Mobile Interface Lab Assignment 2

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(BMI)

Body Mass

Calculator

App

MainActivity.java File

```java
package com.example.bmicalculator;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RelativeLayout;
import android.widget.TextView;
import android.widget.Toast;

import java.text.DecimalFormat;

public class MainActivity extends AppCompatActivity {
    Button calc;
    EditText heighttext,weighttext;
    TextView categoryx,bmiout;
    RelativeLayout rl;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        calc=findViewById(R.id.calculate);
        heighttext=findViewById(R.id.heightInput);
        weighttext=findViewById(R.id.weightInput);
        categoryx=findViewById(R.id.category);
        bmiout=findViewById(R.id.bmioutput);
        rl=findViewById(R.id.RelativeLayout);
        rl.setBackgroundColor(Color.YELLOW);

        calc.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String h=heighttext.getText().toString();

                String w=weighttext.getText().toString();

                if(h.equals("") || w.equals(""))
                {
                    alertDialog();
                }
                else{
                    double weight=Double.parseDouble(w);
                    double height=Double.parseDouble(h);
                    Double BMI=(weight/(height*height));
                    DecimalFormat df = new DecimalFormat("#.#");
                    double BMI_trimmed = Double.parseDouble(df.format(BMI));
                    bmiout.setText(Double.toString(BMI_trimmed));
                    String BMI_Cat;
                    if (BMI < 15)
                        BMI_Cat = "Very severely underweight";
                    else if (BMI < 16)
                        BMI_Cat = "Severely underweight";
                    else if (BMI < 18.5)
                        BMI_Cat = "Underweight";
                    else if (BMI < 25)
                        BMI_Cat = "Normal";
                    else if (BMI < 30)
                        BMI_Cat = "Overweight";
                    else if (BMI < 35)
                        BMI_Cat = "Obese Class 1 - Moderately Obese";
                    else if (BMI < 40)
                        BMI_Cat = "Obese Class 2 - Severely Obese";
                    else
                        BMI_Cat = "Obese Class 3 - Very Severely Obese";

                    categoryx.setText(BMI_Cat);
                }
```

```java
                }
            });
        }
    public void alertDialog() {
        AlertDialog.Builder dialog=new AlertDialog.Builder(this);
        dialog.setMessage("Please Select any option");
        dialog.setTitle("Dialog Box");
        dialog.setPositiveButton("YES",
                new DialogInterface.OnClickListener() {
                    public void onClick(DialogInterface dialog,
                                        int which) {
                        Toast.makeText(getApplicationContext(),"Yes is clicked",Toast.LENGTH_LONG).show();
                    }
                });
        dialog.setNegativeButton("cancel",new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialog, int which) {
                Toast.makeText(getApplicationContext(),"cancel is clicked",Toast.LENGTH_LONG).show();
            }
        });
        AlertDialog alertDialog=dialog.create();
        alertDialog.show();
    }
}
```

