

3. MyCalculator

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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">

    <Button
        android:id="@+id/btn0"
        android:layout_width="75dp"
        android:layout_height="50dp"
        android:layout_marginTop="15dp"
        android:text="0"
        android:textSize="24sp"
        app:layout_constraintEnd_toStartOf="@+id/btnEqual"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toEndOf="@+id/btnDot"
        app:layout_constraintTop_toBottomOf="@+id/btn8" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="300dp"
        android:layout_height="50dp"
        android:layout_marginStart="36dp"
        android:layout_marginTop="38dp"
        android:layout_marginEnd="36dp"
        android:text="Calculate"
        android:textSize="35dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/editText"
        android:layout_width="339dp"
        android:layout_height="59dp"
        android:layout_marginStart="36dp"
        android:layout_marginTop="24dp"
        android:layout_marginEnd="36dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:textAlignment="textEnd"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

    <Button
        android:id="@+id/btn1"
        android:layout_width="75dp"
        android:layout_height="50dp"
        android:layout_marginTop="94dp"
        android:text="1"
        android:textSize="24sp"
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        app:layout_constraintEnd_toStartOf="@+id/btn2"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editText" />

<Button
    android:id="@+id/btn2"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="94dp"
    android:text="2"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btn3"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn1"
    app:layout_constraintTop_toBottomOf="@+id/editText" />

<Button
    android:id="@+id/btn3"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="94dp"
    android:text="3"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btnAdd"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn2"
    app:layout_constraintTop_toBottomOf="@+id/editText" />

<Button
    android:id="@+id/btnAdd"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:layout_marginTop="94dp"
    android:text="+"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn3"
    app:layout_constraintTop_toBottomOf="@+id/editText" />

<Button
    android:id="@+id/btn4"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="4"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btn5"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btn1" />

<Button
    android:id="@+id/btn5"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="5"

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        android:textSize="24sp"
        app:layout_constraintEnd_toStartOf="@+id/btn6"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toEndOf="@+id/btn4"
        app:layout_constraintTop_toBottomOf="@+id/btn2" />

<Button
    android:id="@+id/btn6"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="6"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btnSub"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn5"
    app:layout_constraintTop_toBottomOf="@+id/btn3" />

<Button
    android:id="@+id/btnSub"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="-"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn6"
    app:layout_constraintTop_toBottomOf="@+id/btnAdd" />

<Button
    android:id="@+id/btn7"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="7"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btn8"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btn4" />

<Button
    android:id="@+id/btn8"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="8"
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btn9"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn7"
    app:layout_constraintTop_toBottomOf="@+id/btn5" />

<Button
    android:id="@+id/btn9"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"

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        android:text="9"
        android:textSize="24sp"
        app:layout_constraintEnd_toStartOf="@+id/btnMul"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toEndOf="@+id/btn8"
        app:layout_constraintTop_toBottomOf="@+id/btn6" />

<Button
    android:id="@+id/btnMul"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="*"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn9"
    app:layout_constraintTop_toBottomOf="@+id/btnSub" />

<Button
    android:id="@+id/btnDot"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="."
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btn0"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/btn7" />

<Button
    android:id="@+id/btnEqual"
    android:layout_width="75dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="="
    android:textSize="24sp"
    app:layout_constraintEnd_toStartOf="@+id/btnDiv"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btn0"
    app:layout_constraintTop_toBottomOf="@+id/btn9" />

<Button
    android:id="@+id/btnDiv"
    android:layout_width="100dp"
    android:layout_height="50dp"
    android:layout_marginTop="15dp"
    android:text="/"
    android:textSize="24sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/btnEqual"
    app:layout_constraintTop_toBottomOf="@+id/btnMul" />

<Button
    android:id="@+id/btnClear"
    android:layout_width="100dp"
    android:layout_height="50dp"

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        android:layout_marginTop="15dp"
        android:text="C"
        android:textSize="24sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/btnEqual" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java

```

package com.example.mycalculator;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity
{
    Button
    btn1,btn2,btn3,btn4,btn5,btn6,btn7,btn8,btn9,btn0,btnAdd,btnSub,btnMul,btnDiv,btnE
qual,btnDot;
    Button btnClear;
    EditText ed1;
    float Res1,Res2;
    boolean Add,Sub,Mul,Div;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btn1=(Button)findViewById(R.id.btn1);
        btn2=(Button)findViewById(R.id.btn2);
        btn3=(Button)findViewById(R.id.btn3);
        btn4=(Button)findViewById(R.id.btn4);
        btn5=(Button)findViewById(R.id.btn5);
        btn6=(Button)findViewById(R.id.btn6);
        btn7=(Button)findViewById(R.id.btn7);
        btn8=(Button)findViewById(R.id.btn8);
        btn9=(Button)findViewById(R.id.btn9);
        btn0=(Button)findViewById(R.id.btn0);
        btnAdd=(Button)findViewById(R.id.btnAdd);
        btnSub=(Button)findViewById(R.id.btnSub);
        btnMul=(Button)findViewById(R.id.btnMul);
        btnDiv=(Button)findViewById(R.id.btnDiv);
        btnEqual=(Button)findViewById(R.id.btnEqual);
        btnDot=(Button)findViewById(R.id.btnDot);
        btnClear=(Button)findViewById(R.id.btnClear);
        ed1=(EditText)findViewById(R.id.editText);

        btn1.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {

```

```

        ed1.setText(ed1.getText()+"1");
    }
});
btn2.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"2");
    }
});
btn3.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"3");
    }
});
btn4.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"4");
    }
});
btn5.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"5");
    }
});
btn6.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"6");
    }
});
btn7.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"7");
    }
});
btn8.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"8");
    }
});

```

```

btn9.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"9");
    }
});
btn0.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+"0");
    }
});
btnDot.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        ed1.setText(ed1.getText()+".");
    }
});
btnAdd.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        if(ed1==null)
        {
            ed1.setText("");
        }
        else
        {
            Res1=Float.parseFloat(ed1.getText()+"");
            Add=true;
            ed1.setText(null);
        }
    }
});
btnSub.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        if(ed1==null)
        {
            ed1.setText("");
        }
        else
        {
            Res1=Float.parseFloat(ed1.getText()+"");
            Sub=true;
            ed1.setText(null);
        }
    }
});
btnMul.setOnClickListener(new View.OnClickListener()

```

```

{
    @Override
    public void onClick(View v)
    {
        if(ed1==null)
        {
            ed1.setText("");
        }
        else
        {
            Res1=Float.parseFloat(ed1.getText()+"");
            Mul=true;
            ed1.setText(null);
        }
    }
});
btnDiv.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        if(ed1==null)
        {
            ed1.setText("");
        }
        else
        {
            Res1=Float.parseFloat(ed1.getText()+"");
            Div=true;
            ed1.setText(null);
        }
    }
});
btnEqual.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        Res2=Float.parseFloat(ed1.getText()+"");
        if(Add==true)
        {
            ed1.setText(Res1+Res2+"");
            Add=false;
        }
        if(Sub==true)
        {
            ed1.setText(Res1-Res2+"");
            Sub=false;
        }
        if(Mul==true)
        {
            ed1.setText(Res1*Res2+"");
            Mul=false;
        }
        if(Div==true)
        {
            ed1.setText(Res1/Res2+"");
            Div=false;
        }
    }
});

```



```

    }
    });
    btnClear.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View v)
        {
            ed1.setText("");
        }
    });
}
}

```

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.mycalculator">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>

```

