

- a. Create an Android app to add and subtract two numbers supplied from the user interface having two text boxes.
- b. Create an Android app to multiply and divide two numbers supplied from the user interface having two text boxes.
- activity main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
  xmlns:app="http://schemas.android.com/apk/res-auto"
 xmlns:tools="http://schemas.android.com/tools"
  android:layout width="match parent"
  android:orientation="vertical"
  android:layout height="match parent"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView3"
    android:layout width="match parent"
    android:layout height="wrap content"
    android:background="#FBEAEB"
    android:textSize="40sp"
    android:text="MiNi calculator"
    android:textAlignment="center"/>
  <EditText
    android:id="@+id/editTextText"
    android:layout_width="match_parent"
    android:layout height="wrap content"
    android:layout marginBottom="20dp"
    android:ems="10"
    android:inputType="numberDecimal"
    android:hint="Enter first value" />
  <EditText
    android:id="@+id/editTextText2"
    android:layout width="match parent"
    android:layout height="wrap content"
    android:layout marginBottom="20dp"
    android:ems="10"
    android:inputType="numberDecimal"
    android:hint="Enter second value" />
```

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```
<LinearLayout
  android:layout width="match parent"
  android:layout height="wrap content"
  android:layout margin="20dp"
  android:orientation="horizontal">
  <Button
    android:id="@+id/button2"
    android:layout width="0dp"
    android:layout height="wrap content"
    android:layout weight="1"
    android:text="+"/>
  <Button
    android:id="@+id/button3"
    android:layout width="0dp"
    android:layout height="wrap content"
    android:layout_weight="1"
    android:text="-"/>
  <Button
    android:id="@+id/button4"
    android:layout width="0dp"
    android:layout height="wrap content"
    android:layout weight="1"
    android:text="*"/>
  <Button
    android:id="@+id/button5"
    android:layout width="0dp"
    android:layout height="wrap content"
    android:layout_weight="1"
    android:text="/"/>
</LinearLayout>
<TextView
  android:id="@+id/textView4"
  android:textSize="40sp"
  android:layout width="match parent"
  android:layout_height="wrap_content"
  android:background="#2F3C7E"
  android:text="Result="
```

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android:textColor="#ff0000" android:textStyle="bold"/>

</LinearLayout>

MainActivity.java

```
package com.example.calculator;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
  private EditText editText1, editText2;
  private TextView resultTextView;
  private Button addButton, subtractButton, multiplyButton, divideButton;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    // Initialize UI elements
    editText1 = findViewById(R.id.editTextText);
    editText2 = findViewById(R.id.editTextText2);
    resultTextView = findViewById(R.id.textView4);
    addButton = findViewById(R.id.button2);
    subtractButton = findViewById(R.id.button3);
    multiplyButton = findViewById(R.id.button4);
    divideButton = findViewById(R.id.button5);
    // Set listeners for buttons
    addButton.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        performOperation('+');
```

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             });
             subtractButton.setOnClickListener(new View.OnClickListener() {
                @Override
               public void onClick(View v) {
                  performOperation('-');
               }
             });
             multiplyButton.setOnClickListener(new View.OnClickListener() {
                @Override
               public void onClick(View v) {
                  performOperation('*');
               }
             });
             divideButton.setOnClickListener(new View.OnClickListener() {
                @Override
               public void onClick(View v) {
                  performOperation('/');
               }
             });
           }
           private void performOperation(char operator) {
             String input1 = editText1.getText().toString();
             String input2 = editText2.getText().toString();
             if (input1.isEmpty() | | input2.isEmpty()) {
               Toast.makeText(this, "Please enter both values", Toast.LENGTH SHORT).show();
               return;
             }
             try {
               double value1 = Double.parseDouble(input1);
               double value2 = Double.parseDouble(input2);
               double result = 0;
               switch (operator) {
```

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case '+':

break;

result = value1 + value2;

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```
case '-':
         result = value1 - value2;
         break;
      case '*':
         result = value1 * value2;
         break;
      case '/':
         if (value2 != 0) {
           result = value1 / value2;
           result = Math.round(result * 100.0) / 100.0;
         } else {
           Toast.makeText(this, "Cannot divide by zero", Toast.LENGTH SHORT).show();
         }
         break;
    }
    resultTextView.setText("Result = " + result);
  } catch (NumberFormatException e) {
    Toast.makeText(this, "Invalid input", Toast.LENGTH_SHORT).show();
}
```

• Output: -

