Practical:-8

Aim:-Create calculator app with two textboxes and 4 buttons which calculates the basic mathematical functions.

<activity_main.xml>

```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"
    tools:context=".MainActivity">


    <TextView
        android:id="@+id/textAns"
        android:layout_width="214dp"
        android:layout_height="33dp"
        android:text=""
        android:textAlignment="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.79" />

    <Button
        android:id="@+id/btnAdd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="+"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.263"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.392" />

    <Button
        android:id="@+id/btnSub"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="-"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.727"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.391" />

<Button
    android:id="@+id/btnMul"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="*"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.263"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.561" />

<Button
    android:id="@+id/btnDiv"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="/"
    android:textSize="24sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.727"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.561" />

<EditText
    android:id="@+id/edit1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="text"
    android:text=""
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.422"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.118" />

<EditText
    android:id="@+id/edit2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
    android:ems="10"
    android:inputType="text"
    android:text=""
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.422"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.201" />

<TextView
    android:id="@+id/textView"
    android:layout_width="193dp"
    android:layout_height="51dp"
    android:text="P8 By Kushal Sharma"
    android:textSize="20dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.467"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.917" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

<MainActivity.java>

```java
package com.example.prac8;

import androidx.appcompat.app.AppCompatActivity;

import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;


import android.os.Bundle;

import com.example.prac8.R;

public class MainActivity extends AppCompatActivity {
    int p , p1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText num1 = findViewById(R.id.edit1);
        EditText num2 = findViewById(R.id.edit2);
        TextView ans = findViewById(R.id.textAns);
        Button btnAdd = findViewById(R.id.btnAdd);
        Button btnSub = findViewById(R.id.btnSub);
        Button btnMul = findViewById(R.id.btnMul);
        Button btnDiv = findViewById(R.id.btnDiv);


        btnAdd.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                p = Integer.parseInt(num1.getText().toString());
                p1 = Integer.parseInt(num2.getText().toString());
                ans.setText(""+(p + p1));

            }
        });

        btnSub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int p = Integer.parseInt(num1.getText().toString());
                int p1 = Integer.parseInt(num2.getText().toString());
                ans.setText(""+(p - p1));
            }
        });
        btnMul.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View view) {
                int p = Integer.parseInt(num1.getText().toString());
                int p1 = Integer.parseInt(num2.getText().toString());
                ans.setText(""+(p * p1));
            }
        });
        btnDiv.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int p = Integer.parseInt(num1.getText().toString());
                int p1 = Integer.parseInt(num2.getText().toString());
                ans.setText(""+(p / p1));
            }
        });


    }
}
```

Output Screenshots : -