**Name:** Yogesh Balasaheb Kumbhar. **Roll No: 56**

**Class:** Final Year B. Tech CSE **Batch:** B2

**Title: Develop a native calculator application.**

**activity\_main.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:id="@+id/table1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"  
 android:paddingLeft="40dp"  
 android:paddingRight="40dp"  
 android:paddingTop="200dp"  
 android:background="#D6D6D6">  
  
  
 <TableRow>  
 <TextView  
 android:id="@+id/txt\_result"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="20dp"  
 android:layout\_marginBottom="20dp"  
 android:layout\_weight="1"  
 android:textColor="#000"  
 android:background="#fff"  
  
 />  
 </TableRow>  
  
 <TableRow android:orientation="vertical">  
  
 <Button  
 android:id="@+id/button\_one"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="1"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_two"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="2"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_three"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="3"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_add"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="+" />  
 </TableRow>  
  
 <TableRow>  
  
 <Button  
 android:id="@+id/button\_four"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="4"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_five"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="5"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_six"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="6"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_sub"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="-" />  
 </TableRow>  
  
 <TableRow>  
  
 <Button  
 android:id="@+id/button\_seven"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="7"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_eight"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="8"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_nine"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="9"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_mul"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="\*" />  
 </TableRow>  
  
 <TableRow>  
  
 <Button  
 android:id="@+id/button\_dot"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="." />  
  
 <Button  
 android:id="@+id/button\_zero"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="0"  
 android:onClick="numberClick"/>  
  
 <Button  
 android:id="@+id/button\_C"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="C" />  
  
 <Button  
 android:id="@+id/button\_div"  
 style="?android:attr/buttonStyleSmall"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="/" />  
 </TableRow>  
  
 <TableRow>  
 <Button  
 android:id="@+id/button\_back"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:text="back"  
 android:layout\_margin="4dp"  
 android:layout\_weight=".5"/>  
 <Button  
 android:id="@+id/button\_eql"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="4dp"  
 android:text="="  
 android:layout\_weight="1"/>  
  
 </TableRow>  
  
  
</TableLayout>

**MainActivity.java**

package com.example.calculatorapp;  
  
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;  
  
import java.util.regex.Pattern;  
  
import kotlin.text.Regex;  
  
public class MainActivity extends AppCompatActivity {  
  
 Button button\_back, button\_Add, button\_Sub, button\_Div, button\_Mul, button\_dot, button\_C, button\_Equal;  
 TextView txt\_result;  
 float mValueOne, mValueTwo;  
 boolean crunchifyAddition, mSubtract, crunchifyMultiplication, crunchifyDivision;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 button\_dot = (Button) findViewById(R.id.*button\_dot*);  
 button\_Add = (Button) findViewById(R.id.*button\_add*);  
 button\_Sub = (Button) findViewById(R.id.*button\_sub*);  
 button\_Mul = (Button) findViewById(R.id.*button\_mul*);  
 button\_Div = (Button) findViewById(R.id.*button\_div*);  
 button\_C = (Button) findViewById(R.id.*button\_C*);  
 button\_Equal = (Button) findViewById(R.id.*button\_eql*);  
 txt\_result = (TextView) findViewById(R.id.*txt\_result*);  
 button\_back = (Button) findViewById(R.id.*button\_back*);  
  
 button\_back.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String str = txt\_result.getText().toString();  
 if(!str.isEmpty()){  
 str = str.substring(0,str.length()-1);  
 txt\_result.setText( str );  
 }  
  
 }  
 });  
 button\_Add.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if (txt\_result == null) {  
 txt\_result.setText("");  
 } else {  
 mValueOne = Float.*parseFloat*(txt\_result.getText() + "");  
 crunchifyAddition = true;  
 txt\_result.setText(null);  
 }  
 }  
 });  
 button\_Sub.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 mValueOne = Float.*parseFloat*(txt\_result.getText() + "");  
 mSubtract = true;  
 txt\_result.setText(null);  
 }  
 });  
 button\_Mul.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 mValueOne = Float.*parseFloat*(txt\_result.getText() + "");  
 crunchifyMultiplication = true;  
 txt\_result.setText(null);  
 }  
 });  
 button\_Div.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 mValueOne = Float.*parseFloat*(txt\_result.getText() + "");  
 crunchifyDivision = true;  
 txt\_result.setText(null);  
 }  
 });  
 button\_Equal.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 mValueTwo = Float.*parseFloat*(txt\_result.getText() + "");  
 if (crunchifyAddition == true) {  
 txt\_result.setText(mValueOne + mValueTwo + "");  
 crunchifyAddition = false;  
 }  
 if (mSubtract == true) {  
 txt\_result.setText(mValueOne - mValueTwo + "");  
 mSubtract = false;  
 }  
 if (crunchifyMultiplication == true) {  
 txt\_result.setText(mValueOne \* mValueTwo + "");  
 crunchifyMultiplication = false;  
 }  
 if (crunchifyDivision == true) {  
 txt\_result.setText(mValueOne / mValueTwo + "");  
 crunchifyDivision = false;  
 }  
 }  
 });  
 button\_C.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 txt\_result.setText("");  
 }  
 });  
 button\_dot.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String str = txt\_result.getText().toString();  
 if(Pattern.*matches*("[.]",str)){  
 txt\_result.setText(txt\_result.getText() + ".");  
 }  
  
 }  
 });  
  
  
 }  
 public void numberClick(View view){  
 switch(view.getId()){  
 case R.id.*button\_one*:  
 txt\_result.setText(txt\_result.getText() + "1");  
 break;  
 case R.id.*button\_two*:  
 txt\_result.setText(txt\_result.getText() + "2");  
 break;  
 case R.id.*button\_three*:  
 txt\_result.setText(txt\_result.getText() + "3");  
 break;  
 case R.id.*button\_four*:  
 txt\_result.setText(txt\_result.getText() + "4");  
 break;  
 case R.id.*button\_five*:  
 txt\_result.setText(txt\_result.getText() + "5");  
 break;  
 case R.id.*button\_six*:  
 txt\_result.setText(txt\_result.getText() + "6");  
 break;  
 case R.id.*button\_seven*:  
 txt\_result.setText(txt\_result.getText() + "7");  
 break;  
 case R.id.*button\_eight*:  
 txt\_result.setText(txt\_result.getText() + "8");  
 break;  
 case R.id.*button\_nine*:  
 txt\_result.setText(txt\_result.getText() + "9");  
 break;  
 case R.id.*button\_zero*:  
 txt\_result.setText(txt\_result.getText() + "0");  
 break;  
 }  
 }  
}

**Output:**

 

