CSE4002 - MOBILE APPLICATION DEVELOPMENT

28-10-2021

LAB - 4

Name:Sumana Mupparapu

Reg.No: 19BCE7316

Design a calculator to perform addition, subtraction, multiplication and division. Also a 'C' button to clear the Value in the Textbox and '=' button to display the result.

MainActivity.java:

```
package com.example.lab4;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    double result;
    char op;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        final EditText e = (EditText) findViewById(R.id.et);
        Button b1 = (Button) findViewById(R.id.b2);
        Button b2 = (Button) findViewById(R.id.b2);
        Button b4 = (Button) findViewById(R.id.b3);
        Button b5 = (Button) findViewById(R.id.b4);
        Button b5 = (Button) findViewById(R.id.b5);
        Button b6 = (Button) findViewById(R.id.b6);
```

```
Button b8 = (Button) findViewById(R.id.b8);
Button b9 = (Button) findViewById(R.id.b9);
Button b0 = (Button) findViewById(R.id.b0);
Button bp = (Button) findViewById(R.id.bp);
Button bs = (Button) findViewById(R.id.bs);
Button bc = (Button) findViewById(R.id.bc);
b0.setOnClickListener(new View.OnClickListener() {
   public void onClick(View v) {
    e.setText(e.getText().toString() + "0");
b1.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        e.setText(e.getText().toString() +
b2.setOnClickListener(new View.OnClickListener() {
   public void onClick(View v) {
       e.setText(e.getText().toString() + "2");
});
b3.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
});
b4.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        e.setText( e.getText().toString() + "4");
b5.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
   public void onClick(View v) {
        e.setText(e.getText().toString() + "6");
});
b7.setOnClickListener(new View.OnClickListener()
    public void onClick(View v) {
       e.setText(e.getText().toString() + "7");
b8.setOnClickListener(new View.OnClickListener() {
   public void onClick(View v) {
        e.setText( e.getText().toString() + "8");
```

```
b9.setOnClickListener(new View.OnClickListener() {
           void onClick(View v) {
        e.setText(e.getText().toString() + "9");
});
    public void onClick(View v) {
        e.setText((""));
bp.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        op = '+';
        result = Double.parseDouble(e.getText().toString());
        e.setText((""));
    public void onClick(View v) {
        result = Double.parseDouble(e.getText().toString());
        e.setText((""));
});
bm.setOnClickListener(new View.OnClickListener() {
     ublic void onClick(View v) {
        op = '*';
        e.setText((""));
});
bd.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        result = Double.parseDouble(e.getText().toString());
        e.setText((""));
});
be.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        <u>if (op == '+'</u>) {
            double n = Double.parseDouble(e.getText().toString());
            e.setText(String.valueOf(result + n));
        } else if (op == '-') {
            double n = Double.parseDouble(e.getText().toString());
            e.setText(String.valueOf(result - n));
        } else if (op == '*') {
            double n = Double.parseDouble(e.getText().toString());
            e.setText(String.valueOf(result * n));
        } else {
            double n = Double.parseDouble(e.getText().toString());
            e.setText(String.valueOf(result / n));
```

```
;
});
```

activity main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
Candroidx.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"
    tools:context=".MainActivity">
    <Button
        android:id="@+id/bc
        android:layout width="65dp
        android:text="c"
        android:textAppearance="@style/TextAppearance.AppCompat.Disp
        app:layout_constraintBottom_toBottomOf="pare
        app:layout_constraintEnd_toStartOf="@+id/b0"
        app:layout_constraintHorizontal_bias="0.5
        app:layout constraintStart toStartOf="parent"
        app:layout constraintTop toBottomOf="@+id/b7"
        android:id="@+id/bd
        android:layout width="65dp
        android:text="/"
        android:textAppearance="@style/TextAppearance.AppCompat.Display
        app:layout_constraintBottom_toBottomOf="pa
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toEndOf="@+id/be
    <Button
        android:id="@+id/be'
        android:layout width="65dp"
        android:layout_height="65dp" android:text="="
android:textAppearance="@style/TextAppearance.AppCompat.Display
        app:layout_constraintBottom toBottomOf="parent"
```

app:layout constraintHorizontal bias="0

