



### **Problem 2**

**Exercise Objective:** Create an Android app that calculates the Body Mass Index (BMI) and determines the weight category.

**Problem Statement 2:** The app should have two input fields for weight (in kilograms) and height (in meters). Upon pressing the "Calculate BMI" button, the app should display the BMI value and the corresponding weight category (Underweight, Normal, Overweight, or Obese).

**Expected Output:** The app displays the BMI value and the corresponding weight category.

# 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/weight_input"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="16dp"
        android:hint="Enter Weight (kg)"
        android:inputType="numberDecimal"/>

    <EditText
        android:id="@+id/height_input"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/weight_input"
        android:layout_margin="16dp"
        android:hint="Enter Height (m)"
        android:inputType="numberDecimal"/>

    <Button
        android:id="@+id/calculate_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/height_input"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="Calculate BMI"/>

    <TextView
        android:id="@+id/result_text"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/calculate_button"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"/>

</RelativeLayout>
```

# This is **JAVA** code

```
package com.example.bmicalculator;

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 weightInput, heightInput;
    Button calculateButton;
    TextView resultText;

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

        weightInput = findViewById(R.id.weight_input);
        heightInput = findViewById(R.id.height_input);
        calculateButton = findViewById(R.id.calculate_button);
        resultText = findViewById(R.id.result_text);

        calculateButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                calculateBMI();
            }
        });
    }

    private void calculateBMI() {

        double weight = Double.parseDouble(weightInput.getText().toString());
```

```
double height = Double.parseDouble(heightInput.getText().toString());

//calculating BMI
double bmi = weight / (height * height);

String category;
if (bmi < 18.5) {
    category = "Underweight";
} else if (bmi >= 18.5 && bmi < 25) {
    category = "Normal";
} else if (bmi >= 25 && bmi < 30) {
    category = "Overweight";
} else {
    category = "Obese";
}

// result
String result = "BMI: " + String.format("%.2f", bmi) + "\nWeight
Category: " + category;
resultText.setText(result);
}
}
```