

Android App 1: BMI Calculator

Introduction

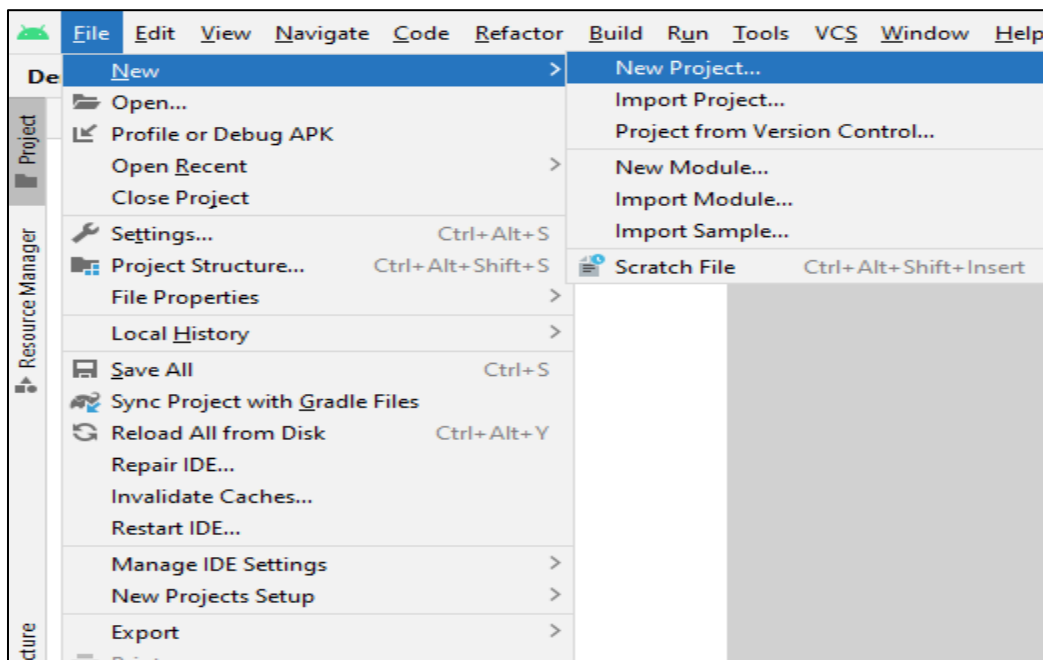
BMI calculator is an Android app which will be used to calculate Body Mass Index (BMI) and show the results as weights status given in following table based upon the value of BMI.

Body Mass Index (BMI) is a **person's weight in kilograms) divided by the square of height in meters (or feet).**

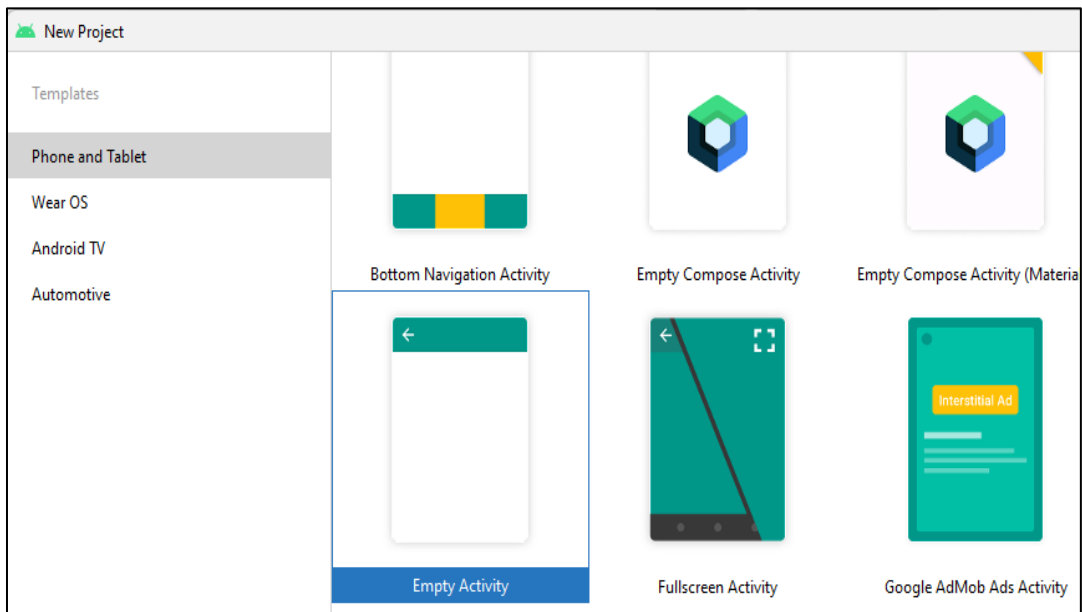
BMI	Weight Status
Below 18.5	Underweight
18.5—24.9	Healthy Weight
25.0—29.9	Overweight
30.0 and Above	Obesity

Let's get Started:

Step 1: Create a New Project in Android Studio as shown below



Step 2: Select Empty Activity as shown below



Step 3: Provide a Project Name as shown below

The screenshot shows the 'Empty Activity' configuration screen in Android Studio. The title is 'Empty Activity'. Below it, it says 'Creates a new empty activity'. The form contains the following fields and options:

- Name:** DemoCalculateBMI
- Package name:** com.example.democalculatebmi
- Save location:** C:\Users\hksharma\AndroidStudioProjects\DemoCalculateBMI2
- Language:** Java
- Minimum SDK:** API 26: Android 8.0 (Oreo)

Below the form, there is an information icon and the text: 'Your app will run on approximately 88.2% of devices. [Help me choose](#)'. There is also a checkbox for 'Use legacy android.support libraries' with a question mark icon. Below this checkbox, it says: 'Using legacy android.support libraries will prevent you from using the latest Play Services and Jetpack libraries'.

