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<Window x:Class="Wpf_Calc.MainWindow"
        xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
        xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
        xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
        xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
        xmlns:local="clr-namespace:Wpf_Calc"
        mc:Ignorable="d"
        Title="Calculator" Height="430" Width="280">
    <Grid>
        <Grid.ColumnDefinitions>
            <ColumnDefinition />
            <ColumnDefinition />
            <ColumnDefinition />
            <ColumnDefinition />
        </Grid.ColumnDefinitions>

        <Grid.RowDefinitions>
            <RowDefinition />
            <RowDefinition />
            <RowDefinition />
            <RowDefinition />
            <RowDefinition />
            <RowDefinition />
        </Grid.RowDefinitions>

        <!-- Number Buttons-->

        <Button x:Name="btn7" Grid.Row="2" Grid.Column="0"
Click="btn7_Click">7</Button>
        <Button x:Name="btn8" Grid.Row="2" Grid.Column="1"
Click="btn8_Click">8</Button>
        <Button x:Name="btn9" Grid.Row="2" Grid.Column="2"
Click="btn9_Click">9</Button>

        <Button x:Name="btn4" Grid.Row="3" Grid.Column="0"
Click="btn4_Click">4</Button>
        <Button x:Name="btn5" Grid.Row="3" Grid.Column="1"
Click="btn5_Click">5</Button>
        <Button x:Name="btn6" Grid.Row="3" Grid.Column="2"
Click="btn6_Click">6</Button>

        <Button x:Name="btn1" Grid.Row="4" Grid.Column="0"
Click="btn1_Click">1</Button>
        <Button x:Name="btn2" Grid.Row="4" Grid.Column="1"
Click="btn2_Click">2</Button>
        <Button x:Name="btn3" Grid.Row="4" Grid.Column="2"
Click="btn3_Click">3</Button>

        <Button x:Name="btn0" Grid.Row="5" Grid.Column="1"
Click="btn0_Click">0</Button>

        <!-- Math Buttons -->
        <Button x:Name="btnPlus" Grid.Row="1" Grid.Column="3"
Click="btnPlus_Click">+</Button>
        <Button x:Name="btnMinus" Grid.Row="2" Grid.Column="3"
Click="btnMinus_Click">-</Button>
        <Button x:Name="btnMult" Grid.Row="3" Grid.Column="3"
Click="btnMult_Click">*</Button>

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        <Button x:Name="btnDiv" Grid.Row="4" Grid.Column="3"
Click="btnDiv_Click"/></Button>
        <Button x:Name="btnEq" Grid.Row="5" Grid.Column="3"
Click="btnEq_Click">=</Button>

        <!-- Clear Buttons -->
        <Button x:Name="btnCE" Grid.Row="1" Grid.Column="0"
Click="btnCE_Click">CE</Button>
        <Button x:Name="btnC" Grid.Row="1" Grid.Column="1"
Click="btnC_Click">C</Button>
        <Button x:Name="btnDel" Grid.Row="1" Grid.Column="2" Content="&lt;="
Click="btnDel_Click"></Button>
        <!-- <= causes problems so add it to the Content box on the left to auto
generate-->

        <!-- Plus minus button-->
        <Button x:Name="btnPosNeg" Grid.Row="5" Grid.Column="0"
Click="btnPosNeg_Click">+--</Button>

        <!-- Display text box -->
        <TextBox x:Name="txtDisplay" Grid.Row="0" Grid.Column="0"
Grid.ColumnSpan="4" IsReadOnly="True" TextAlignment="Right"
VerticalAlignment="Bottom" FontSize="30" BorderThickness="0">0</TextBox>
    </Grid>
</Window>

