STATE UNIVERSITY OF ZANZIBAR

SCHOOL OF BUSINESS

MOBILE APPLICATION DEVELOPMENT

(ANDROID)

ASSIGNMENT 2

BY:

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```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
    android:background="#f2f2f2"
    android:weightSum="5"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/screen"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:gravity="center|right"
        android:textColor="#00BCD4"
        android:textStyle="bold"
        android:textSize="30sp"
        android:background="#cccccc"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="25dp"
        android:layout_marginHorizontal="10dp"
        android:padding="10dp"/>

    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:weightSum="4">

        <Button
            android:id="@+id/seven"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="7"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
            android:onClick="ButtonClick">
        </Button>
        <Button
            android:id="@+id/eight"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="8"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
```

```xml
            android:onClick="ButtonClick">
        </Button>
        <Button
            android:id="@+id/nine"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="9"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
            android:onClick="ButtonClick">
        </Button>
        <Button
            android:id="@+id/div"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="/"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
            android:onClick="ButtonClick">
        </Button>
    </LinearLayout>

    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:weightSum="4">

        <Button
            android:id="@+id/four"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="4"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
            android:onClick="ButtonClick">
        </Button>
        <Button
            android:id="@+id/five"
            android:layout_width="0dp"
            android:layout_weight="1"
            android:layout_height="fill_parent"
            android:text="5"
            android:layout_margin="5dp"
            android:textSize="30sp"
            android:textStyle="bold"
            android:onClick="ButtonClick">
        </Button>
        <Button
```

```xml
        android:id="@+id/six"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="6"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/multiply"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="*"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
</LinearLayout>

<LinearLayout
    android:layout_width="fill_parent"
    android:layout_height="0dp"
    android:layout_weight="1"
    android:weightSum="4">

    <Button
        android:id="@+id/one"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="1"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/two"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="2"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/three"
        android:layout_width="0dp"
        android:layout_weight="1"
```

```xml
        android:layout_height="fill_parent"
        android:text="3"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/minus"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="-"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
</LinearLayout>
<LinearLayout
    android:layout_width="fill_parent"
    android:layout_height="0dp"
    android:layout_weight="1"
    android:weightSum="4">

    <Button
        android:id="@+id/zero"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="0"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/C"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="C"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">

    </Button>
    <Button
        android:id="@+id/equal"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="="
        android:layout_margin="5dp"
```

```xml
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    <Button
        android:id="@+id/plus"
        android:layout_width="0dp"
        android:layout_weight="1"
        android:layout_height="fill_parent"
        android:text="+"
        android:layout_margin="5dp"
        android:textSize="30sp"
        android:textStyle="bold"
        android:onClick="ButtonClick">
    </Button>
    </LinearLayout>
</LinearLayout>
```

MainActivity.java

```java
package com.example.newcalc;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    private TextView Screen;
    private Button seven, eight, nine, four, five, six, three, two, one, zero, C,
div, multiply, add, minus, equal;
    private String input, answer;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Screen = findViewById(R.id.screen);
        C = findViewById(R.id.C);
        div = findViewById(R.id.div);
        multiply = findViewById(R.id.multiply);
        minus = findViewById(R.id.minus);
        add = findViewById(R.id.add);
        nine = findViewById(R.id.nine);
        eight = findViewById(R.id.eight);
        seven = findViewById(R.id.seven);
        six = findViewById(R.id.six);
        five = findViewById(R.id.five);
        four = findViewById(R.id.four);
        three = findViewById(R.id.three);
        two = findViewById(R.id.two);
```

```java
        one = findViewById(R.id.one);
        zero = findViewById(R.id.zero);
        equal = findViewById(R.id.equal);

    }

    public void ButtonClick(View view) {
        Button button = (Button) view;
        String data = button.getText().toString();
        switch (data) {
            case "C":
                input = "";
                break;
            case "x":
                Solve();
                input += "x";
                break;
            case "/":
                Solve();
                input += "/";
                break;
            case "=":
                Solve();
                answer = input;
                break;
            case "<--":
                String newText = input.substring(0, input.length() - 1);
                input = newText;
                break;
            default:
                if (input == null) {
                    input = "";
                }
                if (data.equals("+") || data.equals("-") || data.equals("/")) {
                    Solve();
                }
                input += data;
        }
        Screen.setText(input);
    }
    private  void Solve(){
        if (input.split("\\*").length == 2) {
            String number[] = input.split("\\*");
            try {
                double multiply = Double.parseDouble(number[0]) *
Double.parseDouble(number[1]);
                input = multiply+"";
            }
            catch (Exception e) {
            }
        } else if (input.split("\\/").length == 2) {
            String number[] = input.split("\\/");
            try {
                double div = Double.parseDouble(number[0]) /
Double.parseDouble(number[1]);
```

```java
                input = div+"";
            } catch (Exception e) {

            }
        } else if (input.split("\\+").length == 2) {
            String number[] = input.split("\\+");
            try {
                double add = (Double.parseDouble(number[0]) +
Double.parseDouble(number[1]));
                input = add+"";
            } catch (Exception e) {
            }
        } else if (input.split("\\-").length>1) {
            String number[] = input.split("\\-");
            if (number[0]=="" && number.length==2) {
                number[0] = 0+"";
            }
            try {
                double minus =0;
                if(number.length==2){
                    minus = Double.parseDouble(number[0]) -
Double.parseDouble(number[1]);
                }
                else if(number.length==3){
                    minus= -Double.parseDouble(number[1]) -
Double.parseDouble(number[2]);
                }
                input =minus+"";
            }
            catch (Exception e) {
            }
        }
        String n[]=input.split("\\.");
        if(n.length>1){
            if(n[1].equals("0")){
                input=n[0];
            }
        }
        Screen.setText(input);
    }
}
```

Screenshots