**MAD Lab 01-Simple Calculator**

*XML code:*

<TextView  
 android:id="@+id/textView5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:background="#0026FA" />  
  
<TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Calculator"  
 android:textAlignment="center"  
 android:textSize="20sp" />  
  
<EditText  
 android:id="@+id/editTextText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="text"  
 android:text="Num 1" />  
  
<EditText  
 android:id="@+id/ed\_num1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="text"  
 android:text="Num2" />  
  
<com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:weightSum="1">  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:weightSum="1">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_weight="1"  
 android:orientation="horizontal"></LinearLayout>  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="horizontal">  
  
 <Button  
 android:id="@+id/btn\_add"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="+" />  
  
 <Button  
 android:id="@+id/btn\_sub"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="-" />  
  
 <Button  
 android:id="@+id/btn\_mul"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="×" />  
  
 <Button  
 android:id="@+id/btn\_div"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="÷" />  
  
 </LinearLayout>  
  
</com.google.android.material.textfield.TextInputLayout>

*Java code:*

package com.example.k033\_mad\_lab02;

import android.os.Bundle; import android.view.View; import android.widget.Button; import android.widget.EditText; import android.widget.TextView; import android.widget.Toast; import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity implements View.OnClickListener { EditText ed\_num1,ed\_num2; TextView lbout;

Button btn\_add,btn\_sub,btn\_div,btn\_mul;  
@Override  
protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
 ed\_num1 = findViewById( R.id.ed\_num1);  
 ed\_num2 = findViewById( R.id.ed\_num1);  
 lbout = findViewById( R.id.lb\_out);  
 btn\_add = findViewById( R.id.btn\_add);  
 btn\_sub = findViewById( R.id.btn\_sub);  
 btn\_mul = findViewById( R.id.btn\_mul);  
 btn\_div = findViewById( R.id.btn\_div);  
 btn\_add.setOnClickListener(this);  
 btn\_sub.setOnClickListener(this);  
 btn\_mul.setOnClickListener(this);  
 btn\_div.setOnClickListener(this);  
}  
@Override  
public void onClick(View v){  
 String n1=ed\_num1.getText().toString();  
 String n2=ed\_num2.getText().toString();  
 if(n1.isEmpty() || n2.isEmpty()){  
 Toast.makeText(MainActivity.this,"Input boxes are empty",Toast.LENGTH\_SHORT).show();  
 }  
 else{  
 double num1=Double.parseDouble(n1);  
 double num2=Double.parseDouble(n2);  
 if(v.getId()==R.id.btn\_add){  
 lbout.setText(String.valueOf(num1+num2));  
 }  
 else if(v.getId()==R.id.btn\_sub){  
 lbout.setText(String.valueOf(num1-num2));  
 }  
 else if(v.getId()==R.id.btn\_mul){  
 lbout.setText(String.valueOf(num1\*num2));  
 }  
 else if(v.getId()==R.id.btn\_div){  
 //Checking for divisible by 0 case:  
 if(n2=="0"){  
 Toast.makeText(MainActivity.this,"Divide by zero",Toast.LENGTH\_SHORT).show();  
 }  
 else{  
 lbout.setText(String.valueOf(num1/num2));  
 }  
 }  
 }  
  
}

}

*Output:*

