



STATE UNIVERSITY OF ZANZIBAR
SCHOOL OF BUSINESS

MOBILE APPLICATION DEVELOPMENT
(ANDROID)

ASSIGNMENT 2

BY:

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Activity_main.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"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="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"
        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
        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"
    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"
        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

```

package com.example.landscape;

import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity;
import android.os.Bundle;
import android.util.Log;

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

public class MainActivity extends Activity {
    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);
        Log.d("lifecycle", "onCreate invoked");
        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);
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]);
        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);
}

@Override
protected void onStart() {
    super.onStart();
    Log.d("lifecycle", "onStart invoked");
}

```



```

@Override
protected void onResume() {
    super.onResume();
    Log.d("lifecycle", "onResume invoked");
}

@Override
protected void onPause() {
    super.onPause();
    Log.d("lifecycle", "onPause invoked");
}

@Override
protected void onStop() {
    super.onStop();
    Log.d("lifecycle", "onStop invoked");
}

@Override
protected void onRestart() {
    super.onRestart();
    Log.d("lifecycle", "onRestart invoked");
}

@Override
protected void onDestroy() {
    super.onDestroy();
    Log.d("lifecycle", "onDestroy invoked");
}
}

```

Screenshots

