Experiment No.: 3

Aim

Implementing basic arithmetic operations of a simple calculator

CO1

Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator

Procedure

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    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:background="#D8D8D8"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/text"
        android:text="Arithmetic_Sol"
        android:textColor="@color/white"
        android:textSize="25dp"
        android:textStyle="bold"
        android:fontFamily="serif-monospace"
```

```
    android:layout_margin="10dp"
    android:gravity="center"/>
  <EditText
    android:id="@+id/firstval"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/text"
    android:layout_marginStart="2dp"
    android:layout_marginTop="1dp"
    android:layout_marginEnd="2dp"
    android:layout_marginBottom="2dp"
    android:background="#C9FFFFFF"
    android:drawablePadding="20dp"
    android:layout_margin="10dp"
    android:hint="Enter first value"
    android:padding="10dp"
    android:textColor="@color/black"
    android:textColorHint="@color/black" />
  <EditText
    android:id="@+id/secondval"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/firstval"
    android:layout_marginStart="2dp"
    android:layout_marginTop="1dp"
    android:layout_marginEnd="2dp"
    android:layout_marginBottom="2dp"
    android:background="#B7FFFFFF"
```

```
    android:drawablePadding="20dp"
    android:layout_margin="10dp"
    android:hint="Enter second value"
    android:padding="10dp"
    android:textColor="@color/black"
    android:textColorHint="@color/black" />
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/add"
    android:layout_below="@+id/secondval"
    android:text="ADD"
    android:backgroundTint="@color/white"
    android:layout_centerHorizontal="true" />
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/sub"
    android:layout_below="@+id/add"
    android:text="SUB"
    android:backgroundTint="@color/white"
    android:layout_centerHorizontal="true" />
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/mult"
    android:layout_below="@+id/sub"
    android:text="MULT"
    android:backgroundTint="@color/white"
```

