Name-Nandan Singh Khani Course-BCA Section-A University rollno-1921102 Class rollno-36

```
<?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"
  android:background="#8BC34A"
  android:backgroundTint="@android:color/darker_gray"
  tools:context=".MainActivity">
  <TextView
    android:layout_width="194dp"
    android:layout_height="43dp"
    android:layout_marginStart="114dp"
    android:layout_marginLeft="114dp"
    android:layout marginTop="58dp"
    android:layout_marginEnd="103dp"
    android:layout_marginRight="103dp"
    android:layout marginBottom="502dp"
    android:scrollbarSize="30dp"
    android:text=" Calculator"
    android:textAppearance="@style/TextAppearance.AppCompat.Body1"
    android:textSize="30dp"
    app:layout constraintBottom toBottomOf="parent"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <EditText
    android:id="@+id/num1"
    android:layout_width="364dp"
    android:layout_height="28dp"
    android:layout_marginStart="72dp"
    android:layout_marginLeft="72dp"
    android:layout_marginTop="70dp"
    android:layout marginEnd="71dp"
    android:layout_marginRight="71dp"
    android:layout_marginBottom="416dp"
    android:background="@android:color/white"
    android:ems="10"
    android:hint="Number1(0)"
```

```
android:inputType="number"
  app:layout constraintBottom toBottomOf="parent"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintTop toTopOf="parent" />
<EditText
  android:id="@+id/num2"
  android:layout width="363dp"
  android:layout_height="30dp"
  android:layout marginStart="72dp"
  android:layout marginLeft="72dp"
  android:layout_marginTop="112dp"
  android:layout_marginEnd="71dp"
  android:layout marginRight="71dp"
  android:layout_marginBottom="374dp"
  android:background="@android:color/white"
  android:ems="10"
  android:hint="number2(0)"
  android:inputType="number"
  app:layout constraintBottom toBottomOf="parent"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<TextView
  android:id="@+id/result"
  android:layout_width="356dp"
  android:layout_height="71dp"
  android:layout marginStart="41dp"
  android:layout_marginLeft="41dp"
  android:layout_marginTop="151dp"
  android:layout marginEnd="48dp"
  android:layout_marginRight="48dp"
  android:layout marginBottom="287dp"
  android:background="@android:color/white"
  android:text="result"
  android:textColorLink="#673AB7"
  android:textSize="25sp"
  app:layout_constraintBottom_toBottomOf="parent"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<Button
  android:id="@+id/sum"
  android:layout width="wrap content"
```

```
android:layout_height="wrap_content"
  android:layout marginTop="292dp"
  android:layout marginBottom="263dp"
  android:backgroundTint="@android:color/holo_red_light"
  android:onClick="doSum"
  android:text="+"
  app:layout_constraintBottom_toBottomOf="parent"
  app:layout_constraintEnd_toStartOf="@+id/mul"
  app:layout constraintHorizontal bias="0.5"
  app:layout_constraintStart_toStartOf="parent"
  app:layout constraintTop toTopOf="parent"
  app:layout constraintVertical bias="0.507" />
<Button
  android:id="@+id/sub"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout marginTop="292dp"
  android:layout_marginEnd="113dp"
  android:layout_marginRight="113dp"
  android:layout marginBottom="263dp"
  android:backgroundTint="@android:color/holo_red_light"
  android:onClick="doSub"
 android:text="-"
  app:layout_constraintBottom_toBottomOf="parent"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintTop toTopOf="parent"
  app:layout_constraintVertical_bias="0.507" />
<Button
  android:id="@+id/div"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout_marginStart="307dp"
  android:layout marginLeft="307dp"
  android:layout_marginTop="292dp"
  android:layout_marginEnd="16dp"
  android:layout_marginRight="16dp"
  android:layout marginBottom="263dp"
  android:backgroundTint="@android:color/holo_red_light"
  android:onClick="doDiv"
  android:text="/"
  app:layout_constraintBottom_toBottomOf="parent"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintHorizontal bias="0.0"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
```

```
<Button
    android:id="@+id/mul"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout marginTop="292dp"
    android:layout_marginBottom="263dp"
    android:backgroundTint="@android:color/holo_red_light"
    android:onClick="doMul"
    android:text="x"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/sub"
    app:layout constraintHorizontal bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/sum"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.507" />
</androidx.constraintlayout.widget.ConstraintLayout>
Main Activity
package com.example.calculator;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
  EditText e1, e2;
  TextView t1;
  int num1, num2;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
  }
    public boolean getNumbers() {
    e1 = (EditText) findViewById(R.id.num1);
```

```
e2 = (EditText) findViewById(R.id.num2);
  t1 = (TextView) findViewById(R.id.result);
      String s1 = e1.getText().toString();
  String s2 = e2.getText().toString();
  if ((s1.equals(null) && s2.equals(null))
      || (s1.equals("") && s2.equals(""))) {
    String result = "Please enter a value";
    t1.setText(result);
    return false;
  } else {
    num1 = Integer.parseInt(s1);
    num2 = Integer.parseInt(s2);
  }
  return true;
}
public void doSum(View v) {
  if (getNumbers()) {
    int sum = num1 + num2;
    t1.setText(Integer.toString(sum));
  }
}
public void doPow(View v) {
  if (getNumbers()) {
    double sum = Math.pow(num1, num2);
    t1.setText(Double.toString(sum));
  }
public void doSub(View v) {
  if (getNumbers()) {
    int sum = num1 - num2;
    t1.setText(Integer.toString(sum));
  }
}
public void doMul(View v) {
```

```
if (getNumbers()) {
      int sum = num1 * num2;
      t1.setText(Integer.toString(sum));
    }
  }
    public void doDiv(View v) {
        if (getNumbers()) {
      double sum = num1 / (num2 * 1.0);
      t1.setText(Double.toString(sum));
    }
  }
  public void doMod(View v) {
    if (getNumbers()) {
      double sum = num1 % num2;
      t1.setText(Double.toString(sum));
    }
  }
}
```

