**XML File**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp">

<EditText

android:id="@+id/number1"

android:layout\_width="match\_parent"

android:layout\_height="48dp"

android:hint="Enter first number"

android:inputType="numberDecimal" />

<EditText

android:id="@+id/number2"

android:layout\_width="match\_parent"

android:layout\_height="48dp"

android:hint="Enter second number"

android:inputType="numberDecimal" />

<Button

android:id="@+id/addButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Result" />

<RadioGroup

android:id="@+id/radioGroup"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<RadioButton

android:id="@+id/radioButtonAdd"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Addition" />

<RadioButton

android:id="@+id/radioButtonSubtract"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Subtraction" />

</RadioGroup>

<CheckBox

android:id="@+id/checkBoxEnable"

android:layout\_width="162dp"

android:layout\_height="59dp"

android:text="Enable Operations" />

<AutoCompleteTextView

android:id="@+id/autoCompleteTextView"

android:layout\_width="match\_parent"

android:layout\_height="48dp"

android:hint="Choose operation" />

<ImageButton

android:id="@+id/clearButton"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:src="@android:drawable/ic\_menu\_close\_clear\_cancel"

android:contentDescription="Clear"

android:layout\_marginTop="16dp"/>

<ToggleButton

android:id="@+id/toggleButtonEnable"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textOn="Enabled"

android:textOff="Disabled" />

<TextView

android:id="@+id/resultTextView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Result will be displayed here"

android:layout\_marginTop="16dp" />

</LinearLayout>

**Main Activity.java**

package com.example.variouscontrols;

import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.AutoCompleteTextView;

import android.widget.Button;

import android.widget.CheckBox;

import android.widget.EditText;

import android.widget.ImageButton;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.TextView;

import android.widget.Toast;

import android.widget.ToggleButton;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private EditText number1EditText;

private EditText number2EditText;

private Button addButton;

private RadioGroup radioGroup;

private CheckBox checkBoxEnable;

private AutoCompleteTextView autoCompleteTextView;

private ImageButton clearButton;

private ToggleButton toggleButtonEnable;

private TextView resultTextView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

number1EditText = findViewById(R.id.number1);

number2EditText = findViewById(R.id.number2);

addButton = findViewById(R.id.addButton);

radioGroup = findViewById(R.id.radioGroup);

checkBoxEnable = findViewById(R.id.checkBoxEnable);

autoCompleteTextView = findViewById(R.id.autoCompleteTextView);

clearButton = findViewById(R.id.clearButton);

toggleButtonEnable = findViewById(R.id.toggleButtonEnable);

resultTextView = findViewById(R.id.resultTextView);

String[] operations = {"Addition", "Subtraction"};

ArrayAdapter<String> adapter = new ArrayAdapter<>(this,

android.R.layout.simple\_dropdown\_item\_1line, operations);

autoCompleteTextView.setAdapter(adapter);

addButton.setOnClickListener(v -> {

if (!toggleButtonEnable.isChecked()) {

Toast.makeText(MainActivity.this, "Please enable the toggle button",

Toast.LENGTH\_SHORT).show();

return;

}

try {

double num1 = Double.parseDouble(number1EditText.getText().toString());

double num2 = Double.parseDouble(number2EditText.getText().toString());

int selectedOperationId = radioGroup.getCheckedRadioButtonId();

RadioButton selectedOperation = findViewById(selectedOperationId);

String operation = selectedOperation != null ?

selectedOperation.getText().toString() :

autoCompleteTextView.getText().toString();

double result = 0;

if (operation.equals("Addition") ||

operation.equals("Addition")) {

result = num1 + num2;

} else if (operation.equals("Subtraction")) {

result = num1 - num2;

} else {

Toast.makeText(MainActivity.this, "Please select a valid operation",

Toast.LENGTH\_SHORT).show();

return;

}resultTextView.setText("Result: " + result);

} catch (NumberFormatException e) {

Toast.makeText(MainActivity.this, "Please enter valid numbers",

Toast.LENGTH\_SHORT).show();

}

});

clearButton.setOnClickListener(v -> {

number1EditText.setText("");

number2EditText.setText("");

resultTextView.setText("Result will be displayed here");

autoCompleteTextView.setText("");

radioGroup.clearCheck();

});

toggleButtonEnable.setOnCheckedChangeListener((buttonView, isChecked) ->

{

String message = isChecked ? "Toggle ON" : "Toggle OFF";

Toast.makeText(MainActivity.this, message,

Toast.LENGTH\_SHORT).show();

});

checkBoxEnable.setOnCheckedChangeListener((buttonView, isChecked) -> {

boolean enable = isChecked && toggleButtonEnable.isChecked();

addButton.setEnabled(enable);

});

}}