```
        android:layout_centerHorizontal="true" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/div"
        android:layout_below="@+id/mult"
        android:text="DIV"
        android:backgroundTint="@color/white"
        android:layout_centerHorizontal="true" />
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/viewcntnt"
        android:hint="result shows here"
        android:layout_below="@id/div"
        android:textColorHint="@color/black"
        android:textColor="@color/black"
        android:textSize="25dp"
        android:background="#B7FFFFFF"
        android:textStyle="bold"
        android:fontFamily="serif-monospace"
        android:layout_margin="10dp"
        android:gravity="center"/>
</RelativeLayout>
```

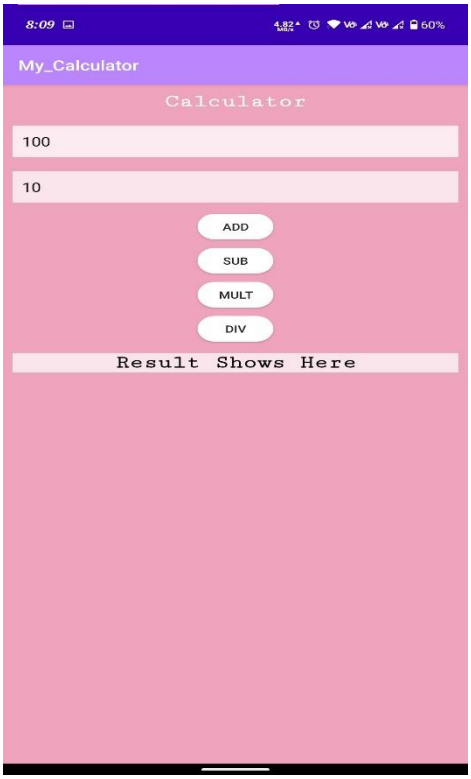
MainActivity.java

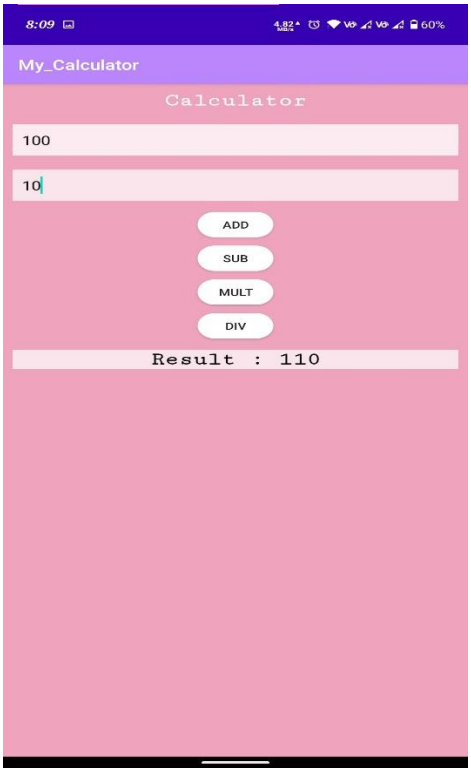
```
package com.example.basic_arithmetic_solution;
import android.support.v7.app.AppCompatActivity;
```

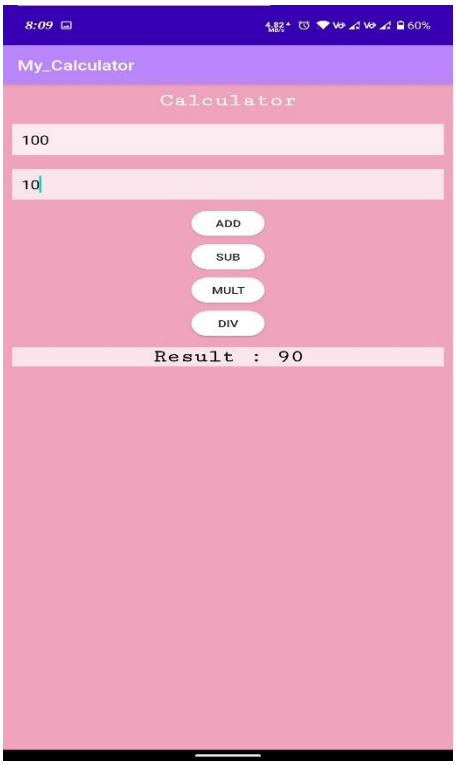
```
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText first =(EditText) findViewById(R.id.firstval);
        EditText second = (EditText) findViewById(R.id.secondval);
        Button add = (Button) findViewById(R.id.add);
        Button sub = (Button) findViewById(R.id.sub);
        Button mult = (Button) findViewById(R.id.mult);
        Button div = (Button) findViewById(R.id.div);
        TextView ans = (TextView) findViewById(R.id.viewcntnt);
        add.setOnClickListener(view -> {
            int x = Integer.parseInt(first.getText().toString());
            int y = Integer.parseInt(second.getText().toString());
            int z = x + y;
            TextView tv_data = (TextView) findViewById(R.id.viewcntnt);
           tv_data.setText("Result : " + z);
        });
        sub.setOnClickListener(view -> {
            int x = Integer.parseInt(first.getText().toString());
            int y = Integer.parseInt(second.getText().toString());
            int z = x - y;
            TextView tv_data = (TextView) findViewById(R.id.viewcntnt);
            tv_data.setText("Result : " + z);
```

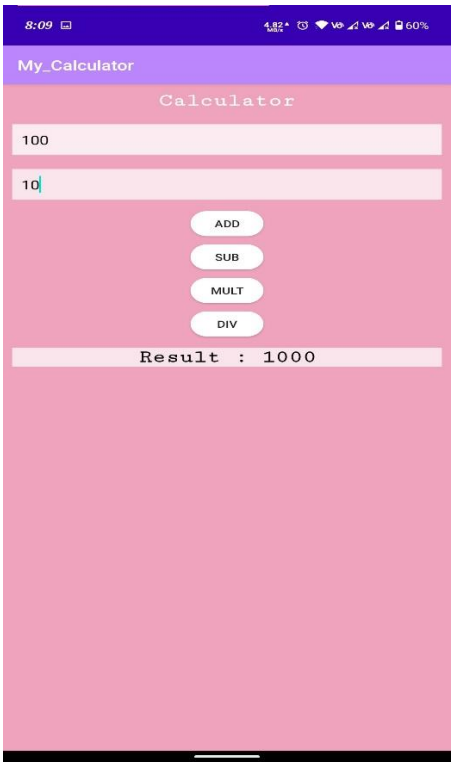
```
});
mult.setOnClickListener(view -> {
   int x = Integer.parseInt(first.getText().toString());
   int y = Integer.parseInt(second.getText().toString());
   int z = x * y;
   TextView tv_data = (TextView) findViewById(R.id.viewcntnt);
   tv_data.setText("Result : " + z);
});
div.setOnClickListener(view -> {
   int x = Integer.parseInt(first.getText().toString());
   int y = Integer.parseInt(second.getText().toString());
   int z = x / y;
   TextView tv_data = (TextView) findViewById(R.id.viewcntnt);
   tv_data.setText("Result : " + z);
});}}
```

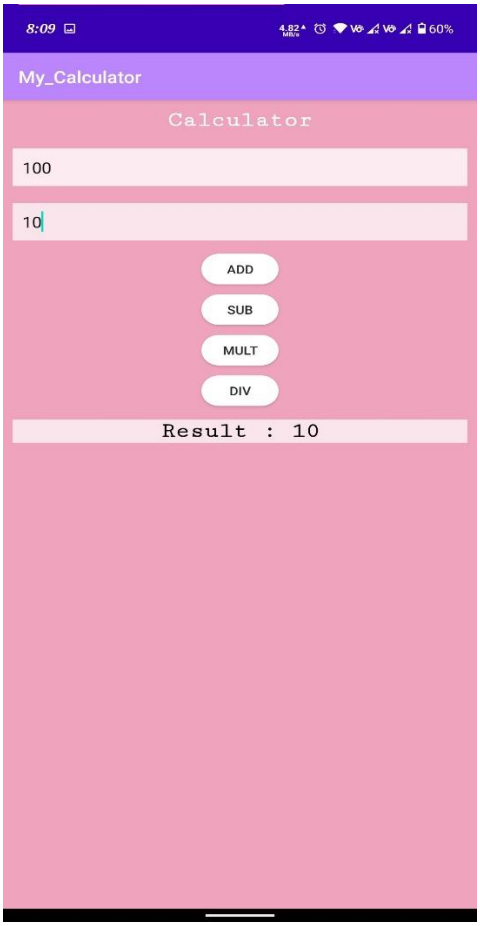
Output Screenshot











Result

The program was executed and the result was successfully obtained. Thus CO1 was obtained.