**activity\_main.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.ConstraintLayout 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">  
  
 <Button  
 android:id="@+id/button\_dot"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="24dp"  
 android:layout\_marginTop="16dp"  
 android:text="."  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_zero"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_nine" />  
  
 <Button  
 android:id="@+id/button\_zero"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="60dp"  
 android:layout\_marginTop="16dp"  
 android:text="0"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_seven" />  
  
 <Button  
 android:id="@+id/button\_division"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="77dp"  
 android:layout\_marginTop="16dp"  
 android:layout\_marginEnd="44dp"  
 android:text="/"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.0"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_dot"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_multiplication" />  
  
 <Button  
 android:id="@+id/button\_multiplication"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="16dp"  
 android:layout\_marginEnd="44dp"  
 android:text="\*"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="1.0"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_nine"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_substraction" />  
  
 <Button  
 android:id="@+id/button\_substraction"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="51dp"  
 android:layout\_marginTop="16dp"  
 android:layout\_marginEnd="44dp"  
 android:text="-"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_six"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_addition" />  
  
 <Button  
 android:id="@+id/button\_seven"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="28dp"  
 android:layout\_marginTop="16dp"  
 android:text="7"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_four" />  
  
 <Button  
 android:id="@+id/button\_eight"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="16dp"  
 android:text="8"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_seven"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_five" />  
  
 <Button  
 android:id="@+id/button\_nine"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="16dp"  
 android:text="9"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_eight"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_six"  
 android:textSize="20sp" />  
  
 <Button  
 android:id="@+id/button\_five"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="16dp"  
 android:text="5"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_four"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_two" />  
  
 <Button  
 android:id="@+id/button\_six"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="16dp"  
 android:text="6"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_five"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_three" />  
  
 <Button  
 android:id="@+id/button\_four"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="28dp"  
 android:layout\_marginTop="16dp"  
 android:text="4"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_one" />  
  
 <TextView  
 android:id="@+id/textView3"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="26dp"  
 android:text="SIMPLE CALCULATOR"  
 android:textSize="34sp"  
 android:textStyle="bold"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.5"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <EditText  
 android:id="@+id/result"  
 android:layout\_width="334dp"  
 android:layout\_height="47dp"  
 android:layout\_marginStart="29dp"  
 android:layout\_marginTop="85dp"  
 android:layout\_marginEnd="30dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:text="RESULT"  
 android:textStyle="bold"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.5"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView3" />  
  
 <Button  
 android:id="@+id/button\_one"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="28dp"  
 android:layout\_marginTop="85dp"  
 android:text="1"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/result" />  
  
 <Button  
 android:id="@+id/button\_two"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="85dp"  
 android:text="2"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_one"  
 app:layout\_constraintTop\_toBottomOf="@+id/result" />  
  
 <Button  
 android:id="@+id/button\_three"  
 android:layout\_width="50dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="85dp"  
 android:text="3"  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_two"  
 app:layout\_constraintTop\_toBottomOf="@+id/result" />  
  
 <Button  
 android:id="@+id/button\_addition"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="85dp"  
 android:layout\_marginEnd="44dp"  
 android:text="+"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_three"  
 app:layout\_constraintTop\_toBottomOf="@+id/result" />  
  
 <Button  
 android:id="@+id/button\_equal"  
 android:layout\_width="189dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="24dp"  
 android:layout\_marginTop="16dp"  
 android:text="="  
 android:textSize="20sp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_zero" />  
  
 <Button  
 android:id="@+id/button\_clear"  
 android:layout\_width="86dp"  
 android:layout\_height="50dp"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="16dp"  
 android:layout\_marginEnd="44dp"  
 android:text="CLEAR"  
 android:textSize="14sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/button\_equal"  
 app:layout\_constraintTop\_toBottomOf="@+id/button\_division" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**MainActivity.java**

package com.example.myapplication;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
import java.util.regex.Pattern;  
  
  
  
  
public class MainActivity extends AppCompatActivity implements View.OnClickListener{  
 Button b1,b2,b3,b4,b5,b6,b7,b8,b9,b0,beq,bdiv,bmul,badd,bsub,bc,bd;  
 EditText res;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 b1=(Button)findViewById(R.id.*button\_one*);  
 b1.setOnClickListener(this);  
  
 b2=(Button)findViewById(R.id.*button\_two*);  
 b2.setOnClickListener(this);  
  
 b3=(Button)findViewById(R.id.*button\_three*);  
 b3.setOnClickListener(this);  
  
 b4=(Button)findViewById(R.id.*button\_four*);  
 b4.setOnClickListener(this);  
  
