

Practical 1(C)

Aim: Write an android program to create a calculator.

Code:

Activity_main.xml

```
<?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/editTextNumber1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter first number"
        android:inputType="numberDecimal" />
    <EditText
        android:id="@+id/editTextNumber2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter second number"
        android:inputType="numberDecimal" />
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_marginTop="16dp"
        android:gravity="center">
        <Button
            android:id="@+id/buttonAdd"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Add" />
        <Button
            android:id="@+id/buttonSubtract"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Subtract"
            android:layout_marginStart="8dp" />
        <Button
            android:id="@+id/buttonMultiply"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Multiply"
            android:layout_marginStart="8dp" />
        <Button
            android:id="@+id/buttonDivide"
            android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:text="Divide"
        android:layout_marginStart="8dp" />
</LinearLayout>
<TextView
    android:id="@+id/textViewResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="16dp"
    android:text="Result:"
    android:textSize="18sp" />
</LinearLayout>
```

MainActivity.java

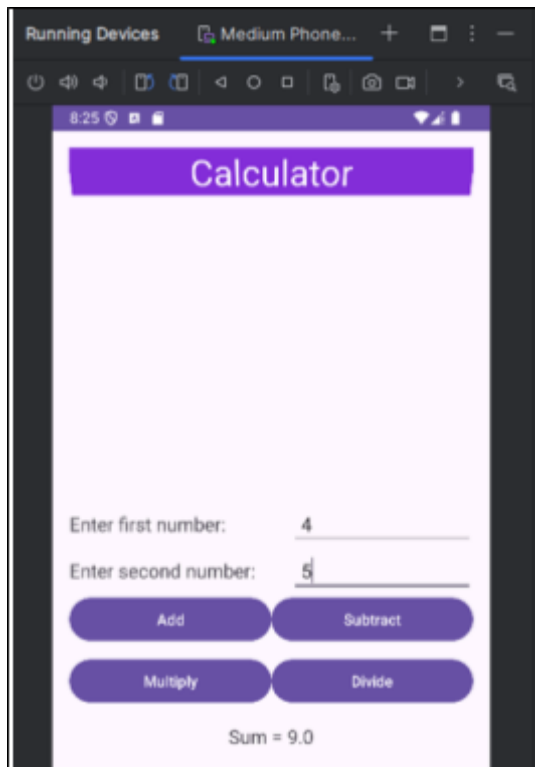
```
package
com.example.practical1; import
android.os.Bundle; import
android.view.View; import
android.widget.Button; import
android.widget.EditText;
import android.widget.LinearLayout;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText n1, n2;
    Button btnAdd, btnSubtract, btnMultiply, btnDivide;
    TextView r;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        n1 = findViewById(R.id.n1);
        n2 = findViewById(R.id.n2);
        btnAdd = findViewById(R.id.add);
        btnSubtract = findViewById(R.id.subtract);
        btnMultiply = findViewById(R.id.multiply);
        btnDivide = findViewById(R.id.divide);
        r = findViewById(R.id.result);
        btnAdd.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View view) {
                if (!n1.getText().toString().isEmpty() && !n2.getText().toString().isEmpty()) {
                    double a = Double.parseDouble(n1.getText().toString());
                    double b = Double.parseDouble(n2.getText().toString());
                    double c = a + b;
                    r.setText("Sum = " + c);
                } else {
                    r.setText("Please enter valid numbers");
                }
            }
        })
    }
}
```

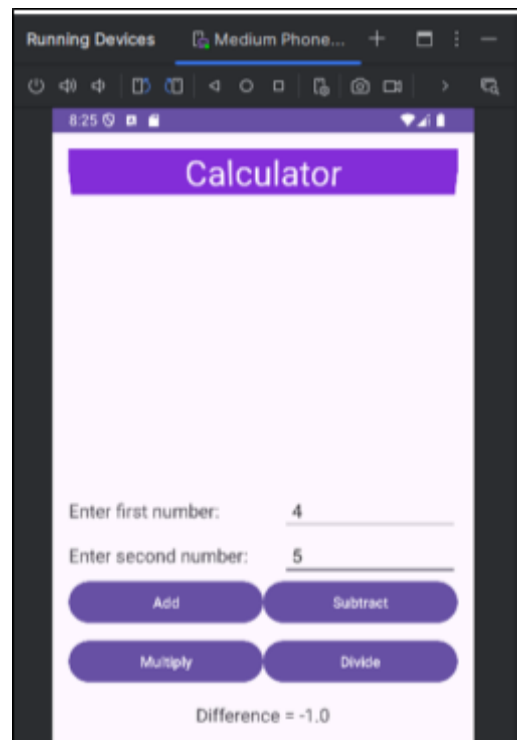
```
});  
btnSubtract.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        if (!n1.getText().toString().isEmpty() && !n2.getText().toString().isEmpty()) {  
            double a = Double.parseDouble(n1.getText().toString());  
            double b = Double.parseDouble(n2.getText().toString());  
            double c = a - b;  
            r.setText("Difference = " + c);  
        } else {  
            r.setText("Please enter valid numbers");  
        }  
    }  
});  
  
btnMultiply.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        if (!n1.getText().toString().isEmpty() && !n2.getText().toString().isEmpty()) {  
            double a = Double.parseDouble(n1.getText().toString());  
            double b = Double.parseDouble(n2.getText().toString());  
            double c = a * b;  
            r.setText("Product = " + c);  
        } else {  
            r.setText("Please enter valid numbers");  
        }  
    }  
});  
  
btnDivide.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        if (!n1.getText().toString().isEmpty() && !n2.getText().toString().isEmpty()) {  
            double a = Double.parseDouble(n1.getText().toString());  
            double b = Double.parseDouble(n2.getText().toString());  
            if (b != 0) {  
                double c = a / b;  
                r.setText("Quotient = " + c);  
            } else {  
                r.setText("Cannot divide by zero");  
            }  
        } else {  
            r.setText("Please enter valid numbers");  
        }  
    }  
});  
}
```

Output:

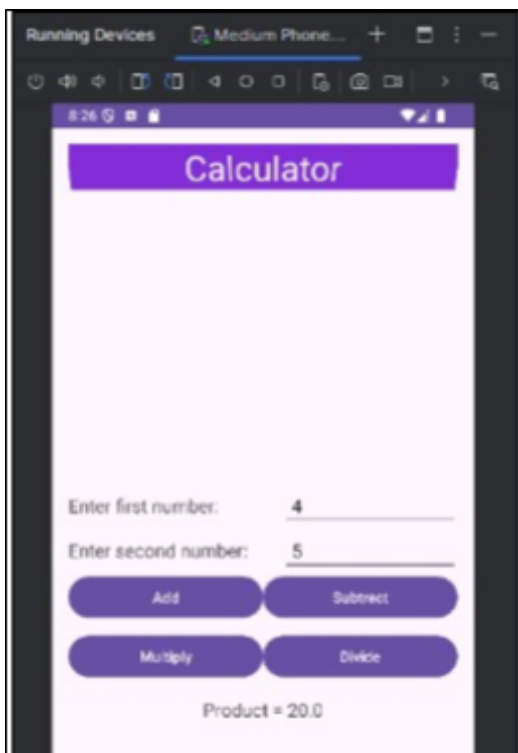
Add



Subtract



Multiply



Divide

