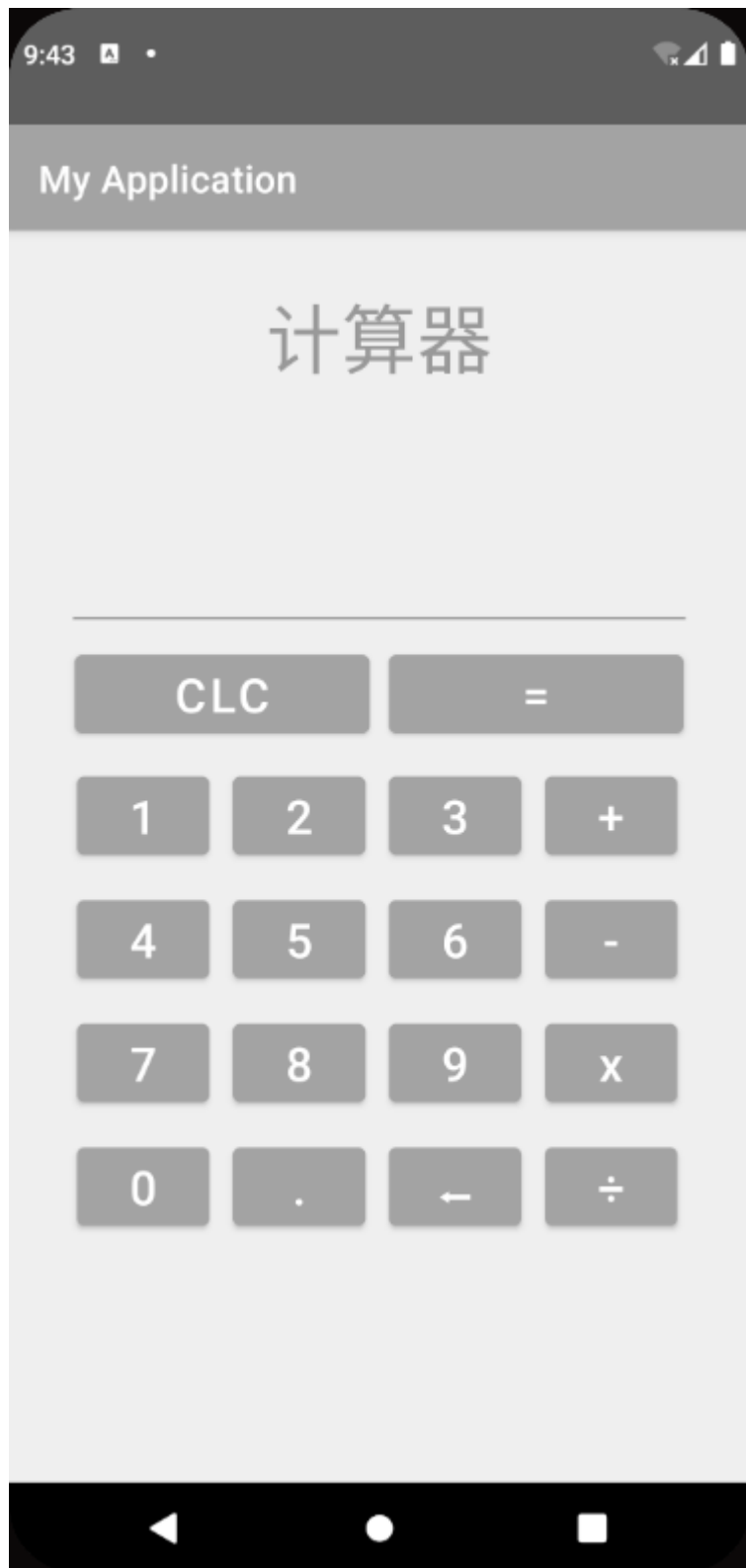


## 美化界面如下：

- 修改符号使其符合用户直觉，如“ = ”、“ CLC”
- 更改配色
- 更改排版布局，使其放松不拥挤



## BUG解决

常规计算器点按加减乘除会互相切换，但这份代码没有实现这个功能，当按下某一个算法符号后，不能切换其他的算法符号。

例如我想要计算“1 + 1”的结果，但是误触到“-”后，不能直接点按“+”更改算法符号，需要全部清除后重新输入。

通过在加减乘除的监听事件中修改如下代码实现直接切换的功能，以加法为例：

```
case R.id.jian: {
    if (ss.length() == 0) {
        edit.setText("0 - ");
        ss = "0 - ";
        break;
    }
    if (ss.contains("+") || ss.contains("-") || ss.contains("x") || ss.contains(
        ss = ss.substring(0, ss.length() - 3);
        ss += " - ";
        edit.setText(ss);
        break;
    }
}
```

