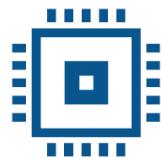




Universitatea *Transilvania* din Brașov  
Facultatea de Inginerie Electrică și Știința  
Calculatoarelor  
Departamentul Automatică și Tehnologia Informației



# LABORATOR 01

## POO

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*Gr. 4LF494, AIA II*

**BRAȘOV, 2021**

## 1. Tema L01.1

### 1.1. Rezolvare temă

#### Calculator.xaml

```
Title="Calculator" Height="336" Width="300" Icon="calculator-icon.png">
    <Grid x:Name="Calculator_Copy" Margin="0,0,-8,-5" Background="White">
        <Button x:Name="Buton1" Content="1" HorizontalAlignment="Left"
Margin="24,87.788,0,0" VerticalAlignment="Top" Width="40" Height="40" FontSize="15"
FontWeight="Bold" Click="buton_click" BorderBrush="{DynamicResource {x:Static
SystemColors.ActiveCaptionTextBrushKey}}" Background="{DynamicResource {x:Static
SystemColors.ActiveCaptionBrushKey}}"/>
        <Button x:Name="Buton2" Content="2" HorizontalAlignment="Left"
Margin="74,87.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton3" Content="3" HorizontalAlignment="Left"
Margin="125,87.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton4" Content="4" HorizontalAlignment="Left"
Margin="24,140.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton5" Content="5" HorizontalAlignment="Left"
Margin="74,140.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton6" Content="6" HorizontalAlignment="Left"
Margin="125,140.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton7" Content="7" HorizontalAlignment="Left"
Margin="24,197.576,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton8" Content="8" HorizontalAlignment="Left"
Margin="74,197.576,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton9" Content="9" HorizontalAlignment="Left"
Margin="125,197.576,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Buton0" Content="0" HorizontalAlignment="Left"
Margin="24,249.788,0,0" VerticalAlignment="Top" Width="90" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Butonpunct" Content"." HorizontalAlignment="Left"
Margin="125,249.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="buton_click"/>
        <Button x:Name="Butonimpartire" Content="/" HorizontalAlignment="Left"
Margin="179,87.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="operator_click"/>
        <Button x:Name="ButonCE" Content="CE" HorizontalAlignment="Left"
Margin="233,87.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
```

```

FontSize="15" FontWeight="Bold" Click="clearCE_click"/>
    <Button x:Name="Butoninmultire" Content="*" HorizontalAlignment="Left"
Margin="179,140.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="operator_click"/>
    <Button x:Name="ButonC" Content="C" HorizontalAlignment="Left"
Margin="233,140.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="clearC_click"/>
    <Button x:Name="Butonminus" Content="-" HorizontalAlignment="Left"
Margin="179,197.576,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="operator_click"/>
    <Button x:Name="Butonegal" Content "=" HorizontalAlignment="Left"
Margin="233,197.576,0,0" VerticalAlignment="Top" Width="40" Height="92.212"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" Click="Equal_click"/>
    <Button x:Name="Butonplus" Content "+" HorizontalAlignment="Left"
Margin="179,249.788,0,0" VerticalAlignment="Top" Width="40" Height="40"
Background="{DynamicResource {x:Static SystemColors.ActiveCaptionBrushKey}}"
FontSize="15" FontWeight="Bold" RenderTransformOrigin="2.225,4.63"
Click="operator_click"/>
    <TextBox x:Name="TextBox_Resultat" HorizontalAlignment="Left" Height="28"
Margin="24,45,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="249"
FontSize="15" FontWeight="Bold" TextAlignment="Right"/>
        <Label x:Name="LabelOperatieCurenta" Content="" HorizontalAlignment="Left"
Margin="24,14.04,0,0" VerticalAlignment="Top" Height="25.96" FontWeight="Bold"
Background="{DynamicResource {x:Static SystemColors.ControlBrushKey}}"/>

```

</Grid>

### MainWindow.xaml.cs

```
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 WpfApp1
{
    /// <summary>
    /// Interaction logic for MainWindow.xaml
    /// </summary>
    public partial class MainWindow : Window
    {
        Double valresult = 0;
        String operators = "";
        bool operexecutat = false;
        public MainWindow()
        {
            InitializeComponent();
        }

        private void button_click(object sender, RoutedEventArgs e)
        {
            if ((TextBox_Resultat.Text == "0") || operexecutat)
                TextBox_Resultat.Clear();

            operexecutat = false;
            Button button = (Button)sender;
            if ((string)button.Content == ".")
            {
                if (!TextBox_Resultat.Text.Contains("."))
                    TextBox_Resultat.Text = TextBox_Resultat.Text +
(string)button.Content;
            } else
                TextBox_Resultat.Text = TextBox_Resultat.Text + (string)button.Content;
        }

        private void operator_click(object sender, RoutedEventArgs e)
        {
            Button button = (Button)sender;
            operators = (string)button.Content;
            valresult = Double.Parse(TextBox_Resultat.Text);
            LabelOperatieCurenta.Content = valresult + " " + operators;
            operexecutat = true;
        }

        private void clearC_click(object sender, RoutedEventArgs e)
        {
```

```
        TextBox_Resultat.Text = "0";
        valresult = 0;
        LabelOperatieCurenta.Content = "";
    }

    private void clearCE_click(object sender, RoutedEventArgs e)
    {
        TextBox_Resultat.Text = "0";
        LabelOperatieCurenta.Content = "";
    }

    private void Equal_click(object sender, RoutedEventArgs e)
    {
        switch(operators)
        {
            case "+":
                TextBox_Resultat.Text = (valresult +
Double.Parse(TextBox_Resultat.Text)).ToString();
                break;
            case "-":
                TextBox_Resultat.Text = (valresult -
Double.Parse(TextBox_Resultat.Text)).ToString();
                break;
            case "*":
                TextBox_Resultat.Text = (valresult *
Double.Parse(TextBox_Resultat.Text)).ToString();
                break;
            case "/":
                TextBox_Resultat.Text = (valresult /
Double.Parse(TextBox_Resultat.Text)).ToString();
                break;
            default:
                break;
        }
    }
}
```