 b5=(Button)findViewById(R.id.*button\_five*);  
 b5.setOnClickListener(this);  
  
 b6=(Button)findViewById(R.id.*button\_six*);  
 b6.setOnClickListener(this);  
  
 b7=(Button)findViewById(R.id.*button\_seven*);  
 b7.setOnClickListener(this);  
  
 b8=(Button)findViewById(R.id.*button\_eight*);  
 b8.setOnClickListener(this);  
  
 b9=(Button)findViewById(R.id.*button\_nine*);  
 b9.setOnClickListener(this);  
  
 b0=(Button)findViewById(R.id.*button\_zero*);  
 b0.setOnClickListener(this);  
  
 badd=(Button)findViewById(R.id.*button\_addition*);  
 badd.setOnClickListener(this);  
  
 bsub=(Button)findViewById(R.id.*button\_substraction*);  
 bsub.setOnClickListener(this);  
  
 bmul=(Button)findViewById(R.id.*button\_multiplication*);  
 bmul.setOnClickListener(this);  
  
 bdiv=(Button)findViewById(R.id.*button\_division*);  
 bdiv.setOnClickListener(this);  
  
 beq=(Button)findViewById(R.id.*button\_equal*);  
 beq.setOnClickListener(this);  
  
 bc=(Button)findViewById(R.id.*button\_clear*);  
 bc.setOnClickListener(this);  
  
 bd=(Button)findViewById(R.id.*button\_dot*);  
 bd.setOnClickListener(this);  
  
 res=(EditText)findViewById(R.id.*result*);  
 res.setText("");  
  
 }  
  
 @Override  
 public void onClick(View v) {  
 if(v.equals(b0)) res.append("0");  
 if(v.equals(b1)) res.append("1");  
 if(v.equals(b2)) res.append("2");  
 if(v.equals(b3)) res.append("3");  
 if(v.equals(b4)) res.append("4");  
 if(v.equals(b5)) res.append("5");  
 if(v.equals(b6)) res.append("6");  
 if(v.equals(b7)) res.append("7");  
 if(v.equals(b8)) res.append("8");  
 if(v.equals(b9)) res.append("9");  
 if(v.equals(bd)) res.append(".");  
 if(v.equals(bc)) res.setText("");  
  
  
 if(v.equals(beq)){  
 try {  
 String data = res.getText().toString();  
 if (data.contains("/")) {  
 String[] operands = data.split("/");  
 if (operands.length == 2) {  
 double operand1 = Double.*parseDouble*(operands[0]);  
 double operand2 = Double.*parseDouble*(operands[1]);  
 double result = operand1 / operand2;  
 res.setText(String.*valueOf*(result));  
 } else {  
 Toast.*makeText*(getBaseContext(), "Invalid Input", Toast.*LENGTH\_LONG*).show();  
 }  
  
 } else if (data.contains("\*")) {  
 String[] operands = data.split(Pattern.*quote*("\*"));  
 if (operands.length == 2) {  
 double operand1 = Double.*parseDouble*(operands[0]);  
 double operand2 = Double.*parseDouble*(operands[1]);  
 double result = operand1 \* operand2;  
 res.setText(String.*valueOf*(result));  
  
 } else {  
 Toast.*makeText*(getBaseContext(), "Invalid Input", Toast.*LENGTH\_LONG*).show();  
 }  
  
 } else if (data.contains("+")) {  
 String[] operands = data.split(Pattern.*quote*("+"));  
 if (operands.length == 2) {  
 double operand1 = Double.*parseDouble*(operands[0]);  
 double operand2 = Double.*parseDouble*(operands[1]);  
 double result = operand1 + operand2;  
 res.setText(String.*valueOf*(result));  
  
 } else {  
 Toast.*makeText*(getBaseContext(), "Invalid Input", Toast.*LENGTH\_LONG*).show();  
 }  
 } else if (data.contains("-")) {  
 String[] operands = data.split(Pattern.*quote*("-"));  
 if (operands.length == 2) {  
 double operand1 = Double.*parseDouble*(operands[0]);  
 double operand2 = Double.*parseDouble*(operands[1]);  
 double result = operand1 - operand2;  
 res.setText(String.*valueOf*(result));  
  
 } else {  
 Toast.*makeText*(getBaseContext(), "Invalid Input", Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 }  
 catch(Exception e){  
 Toast.*makeText*(getBaseContext(),"Invalid Input",Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 if(v.equals(badd)) res.append("+");  
 if(v.equals(bsub)) res.append("-");  
 if(v.equals(bmul)) res.append("\*");  
 if(v.equals(bdiv)) res.append("/");  
  
 }  
}