```
app:layout constraintStart toEndOf="@+id/b0
    app:layout constraintTop toBottomOf="@+
<Button
    android:id="@+id/b0"
    android:layout width="65dp"
    android:textAppearance="@style/TextAppearance.AppCompat.Display
    app:layout constraintBottom toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/be
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/bc
    app:layout constraintTop toBottomOf="@+id/b8"
<Button
    android:layout width="65dp
    android:layout height="65dg
android:text="7"
    android:textAppearance="@style/TextAppearance.AppCompat.Display1
    app:layout constraintEnd toStartOf="@+id/b8
    app:layout constraintStart toStartOf="parer
<Button
    android:id="@+id/bm
    android:layout width="65d
    android:text="*"
    android:textAppearance="@style/TextAppearance.AppCompat.Di
    app:layout_constraintBottom toTopOf="@+id/bd"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintHorizontal bias="0.5
    app:layout constraintTop toBottomOf="@
<Button
    android:id="@+id/b9"
    android:layout_width="65dp
    android:layout_height="65d
    android:text="9"
    app:layout constraintEnd toStartOf="@+id/bm"
    app:layout constraintHorizontal bias="0.5"
    app:layout constraintStart toEndOf="@+id/b8
    app:layout constraintTop toBottomOf="@+id/b6" /
<Button
    android:id="@+id/b8"
    android:layout_width="65dp
    android:layout_height="65dp
    android: text = "8"
    app:layout constraintEnd toStartOf="@+id/b9"
    app:layout_constraintHorizontal_bias="0.5
    app:layout constraintStart toEndOf="@+id/
```

```
app:layout constraintTop toBottomOf="@+id/b5" />
<Button
    android:id="@+id/b4'
    android:layout_width="65dp
    android:layout height="65dp"
    android:text="4"
    android:textAppearance="@style/TextAppearance.AppCompat.Display
    app:layout constraintBottom toTopOf="@+id/b7"
    app:layout_constraintEnd_toStartOf="@+id/b5'
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent
    app:layout constraintTop toBottomOf="@+id/b1"
<Button
    android:layout width="65dp
    android:layout height="65dg
android:text="-"
    android:textAppearance="@style/TextAppearance.AppCompat.Display1
    app:layout constraintBottom toTopOf="@+id/bm"
    app:layout constraintHorizontal bias="0.5"
    app:layout constraintStart toEndOf="@+id/b6
<Button
    android:id="@+id/b6"
    android:layout width="65dg
    android:text="6"
    android:textAppearance="@style/TextAppearance.AppCompat.Di
app:layout_constraintBottom_toTopOf="@+id/b9"
    app:layout_constraintEnd_toStartOf="@+id/bs"
    app:layout constraintHorizontal bias="0.5
<Button
    android:id="@+id/b5
    android:layout_width="65dp
    android:layout_height="65dg
    android:text="5"
    app:layout constraintEnd toStartOf="@+id/b6"
    app:layout constraintHorizontal bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/b4
    app:layout constraintTop toBottomOf="@+id/b2"
<Button
    android:id="@+id/bp"
    android:layout width="65dp'
    android:layout_height="65dg
android:text="+"
    android:textAppearance="@style/TextAppearance.AppCompat.Display
    app:layout constraintBottom toTopOf="@+id/bs"
```

app:layout constraintStart toEndOf="@+id/

```
app:layout constraintTop toBottomOf="@+id/et"
   <EditText
       android:id="@+id/et
       android:layout_height="64dp"
       android:ems="10"
       android:inputType="number"
       android:textAppearance="@style/TextAppearance.AppCompat.Display
       app:layout_constraintBottom_toBottomOf="pa
       app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent"
   <Button
       android:id="@+id/b1"
       android:layout_width="65dp"
       android:layout_height="65dp"
android:text="1"
       android:textAppearance="@style/TextAppearance.AppCompat.Displayl
       app:layout constraintEnd toStartOf="@+id/b
app:layout constraintHorizontal bias="0.5"
       app:layout_constraintStart_toStartOf="paren
   <Button
       android:layout_height="65dp"
android:text="2"
       android:textAppearance="@style/TextAppearance.AppCompat.Display
       app:layout_constraintBottom_toTopOf="@+id/b
       app:layout constraintStart toEndOf="@+id/b1"
       app:layout constraintTop toBottomOf="@+id/et"
   <Button
       android:id="@+id/b3"
       android:text="3"
       android:textAppearance="@style/TextAppearance.AppCompat.Displ
       app:layout_constraintBottom_toTopOf="@+id/b6"
app:layout_constraintEnd_toStartOf="@+id/bp"
       app:layout_constraintHorizontal_bias="0.5"
       app:layout_constraintStart_toEndOf="@+id/b
       app:layout_constraintTop toBottomOf="@+id/et" />
/androidx.constraintlayout.widget.ConstraintLayout>
```









