

## Hybrid Application Development Lab Assignment - 2

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Subject : Hybrid Application Development Lab

### 2. Make a calculator app.

Code:

**MainActivity.java :**

```
package com.example.my_application;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    boolean isNewOp = true;
    EditText ed1;
    String op, oldNumber;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ed1 = findViewById(R.id.editText);
    }

    public void numberEvent(View view){
        if(isNewOp)
            ed1.setText("");
        isNewOp = false;
        String number = ed1.getText().toString();
        switch(view.getId()){
            case R.id.but_1:
                number += "1";
                break;
            case R.id.but_2:
                number += "2";
                break;
            case R.id.but_3:
```

```

        number += "3";
        break;
    case R.id.but_4:
        number += "4";
        break;
    case R.id.but_5:
        number += "5";
        break;
    case R.id.but_6:
        number += "6";
        break;
    case R.id.but_7:
        number += "7";
        break;
    case R.id.but_8:
        number += "8";
        break;
    case R.id.but_9:
        number += "9";
        break;
    case R.id.but_0:
        number += "0";
        break;
    case R.id.but_dot:
        number += ".";
        break;
    case R.id.but_plus_minus:
        number += "-" + number;
        break;
    }

    ed1.setText(number);
}

public void operatorEvent(View view) {
    isNewOp = true;
    oldNumber = ed1.getText().toString();

    switch(view.getId())
    {
        case R.id.but_divide: op = "/"; break;
        case R.id.but_star: op = "*"; break;
        case R.id.but_plus: op = "+"; break;
        case R.id.but_minus: op = "-"; break;
    }
}

public void equalEvent(View view) {

```

```

String newNumber = ed1.getText().toString();
double result = 0.0;
switch(op) {
    case "+":
        result = Double.parseDouble(oldNumber) +
Double.parseDouble(newNumber);
        break;
    case "-":
        result = Double.parseDouble(oldNumber) -
Double.parseDouble(newNumber);
        break;
    case "*":
        result = Double.parseDouble(oldNumber) *
Double.parseDouble(newNumber);
        break;
    case "/":
        result = Double.parseDouble(oldNumber) /
Double.parseDouble(newNumber);
        break;

}

ed1.setText(result+"");
}

public void acEvent(View view){
    ed1.setText("0");
    isNewOp = true;
}

public void percentEvent(View view){
    double no = Double.parseDouble(ed1.getText().toString())/100;
    ed1.setText(no+"");
    isNewOp = true;
}
}

```

## 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="wrap_content"
    android:orientation="vertical"

    tools:context=".MainActivity" >

    <EditText
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="213dp"
        android:background="@color/cardview_dark_background"
        android:ems="10"
        android:gravity="right|center"
        android:inputType="textPersonName"
        android:text="0"
        android:textSize="40pt" />

    <TableLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="match_parent">

            <Button
                android:id="@+id/but_ac"
                android:layout_width="30pt"
                android:layout_height="30pt"
                android:layout_marginTop="1pt"
                android:layout_marginRight="1pt"
                android:layout_weight="1"
                android:onClick="acEvent"
                android:text="AC" />

            <Button
                android:id="@+id/but_plus_minus"
                android:layout_width="30pt"
                android:layout_height="30pt"
                android:layout_marginTop="1pt"
                android:layout_marginRight="1pt"
                android:layout_weight="1"
                android:onClick="numberEvent"
```

```
        android:text="+/-" />
```

```
<Button
    android:id="@+id/but_slash"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="percentEvent"
    android:text="%" />
```

```
<Button
    android:id="@+id/but_dot"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="numberEvent"
    android:text="." />
```

```
</TableRow>
```

```
<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
```

```
<Button
    android:id="@+id/but_7"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="numberEvent"
    android:text="7" />
```

```
<Button
    android:id="@+id/but_8"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="numberEvent"
    android:text="8" />
```

```
<Button
```

```
        android:id="@+id/but_9"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="numberEvent"
        android:text="9" />
```

```
<Button
    android:id="@+id/but_divide"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="operatorEvent"
    android:text="/" />
```

```
</TableRow>
```

```
<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<Button
    android:id="@+id/but_4"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="numberEvent"
    android:text="4" />
```

```
<Button
    android:id="@+id/but_5"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="numberEvent"
    android:text="5" />
```

```
<Button
    android:id="@+id/but_6"
    android:layout_width="30pt"
    android:layout_height="30pt"
```

```

        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="numberEvent"
        android:text="6" />

<Button
    android:id="@+id/but_plus"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="operatorEvent"
    android:text="+" />
</TableRow>

<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >

    <Button
        android:id="@+id/but_1"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="numberEvent"
        android:text="1" />

    <Button
        android:id="@+id/but_2"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="numberEvent"
        android:text="2" />

    <Button
        android:id="@+id/but_3"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="numberEvent"

```

```

        android:text="3" />

<Button
    android:id="@+id/but_minus"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginTop="1pt"
    android:layout_marginRight="1pt"
    android:layout_weight="1"
    android:onClick="operatorEvent"
    android:text="-" />
</TableRow>
<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <Button
        android:id="@+id/but_0"
        android:layout_width="45pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="2"
        android:onClick="numberEvent"
        android:text="0" />

    <Button
        android:id="@+id/but_equals"
        android:layout_width="45pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="2"
        android:onClick="equalEvent"
        android:text="=" />

    <Button
        android:id="@+id/but_star"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginTop="1pt"
        android:layout_marginRight="1pt"
        android:layout_weight="1"
        android:onClick="operatorEvent"
        android:text="*" />

</TableRow>
</TableLayout>
</LinearLayout>

```



**Output:**