activity_main.xml file

```xml
<?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"
    tools:context=".MainActivity"
    android:id="@+id/RelativeLayout">

    <TextView
        android:id="@+id/BmiCalculator"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="90dp"
        android:layout_marginTop="110dp"
        android:text="BMI CALCULATOR"
        android:textSize="24sp"
        android:visibility="visible"
        tools:layout_editor_absoluteX="159dp"
        tools:layout_editor_absoluteY="103dp" />

    <TextView
        android:id="@+id/weightText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_marginStart="10dp"
        android:layout_marginLeft="10dp"
        android:layout_marginTop="190dp"
        android:text="Enter you Weight (Kg) :"
        android:textColor="@color/black"
        android:textSize="16sp" />

    <TextView
        android:id="@+id/heightText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_marginStart="10dp"
        android:layout_marginLeft="10dp"
        android:layout_marginTop="240dp"
        android:text="Enter you height (m) :"
        android:textColor="@android:color/black"
        android:textSize="16sp" />
```

```xml
<TextView
    android:id="@+id/bmiText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginLeft="95dp"
    android:layout_marginTop="397dp"
    android:text="YOUR BMI :"
    android:textColor="@color/purple_700"
    android:textSize="16sp" />

<TextView
    android:id="@+id/category"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="154dp"
    android:layout_marginLeft="80dp"
    android:layout_marginBottom="152dp"
    android:textColor="@color/black"
    android:textSize="14sp" />

<EditText
    android:id="@+id/weightInput"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="180dp"
    android:layout_marginTop="180dp"
    android:ems="10"
    android:inputType="numberDecimal"
    android:textAlignment="center"