At the bottom right, there are four buttons: 'Previous', 'Next', 'Cancel', and 'Finish'.

Step 4: Update MainActivity.java as per the code given below

```
package com.example.democalculatebmi;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText edtWeight, edtHeightFt, edtHeightIn;
        TextView txtResult;
        Button btnCalculate;
        edtWeight=findViewById(R.id.edtWeight);
        edtHeightFt=findViewById(R.id.edtHeightFt);
        edtHeightIn=findViewById(R.id.edtHeightIn);
        txtResult=findViewById(R.id.txtResult);
        btnCalculate=findViewById(R.id.btnCalculate);
        btnCalculate.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int wt= Integer.parseInt(edtWeight.getText().toString());
                int ft= Integer.parseInt(edtHeightFt.getText().toString());
                int in= Integer.parseInt(edtHeightIn.getText().toString());
                int totIn= ft*12+in;
                double totCm= totIn*2.53;
                double totM=totCm/100;
                double bmi=wt/(totM*totM);
                if (bmi>25)
                {
                    txtResult.setText("You are Overweight");
                }
                else if (bmi<18)
                {
                    txtResult.setText("You are Under Weight");
                }
                else
                {
                    txtResult.setText("You are Perfect");
                }
            }
        });
    }
}
```

Step 5: Update activity_main.xml for Vertical Orientation as per the code given below

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:id="@+id/edtWeight"
        android:hint="@string/hintWeight"
        android:inputType="number"
        />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:id="@+id/edtHeightFt"
        android:hint="@string/hinttHeightFt"
        android:inputType="number"/>

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:id="@+id/edtHeightIn"
        android:hint="@string/hinttHeightIn"
        android:inputType="number"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculate BMI"
        android:id="@+id/btnCalculate"/>

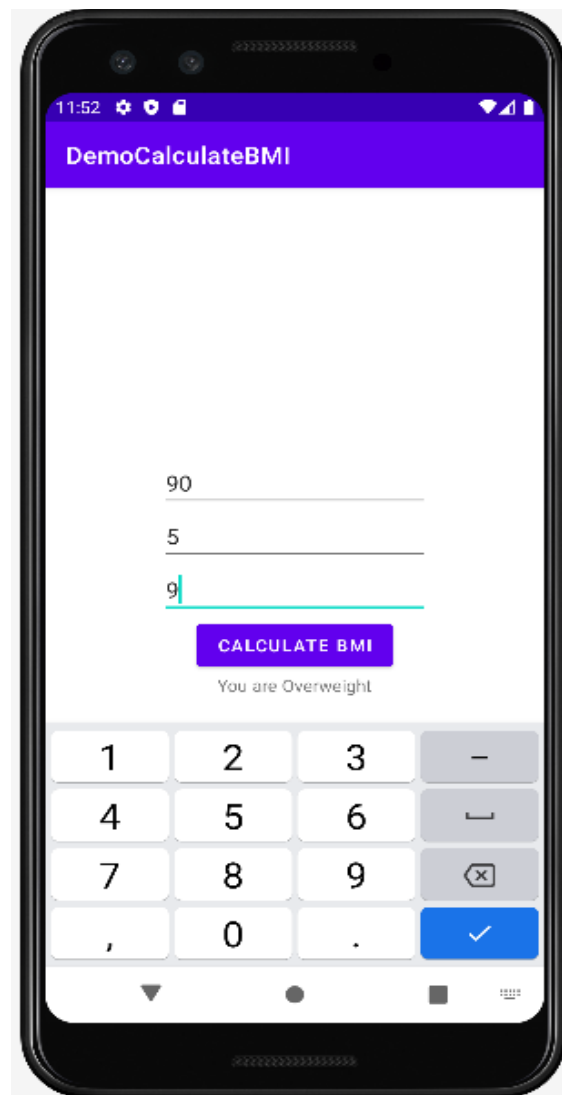
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="RESULT"
        android:id="@+id/txtResult"/>

</LinearLayout>
```

Step 6: Update String.xml for sting values as per the code given below

```
<resources>
    <string name="app_name">DemoCalculateBMI</string>
    <string name="hintWeight">Enter Your Weight</string>
    <string name="hinttHeightFt">Enter Your Height (Ft)</string>
    <string name="hinttHeightIn">Enter Your Height (In)</string>
</resources>
```

Step 7: Check Output on Android Emulator and it should look like as given below



Voila!! We have successfully completed this lab.