editTextValue"  
    android:layout\_width="match\_parent"  
    android:layout\_height="48dp"  
    android:hint="Enter value"  
    android:inputType="numberDecimal" />  
     
     
    <RadioButton  
    android:id="@+id/radioButtonCelsiusToFahrenheit"  
    android:layout\_width="wrap\_content"  
    android:layout\_height="wrap\_content"  
    android:layout\_below="@+id/editTextValue"  
    android:text="°C to °F" />  
     
    <RadioButton  
    android:id="@+id/radioButtonFahrenheitToCelsius"  
    android:layout\_width="wrap\_content"  
    android:layout\_height="wrap\_content"  
    android:layout\_below="@+id/radioButtonCelsiusToFahrenheit"  
    android:text="°F to °C" />  
     
    <Button  
    android:id="@+id/buttonConvert"  
    android:layout\_width="match\_parent"  
    android:layout\_height="wrap\_content"  
    android:layout\_below="@+id/radioButtonFahrenheitToCelsius"  
    android:text="Convert" />  
     
    <TextView  
    android:id="@+id/textViewResult"  
    android:layout\_width="match\_parent"  
    android:layout\_height="wrap\_content"  
    android:layout\_below="@+id/buttonConvert"  
    android:layout\_marginTop="16dp"  
    android:text=""  
    android:textAppearance="?android:attr/textAppearanceMedium" />  
     
   </RelativeLayout>

**Step 3: Implement Conversion Logic**

1. Open the **MainActivity.java** file located in the **java/com.example.yourpackage** folder.
2. Declare and initialize the views and variables needed for the conversion in the **onCreate** method:
3. package com.example.myapplication;  
   import androidx.appcompat.app.AppCompatActivity;  
   import android.os.Bundle;  
   import android.view.View;  
   import android.widget.Button;  
   import android.widget.EditText;  
   import android.widget.RadioButton;  
   import android.widget.TextView;  
     
   public class MainActivity extends AppCompatActivity {  
     
    private EditText editTextValue;  
    private RadioButton radioButtonCelsiusToFahrenheit, radioButtonFahrenheitToCelsius;  
    private Button buttonConvert;  
    private TextView textViewResult;  
     
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.*activity\_main*);  
     
    editTextValue = findViewById(R.id.*editTextValue*);  
    radioButtonCelsiusToFahrenheit = findViewById(R.id.*radioButtonCelsiusToFahrenheit*);  
    radioButtonFahrenheitToCelsius = findViewById(R.id.*radioButtonFahrenheitToCelsius*);  
    buttonConvert = findViewById(R.id.*buttonConvert*);  
    textViewResult = findViewById(R.id.*textViewResult*);  
     
    buttonConvert.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
    convertTemperature();  
    }  
    });  
    }  
     
    private void convertTemperature() {  
    try {  
    double inputValue = Double.*parseDouble*(editTextValue.getText().toString());  
    double result;  
    if (radioButtonCelsiusToFahrenheit.isChecked()) {  
    result = (inputValue \* 9 / 5) + 32;  
    textViewResult.setText(String.*format*("%.2f °F", result));  
    } else if (radioButtonFahrenheitToCelsius.isChecked()) {  
    result = (inputValue - 32) \* 5 / 9;  
    textViewResult.setText(String.*format*("%.2f °C", result));  
    } else {  
    textViewResult.setText("Select a conversion type");  
    }  
    } catch (NumberFormatException e) {  
    textViewResult.setText("Invalid input");  
    }  
    }  
   }

**Step 4: Run the App**

You can now run your app on an Android emulator or a physical device to test the Celsius to Fahrenheit and Fahrenheit to Celsius conversions. Users can enter a value, select the conversion type, and see the result displayed on the screen.