具体演示见视频。

## 源码

below is "MainActivity.java"

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    Button btn1, btn2, btn3, btn4, btn5, btn6, btn7, btn8, btn9, btn0; // 数字按钮
    Button jia, jian, cheng, chu, dian, sum, clear, back; // +号
    EditText edit; // 显示文本

    private String ss = ""; // 设置一个String类型的变量
    private String ss1 = "1 + ";
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    // 获取页面上的控件
    btn1 = findViewById(R.id.btn1);
    btn2 = findViewById(R.id.btn2);
    btn3 = findViewById(R.id.btn3);
    btn4 = findViewById(R.id.btn4);
    btn5 = findViewById(R.id.btn5);
    btn6 = findViewById(R.id.btn6);
    btn7 = findViewById(R.id.btn7);
    btn8 = findViewById(R.id.btn8);
    btn9 = findViewById(R.id.btn9);
    btn0 = findViewById(R.id.btn0);
    jia = findViewById(R.id.jia);
    jian = findViewById(R.id.jian);
    cheng = findViewById(R.id.cheng);
    chu = findViewById(R.id.chu);
    sum = findViewById(R.id.calculation);
    dian = findViewById(R.id.dian);
    clear = findViewById(R.id.clear);
    edit = findViewById(R.id.edit);
    back = findViewById(R.id.back);

    // 按钮的单击事件
    btn1.setOnClickListener(new Click());
    btn2.setOnClickListener(new Click());
    btn3.setOnClickListener(new Click());
    btn4.setOnClickListener(new Click());
    btn5.setOnClickListener(new Click());
    btn6.setOnClickListener(new Click());
    btn7.setOnClickListener(new Click());
    btn8.setOnClickListener(new Click());
    btn9.setOnClickListener(new Click());
    btn0.setOnClickListener(new Click());
    jia.setOnClickListener(new Click());
    jian.setOnClickListener(new Click());
    cheng.setOnClickListener(new Click());
    chu.setOnClickListener(new Click());
    sum.setOnClickListener(new Click());
    dian.setOnClickListener(new Click());
    clear.setOnClickListener(new Click());
    edit.setOnClickListener(new Click());
    back.setOnClickListener(new Click());
}

// 设置按钮点击后的监听
class Click implements View.OnClickListener {
    public void onClick(View v) {
        switch (v.getId()) {
            case R.id.clear: {
                //switch循环获取点击按钮后的值
            }
        }
    }
}
```

```
        ss = "";
        edit.setText(ss); //在edittext里面显示字符串ss
    }
    break;

    case R.id.btn0: {
        ss += "0";
        edit.setText(ss);
    }
    break;
    case R.id.btn1: {
        ss += "1"; // ss=ss+1
        edit.setText(ss);
    }
    break;
    case R.id.btn2: {
        ss += "2";
        edit.setText(ss);
    }
    break;

    case R.id.btn3: {
        ss += "3";
        edit.setText(ss);
    }
    break;
    case R.id.btn4: {
        ss += "4";
        edit.setText(ss);
    }
    break;
    case R.id.btn5: {
        ss += "5";
        edit.setText(ss);
    }
    break;

    case R.id.btn6: {
        ss += "6";
        edit.setText(ss);
    }
    break;
    case R.id.btn7: {
        ss += "7";
        edit.setText(ss);
    }
    break;
    case R.id.btn8: {
        ss += "8";
        edit.setText(ss);
    }
    break;
    case R.id.btn9: {
```

```
        ss += "9";
        edit.setText(ss);
    }
    break;
    case R.id.dian: {
        if (ss.length() == 0) {
            break;
        } else {
            ss += ".";
            edit.setText(ss);
        }
    }
    break;
    case R.id.jia: {
        if (ss.length() == 0) {
            edit.setText("0 + ");
            ss = "0 + ";
            break;
        }
        if (ss.contains("+") || ss.contains("-") || ss.contains("x") || ss.contains(
            ss = ss.substring(0, ss.length() - 3);
            ss += " + ";
            edit.setText(ss);
            break;
        )
        ss += " + ";
        edit.setText(ss);
    }
    break;
    case R.id.jian: {
        if (ss.length() == 0) {
            edit.setText("0 - ");
            ss = "0 - ";
            break;
        }
        if (ss.contains("+") || ss.contains("-") || ss.contains("x") || ss.contains(
            ss = ss.substring(0, ss.length() - 3);
            ss += " - ";
            edit.setText(ss);
            break;
        )
        ss += " - ";
        edit.setText(ss);
    }
    break;
    case R.id.cheng: {
        if (ss.length() == 0) {
            edit.setText("0 x ");
            ss = "0 x ";
            break;
        }
    }
```

