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Course:-BCA

Roll no.52

Semester-5th

Section -A

Subject-Mobile App Dev. Practical

MainActivity.java:-

```
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;
```

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```
        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));
    }
}
}
```

Activity_main.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"
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"
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```
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"
```

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```
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"
```

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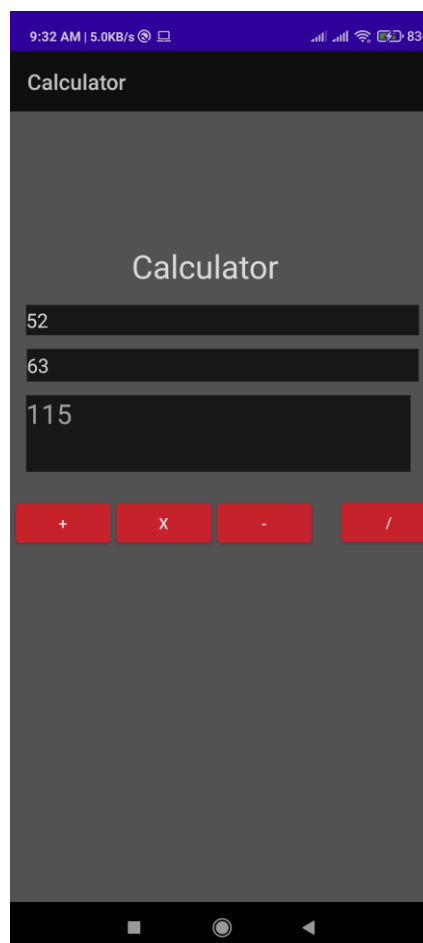
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```
android:text="/"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.0"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />

<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>
```

OUTPUT:-



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