

Constraint Layout:

<https://github.com/MinhHoang137/AndroidCalculatorConstraintLayout/>



File 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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#FDFDFD"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/screenText"
        android:layout_width="0dp"
        android:layout_height="250dp"
        android:background="@color/white"
        android:backgroundTint="#DFDFDF"
        android:gravity="right|center_vertical"
        android:text="0"
        android:textColor="@color/black"
        android:textSize="100sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/ceButton"
        android:layout_width="0dp"
        android:layout_height="0dp"
```

```
    android:layout_margin="3dp"
    android:backgroundTint="#DCDCDC"
    android:text="CE"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button7"
    app:layout_constraintEnd_toStartOf="@+id/cButton"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/screenText" />
```

<Button

```
    android:id="@+id/equalButton"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#DCDCDC"
    android:text=""
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/dotButton"
    app:layout_constraintTop_toBottomOf="@+id/plusButton" />
```

<Button

```
    android:id="@+id/dotButton"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:layout_marginTop="3dp"
```

```
    android:backgroundTint="#DCDCDC"
    android:text="."
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/equalButton"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/button0"
    app:layout_constraintTop_toBottomOf="@+id/button3" />
```

<Button

```
    android:id="@+id/signButton"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:layout_marginStart="12dp"
    android:backgroundTint="#DCDCDC"
    android:text="+/-"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/button0"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button1" />
```

<Button

```
    android:id="@+id/plusButton"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#DCDCDC"
```

```
    android:text="+"  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toTopOf="@+id/equalButton"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.5"  
    app:layout_constraintStart_toEndOf="@+id/button3"  
    app:layout_constraintTop_toBottomOf="@+id/minusButton" />
```

<Button

```
    android:id="@+id/minusButton"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#DCDCDC"  
    android:text="- "  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toTopOf="@+id/plusButton"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.5"  
    app:layout_constraintStart_toEndOf="@+id/button6"  
    app:layout_constraintTop_toBottomOf="@+id/productButton" />
```

<Button

```
    android:id="@+id/productButton"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#DCDCDC"  
    android:text="x"  
    android:textColor="@color/black"
```

```
        android:textSize="30sp"
        app:layout_constraintBottom_toTopOf="@+id/minusButton"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toEndOf="@+id/button9"
        app:layout_constraintTop_toBottomOf="@+id/divideButton" />
```

<Button

```
        android:id="@+id/divideButton"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:layout_margin="3dp"
        android:backgroundTint="#DCDCDC"
        android:text="/"
        android:textColor="@color/black"
        android:textSize="30sp"
        app:layout_constraintBottom_toTopOf="@+id/productButton"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toEndOf="@+id/bsButton"
        app:layout_constraintTop_toBottomOf="@+id/screenText" />
```

<Button

```
        android:id="@+id/bsButton"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:layout_margin="3dp"
        android:backgroundTint="#DCDCDC"
        android:text="BS"
        android:textColor="@color/black"
        android:textSize="30sp"
        app:layout_constraintBottom_toTopOf="@+id/button9"
```

```
app:layout_constraintEnd_toStartOf="@+id/divideButton"  
app:layout_constraintHorizontal_bias="0.5"  
app:layout_constraintStart_toEndOf="@+id/cButton"  
app:layout_constraintTop_toBottomOf="@+id/screenText" />
```

```
<Button
```

```
    android:id="@+id/cButton"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#DCDCDC"  
    android:text="C"  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toTopOf="@+id/button8"  
    app:layout_constraintEnd_toStartOf="@+id/bsButton"  
    app:layout_constraintHorizontal_bias="0.5"  
    app:layout_constraintStart_toEndOf="@+id/ceButton"  
    app:layout_constraintTop_toBottomOf="@+id/screenText" />
```

```
<Button
```

```
    android:id="@+id/button0"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#EDEDED"  
    android:text="0"  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toStartOf="@+id/dotButton"  
    app:layout_constraintHorizontal_bias="0.5"
```

```
app:layout_constraintStart_toEndOf="@+id/signButton"  
app:layout_constraintTop_toBottomOf="@+id/button2" />
```

```
<Button
```

```
    android:id="@+id/button3"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#EDED" "  
    android:text="3"  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toTopOf="@+id/dotButton"  
    app:layout_constraintEnd_toStartOf="@+id/plusButton"  
    app:layout_constraintHorizontal_bias="0.5"  
    app:layout_constraintStart_toEndOf="@+id/button2"  
    app:layout_constraintTop_toBottomOf="@+id/button6" />
```

```
<Button
```

```
    android:id="@+id/button2"  
    android:layout_width="0dp"  
    android:layout_height="0dp"  
    android:layout_margin="3dp"  
    android:backgroundTint="#EDED" "  
    android:text="2"  
    android:textColor="@color/black"  
    android:textSize="30sp"  
    app:layout_constraintBottom_toTopOf="@+id/button0"  
    app:layout_constraintEnd_toStartOf="@+id/button3"  
    app:layout_constraintHorizontal_bias="0.5"  
    app:layout_constraintStart_toEndOf="@+id/button1"  
    app:layout_constraintTop_toBottomOf="@+id/button5" />
```



```
<Button
    android:id="@+id/button1"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#EDED"
    android:text="1"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/signButton"
    app:layout_constraintEnd_toStartOf="@+id/button2"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button4" />
```

```
<Button
    android:id="@+id/button6"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:layout_marginStart="24dp"
    android:backgroundTint="#EDED"
    android:text="6"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button3"
    app:layout_constraintEnd_toStartOf="@+id/minusButton"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/button5"
    app:layout_constraintTop_toBottomOf="@+id/button9" />
```

```
<Button
    android:id="@+id/button5"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:layout_marginStart="60dp"
    android:layout_marginTop="48dp"
    android:backgroundTint="#EDEDED"
    android:text="5"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button2"
    app:layout_constraintEnd_toStartOf="@+id/button6"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/button4"
    app:layout_constraintTop_toBottomOf="@+id/button8" />
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#EDEDED"
    android:text="4"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button1"
    app:layout_constraintEnd_toStartOf="@+id/button5"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/button7" />
```

```
<Button
    android:id="@+id/button9"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#EDED"
    android:text="9"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button6"
    app:layout_constraintEnd_toStartOf="@+id/productButton"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/button8"
    app:layout_constraintTop_toBottomOf="@+id/bsButton" />
```

```
<Button
    android:id="@+id/button8"
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:backgroundTint="#EDED"
    android:text="8"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button5"
    app:layout_constraintEnd_toStartOf="@+id/button9"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/button7"
    app:layout_constraintTop_toBottomOf="@+id/cButton" />
```

```
<Button
    android:id="@+id/button7"
```

```
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_margin="3dp"
    android:layout_marginStart="16dp"
    android:backgroundTint="#EDED"
    android:text="7"
    android:textColor="@color/black"
    android:textSize="30sp"
    app:layout_constraintBottom_toTopOf="@+id/button4"
    app:layout_constraintEnd_toStartOf="@+id/button8"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/ceButton" />
```

```
<TextView
```

```
    android:id="@+id/StudentID"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="20225719"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```