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using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows;
using System.Windows.Controls;
using System.Windows.Data;
using System.Windows.Documents;
using System.Windows.Input;
using System.Windows.Media;
using System.Windows.Media.Imaging;
using System.Windows.Navigation;
using System.Windows.Shapes;

namespace Wpf_Calc
{
    /// <summary>
    /// Interaction logic for MainWindow.xaml
    /// </summary>
    public partial class MainWindow : Window
    {
        long longNumber1 = 0;
        long longNumber2 = 0;
        string operation = "";
        public MainWindow()
        {
            InitializeComponent();
        }

        private void btn1_Click(object sender, RoutedEventArgs e)
        {
            //if the operation is an empty string then you know its the first number
            //becasue they havent selected an operation yet
            if(operation == "")
            {
                //becasue 78 needs to increase by a factor of 10 to become 781
                longNumber1 = (longNumber1 * 10) + 1;
                txtDisplay.Text = longNumber1.ToString();
            }
            else
            {
                longNumber2 = (longNumber2 * 10) + 1;
                txtDisplay.Text = longNumber2.ToString();
            }
        }

        private void btn2_Click(object sender, RoutedEventArgs e)
        {
            if (operation == "")
            {
                longNumber1 = (longNumber1 * 10) + 2;
                txtDisplay.Text = longNumber1.ToString();
            }
            else
            {
                longNumber2 = (longNumber2 * 10) + 2;
                txtDisplay.Text = longNumber2.ToString();
            }
        }
    }
}

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    }
}
private void btn3_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 3;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 3;
        txtDisplay.Text = longNumber2.ToString();
    }
}
private void btn4_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 4;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 4;
        txtDisplay.Text = longNumber2.ToString();
    }
}
private void btn5_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 5;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 5;
        txtDisplay.Text = longNumber2.ToString();
    }
}
private void btn6_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 6;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 6;
        txtDisplay.Text = longNumber2.ToString();
    }
}
private void btn7_Click(object sender, RoutedEventArgs e)

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{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 7;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 7;
        txtDisplay.Text = longNumber2.ToString();
    }
}

private void btn8_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 8;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 8;
        txtDisplay.Text = longNumber2.ToString();
    }
}

private void btn9_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10) + 9;
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10) + 9;
        txtDisplay.Text = longNumber2.ToString();
    }
}

private void btn0_Click(object sender, RoutedEventArgs e)
{
    if (operation == "")
    {
        longNumber1 = (longNumber1 * 10);
        txtDisplay.Text = longNumber1.ToString();
    }
    else
    {
        longNumber2 = (longNumber2 * 10);
        txtDisplay.Text = longNumber2.ToString();
    }
}

private void btnPlus_Click(object sender, RoutedEventArgs e)

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{
    operation = "+";
    txtDisplay.Text = "0";
}

private void btnMinus_Click(object sender, RoutedEventArgs e)
{
    operation = "-";
    txtDisplay.Text = "0";
}

private void btnMult_Click(object sender, RoutedEventArgs e)
{
    operation = "*";
    txtDisplay.Text = "0";
}

private void btnDiv_Click(object sender, RoutedEventArgs e)
{
    operation = "/";
    txtDisplay.Text = "0";
}

private void btnEq_Click(object sender, RoutedEventArgs e)
{
    switch(operation)
    {
        case "+":
            txtDisplay.Text = (longNumber1 + longNumber2).ToString();
            break;
        case "-":
            txtDisplay.Text = (longNumber1 - longNumber2).ToString();
            break;
        case "*":
            txtDisplay.Text = (longNumber1 * longNumber2).ToString();
            break;
        case "/":
            txtDisplay.Text = (longNumber1 / longNumber2).ToString();
            break;
    }
}

private void btnCE_Click(object sender, RoutedEventArgs e)
{
    if(operation == "")
    {
        longNumber1 = 0;
        txtDisplay.Text = "0";
    }
    else
    {
        longNumber2 = 0;
        txtDisplay.Text = "0";
    }
}

private void btnC_Click(object sender, RoutedEventArgs e)
{

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        longNumber1 = 0;
        longNumber2 = 0;
        operation = "";
        txtDisplay.Text = "0";
    }

    private void btnDel_Click(object sender, RoutedEventArgs e)
    {
        if (operation == "")
        {
            longNumber1 = (longNumber1 / 10);
            txtDisplay.Text = longNumber1.ToString();
        }
        else
        {
            longNumber2 = (longNumber2 / 10);
            txtDisplay.Text = longNumber2.ToString();
        }
    }

    private void btnPosNeg_Click(object sender, RoutedEventArgs e)
    {
        if (operation == "")
        {
            longNumber1 *= -1;
            txtDisplay.Text = longNumber1.ToString();
        }
        else
        {
            longNumber2 *= -1;
            txtDisplay.Text = longNumber2.ToString();
        }
    }
}

```