```

        if (ss.contains("+") || ss.contains("-") || ss.contains("x") || ss.contains(
            ss = ss.substring(0,ss.length()-3);
            ss += " x ";
            edit.setText(ss);
            break;
        }

        ss += " x ";
        edit.setText(ss);
    }
    break;
    case R.id.chu: {
        if (ss.length() == 0) {
            edit.setText("0 / ");
            ss = "0 / ";
            break;
        }
        if (ss.contains("+") || ss.contains("-") || ss.contains("x") || ss.contains(
            ss = ss.substring(0,ss.length()-3);
            ss += " / ";
            edit.setText(ss);
            break;
        }

        ss += " / ";
        edit.setText(ss);
    }
    break;
    case R.id.calculation:

        getResult();

        break;
    case R.id.back: {
        if (ss.contains(" ")){
            if (ss.indexOf(" ") == ss.length() - 3) {
                ss = ss.substring(0, ss.length() - 3);
                edit.setText(ss);
                break;
            }
        }

        ss = ss.substring(0, ss.length() - 1);
        edit.setText(ss);
        break;
    }
}
}
}

private void getResult() {
    double result = 0;
    if (ss == null || ss.equals("")) return;

```

}
}

```
<?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:padding="30dp"
    android:background="#efefef">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="计算器"
        android:textSize="40sp"
        android:textColor="#999999"
        android:layout_marginBottom="30dp"
        android:gravity="center"/>
    <EditText
        android:id="@+id/edit"
        android:textSize="40dp"
        android:layout_width="match_parent"
        android:layout_height="100dp"
        android:gravity="end|bottom"
    />

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <Button
            android:id="@+id/clear"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="c1c"
            android:textSize="25dp"/>

        <Button
            android:id="@+id/calculation"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="5dp"
            android:layout_weight="1"
            android:text="="
            android:textSize="25dp" />
    </LinearLayout>

    <GridLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```



```
    android:rowCount="4"
    android:columnCount="4"
  >
```

```
    <Button
    android:id="@+id/btn1"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_margin="6dp"
    android:text="1"
    android:textSize="25sp"/>
```

```
    <Button
    android:id="@+id/btn2"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_margin="6dp"
    android:text="2"
    android:textSize="25sp"/>
```

```
    <Button
    android:id="@+id/btn3"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_margin="6dp"
    android:text="3"
    android:textSize="25sp"/>
```

```
    <Button
    android:id="@+id/jia"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_row="0"
    android:layout_margin="6dp"
    android:text="+"
    android:textSize="25sp" />
```

```
    <Button
    android:id="@+id/btn4"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_margin="6dp"
    android:text="4"
    android:textSize="25sp"/>
```

```
    <Button
    android:id="@+id/btn5"
    android:layout_width="70dp"
    android:layout_height="wrap_content"
    android:layout_margin="6dp"
    android:text="5"
    android:textSize="25sp"/>
```

```
    <Button
    android:id="@+id/btn6"
    android:layout_width="70dp"
```

```
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="6"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/jian"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="-"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/btn7"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="7"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/btn8"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="8"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/btn9"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="9"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/cheng"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="x"
        android:textAllCaps="false"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/btn0"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="0"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/dian"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="."
```

```

        android:textSize="25sp"/>
        <Button
        android:id="@+id/back"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="←"
        android:textSize="25sp"/>
        <Button
        android:id="@+id/chu"
        android:layout_width="70dp"
        android:layout_height="wrap_content"
        android:layout_margin="6dp"
        android:text="÷"
        android:textSize="25sp"/>
    </GridLayout>
</LinearLayout>

```

## below is "theme.xml"

```

<resources xmlns:tools="http://schemas.android.com/tools">
    <!-- Base application theme. -->
    <style name="Theme.MyApplication" parent="Theme.MaterialComponents.DayNight.DarkActionBar"
        <!-- Primary brand color. -->
        <item name="colorPrimary">@color/grey</item>
        <item name="colorPrimaryVariant">@color/darkGrey</item>
        <item name="colorOnPrimary">@color/white</item>
        <!-- Secondary brand color. -->
        <item name="colorSecondary">@color/teal_200</item>
        <item name="colorSecondaryVariant">@color/teal_700</item>
        <item name="colorOnSecondary">@color/black</item>
        <!-- Status bar color. -->
        <item name="android:statusBarColor" tools:targetApi="1">?attr/colorPrimaryVariant</ite
        <!-- Customize your theme here. -->
    </style>
</resources>

```

## below is "color.xml"

```

<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_500">#FF6200EE</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="teal_200">#9cc679</color>
    <color name="teal_700">#79a852</color>
    <color name="black">#FF000000</color>
    <color name="white">#FFFFFFFF</color>
    <color name="grey">#a3a3a3</color>

```

```
<color name="darkGrey">#5e5e5e</color>
```

```
</resources>
```