



Problem 1

Exercise Objective: Develop a simple Android application that converts Celsius temperatures to Fahrenheit.

Problem Statement 1: Create an app with one input field where the user can enter a temperature in Celsius. Upon pressing a "Convert" button, the app should display the temperature converted to Fahrenheit.

Expected Output: The app displays the temperature in Fahrenheit after conversion

This is XML code

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

<EditText
    android:id="@+id/editTextCelsius"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="16dp"
    android:hint="Enter temperature in Celsius"
    android:inputType="numberDecimal" />

<Button
    android:id="@+id/buttonConvert"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/editTextCelsius"
    android:layout_centerHorizontal="true"
    android:text="Convert"
    android:layout_marginTop="16dp"/>

<TextView
    android:id="@+id/textViewResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@id/buttonConvert"
    android:layout_centerHorizontal="true"
    android:textSize="24sp"
    android:textStyle="bold"
    android:layout_marginTop="16dp"/>

</RelativeLayout>
```

This is **JAVA** code

```
package com.example.temperatureconverter;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

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 {
    EditText celsiusInput;
    Button convertButton;
    TextView resultText;

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

        celsiusInput = findViewById(R.id.editTextCelsius);
        convertButton = findViewById(R.id.buttonConvert);
        resultText = findViewById(R.id.textViewResult);

        convertButton.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // input temperature in Celsius
                String inputString = celsiusInput.getText().toString();
```

```
if (!inputString.isEmpty()) {
    double celsius = Double.parseDouble(inputString);

    double fahrenheit = (celsius * 9/5) + 32;

    //result
    resultText.setText(String.format("%.2f °F",
fahrenheit));
    } else {
        resultText.setText("Please enter a temperature.");
    }
}
});
}
```