Experiment no:

Procedure:

Activity\_main

<?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:padding="30dp"

android:gravity="center\_horizontal">

<!-- Text View -->

<TextView

android:id="@+id/TextView1"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Simple Calculator"

android:textColor="@color/black"

android:textSize="24sp"

android:layout\_gravity="center"

android:layout\_marginBottom="16dp"

android:textStyle="bold"/>

<!-- Edit Text-->

<EditText

android:id="@+id/EditText1"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="30dp"

android:layout\_marginStart="50dp"

android:layout\_marginTop="50dp"

android:layout\_marginEnd="50dp"

android:layout\_marginBottom="50dp" />

<GridLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:rowCount="4"

android:columnCount="4"

android:layout\_gravity="center"

android:layout\_marginTop="40dp">

<Button

android:id="@+id/button1"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="1"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button2"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="2"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button3"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="3"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/buttonDiv"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="/"

android:textSize="18sp"

android:onClick="onOperatorClick"/>

<Button

android:id="@+id/button4"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="4"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button5"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="5"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button6"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="6"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/buttonMul"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="\*"

android:textSize="18sp"

android:onClick="onOperatorClick"/>

<Button

android:id="@+id/button7"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="7"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button8"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="8"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/button9"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="9"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/buttonSub"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="-"

android:textSize="18sp"

android:onClick="onOperatorClick"/>

<Button

android:id="@+id/button0"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="0"

android:textSize="18sp"

android:onClick="onDigitClick"/>

<Button

android:id="@+id/buttonDot"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="C"

android:textSize="18sp"

android:onClick="onClearClick"/>

<Button

android:id="@+id/buttonEqual"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="="

android:textSize="18sp"

android:onClick="onEqualsClick"/>

<Button

android:id="@+id/buttonAdd"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

style="?android:attr/buttonStyleSmall"

android:layout\_columnWeight="1"

android:text="+"

android:textSize="18sp"

android:onClick="onOperatorClick"/>

</GridLayout>

</LinearLayout>

Main.activity

package com.example.calc;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

private TextView TextView1;

private Button button1;

private Button button2;

private Button button3;

private Button buttonDiv;

private Button button4;

private Button button5;

private Button button6;

private Button buttonMul;

private Button button7;

private Button button8;

private Button button9;

private Button buttonSub;

private Button button0;

private Button buttonDot;

private Button buttonEqual;

private Button buttonAdd;

private String currentInput = "";

private double operand1 = 0;

private String operator = "";

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

TextView1 = findViewById(R.id.TextView1);

}

public void onDigitClick(View view) {

Button button = (Button) view;

currentInput += button.getText().toString();

updateDisplay();

}

public void onOperatorClick(View view){

if (!currentInput.isEmpty()){

operand1 = Double.parseDouble(currentInput);

operator = ((Button) view).getText().toString();

currentInput = "";

}

}

public void onEqualsClick(View view){

if (!currentInput.isEmpty()){

double operand2 = Double.parseDouble(currentInput);

double result = performOperation(operand1,operand2,operator);

currentInput = String.valueOf((result));

updateDisplay();

}

}

public void onClearClick(View view){

currentInput = "";

operand1 = 0;

operator = "";

updateDisplay();

}

private double performOperation(double operand1, double operand2, String operator){

switch (operator){

case "+":

return operand1 + operand2;

case "-":

return operand1 - operand2;

case "\*":

return operand1 \* operand2;

case "/":

if (operand2 !=0) {

return operand1 / operand2;

} else {

return Double.NaN;

}

default:

return 0;

}

}

public void updateDisplay(){

TextView1.setText(currentInput);

}

}

**Output**

 