THE STATE UNIVERSITY OF ZANZIBAR

(SUZA)

THE STATE UNIVERSITY OF ZANZIBAR

SCHOOL OF BUSINESS

SOB SUZA

STUDENT NAME: NAZRA KASSIM RAMADHAN

STUDENT REG NO: BITA/5/21/052/TZ

LECTURE NAME: Mr. MASSOUD HAMAD MMANGA

ASSIGNMENT: CALCULATOR

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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">

    <TextView

        android:id="@+id/solution_tv"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_above="@id/result_tv"
        android:layout_margin="16dp"
        android:text="0"
        android:textAlignment="textEnd"
        android:textColor="@color/black"
        android:textSize="50dp" />

    <TextView

        android:id="@+id/result_tv"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_above="@id/buttons_layout"
        android:layout_margin="16dp"
        android:text="0"
        android:textAlignment="textEnd"
        android:textColor="@color/black"
        android:textSize="64dp" />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:layout_alignParentBottom="true"
        android:background="#F1F1F1"
        android:paddingVertical="16dp"
        android:id="@+id/buttons_layout">


        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center"
            android:orientation="horizontal">

            <com.google.android.material.button.MaterialButton
                android:layout_width="72dp"
                android:layout_height="72dp"
                app:cornerRadius="36dp"
                style="@style/Widget.MaterialComponents.FloatingActionButton"
                android:textSize="32dp"
                android:textColor="@color/white"
                android:layout_margin="12dp"
                android:id="@+id/button_7"
```

```xml
            android:text="7" />

        <com.google.android.material.button.MaterialButton
            android:id="@+id/button_8"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:layout_width="72dp"
            android:layout_height="72dp"
            android:layout_margin="12dp"
            android:layout_marginStart="12dp"
            android:layout_marginTop="12dp"
            android:layout_marginEnd="12dp"
            android:layout_marginBottom="12dp"
            android:text="8"
            android:textColor="@color/white"
            android:textSize="32dp"
            app:cornerRadius="36dp" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_9"
            android:text="9" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_divide"
            android:text="/" />


    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:orientation="horizontal">

        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_4"
            android:text="4" />
        <com.google.android.material.button.MaterialButton
```

```xml
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_5"
            android:text="5" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_6"
            android:text="6" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_multiply"
            android:text="x" />

    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:orientation="horizontal">

        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_1"
            android:text="1" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_2"
            android:text="2" />
```

```xml
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_3"
            android:text="3" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_minus"
            android:text="-" />

    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:orientation="horizontal">

        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_0"
            android:text="0" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_c"
            android:text="C" />
        <com.google.android.material.button.MaterialButton
            android:layout_width="72dp"
            android:layout_height="72dp"
            app:cornerRadius="36dp"
            style="@style/Widget.MaterialComponents.FloatingActionButton"
            android:textSize="32dp"
            android:textColor="@color/white"
            android:layout_margin="12dp"
            android:id="@+id/button_equal"
```

```xml
                    android:text="=" />
                <com.google.android.material.button.MaterialButton
                    android:layout_width="72dp"
                    android:layout_height="72dp"
                    app:cornerRadius="36dp"
                    style="@style/Widget.MaterialComponents.FloatingActionButton"
                    android:textSize="32dp"
                    android:textColor="@color/white"
                    android:layout_margin="12dp"
                    android:id="@+id/button_plus"
                    android:text="+" />

        </LinearLayout>


    </LinearLayout>

</RelativeLayout>
```

```java
package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.TextView;

import com.google.android.material.button.MaterialButton;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener{

    TextView resultTv,solutionTv;
    MaterialButton
buttonDivide,buttonMultiply,buttonPlus,buttonMinus,buttonEqual;
    MaterialButton buttonC;
    MaterialButton
button0,button1,button2,button3,button4,button5,button6,button7,button8,butto
n9;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        resultTv = findViewById(R.id.result_tv);
        solutionTv = findViewById(R.id.solution_tv);
        assignId(buttonDivide,R.id.button_divide);
        assignId(buttonMultiply,R.id.button_multiply);
        assignId(buttonPlus,R.id.button_plus);
        assignId(buttonMinus,R.id.button_minus);
        assignId(buttonEqual,R.id.button_equal);
        assignId(buttonC,R.id.button_c);
        assignId(button0,R.id.button_0);
        assignId(button1,R.id.button_1);
        assignId(button2,R.id.button_2);
```

```java
        assignId(button3,R.id.button_3);
        assignId(button4,R.id.button_4);
        assignId(button5,R.id.button_5);
        assignId(button6,R.id.button_6);
        assignId(button7,R.id.button_7);
        assignId(button8,R.id.button_8);
        assignId(button9,R.id.button_9);
    }
    void  assignId(MaterialButton btn,int id){
        btn = findViewById(id);
        btn.setOnClickListener(this);
    }

    @Override
    public void onClick(View view) {
        MaterialButton button = (MaterialButton) view;
        String buttonText = button.getText().toString();
        solutionTv.setText(buttonText);

    }
}
```