    android:textColor="@color/black"
    tools:ignore="TouchTargetSizeCheck,TouchTargetSizeCheck,SpeakableTextPresentCheck" />

<EditText
    android:id="@+id/heightInput"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="180dp"
    android:layout_marginTop="220dp"
    android:ems="10"
    android:inputType="numberDecimal"
    android:minHeight="48dp"
    android:textAlignment="center"
    android:textColor="@color/black"
    tools:ignore="SpeakableTextPresentCheck" />

<TextView
    android:id="@+id/bmioutput"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="225dp"
    android:layout_marginTop="396dp"
    android:textSize="16sp"
    tools:textColor="#103EE5" />

<Button
    android:id="@+id/calculate"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_centerInParent="true"
    android:layout_marginStart="128dp"
    android:layout_marginTop="305dp"
    android:text="CALCULATE" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignEnd="@+id/category"
    android:layout_alignParentStart="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="43dp"
```
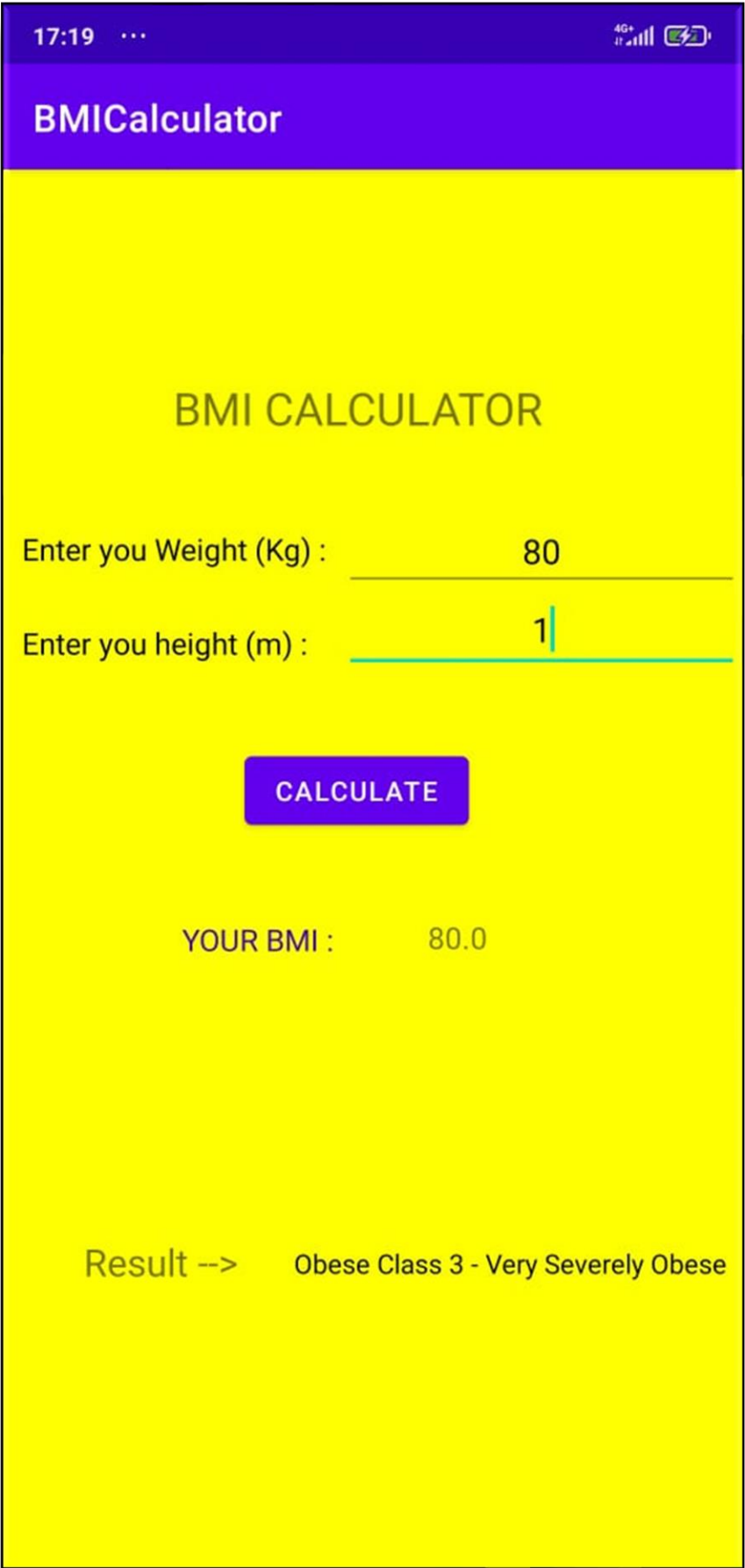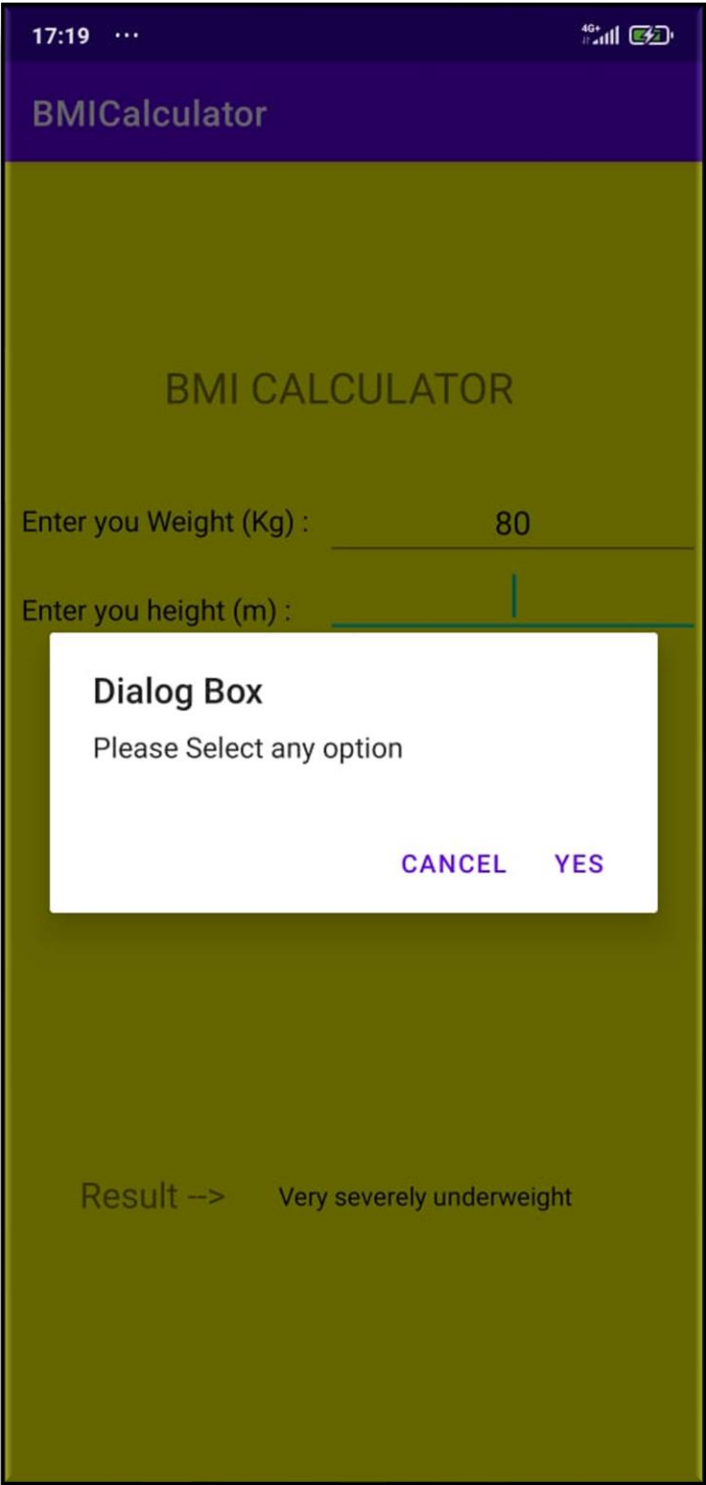
```
        android:layout_marginEnd="4dp"
        android:layout_marginBottom="149dp"
        android:text="Result --> "
        android:textSize="20sp" />


</RelativeLayout>
```

UI Design of the activity_main.xml

Alert Window if any field is left empty

BMICalculator

BMI CALCULATOR

Enter you Weight (Kg) :   80

Enter you height (m) : |

Dialog Box
Please Select any option

CANCEL   YES

Result --> Very severely underweight

Other outputs

BMICalculator

BMI CALCULATOR

Enter you Weight (Kg) :   80

Enter you height (m) :   5

CALCULATE

YOUR BMI :   3.2

Result --> Very severely underweight

BMICalculator

BMI CALCULATOR

Enter you Weight (Kg) :   80

Enter you height (m) :   1.5

CALCULATE

YOUR BMI :   35.6

Result --> Obese Class 2 - Severely Obese