Universitatea Tehinica a Moldovei

Facultatea Calculatoare,Informatica si
Microelectronica

MIDPS

Lucrare de laborator #3

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1 Scopul lucrarii de laborator

Realizeaza un simplu GUI calculator care suporta urmatoare functii: +, -, /, *, putere, radical, InversareSemn(+/-), operatii cu numere zecimale.

2 Obiective

1. Realizeaza un simplu GUI Calculator.
2. Operatiile simple: +,-,*,/,putere,radical,InversareSemn(+/-),operatii cu numere zecimale.
3. Divizare proiectului in doua module - Interfata grafica(Modul GUI) si Modulul de baza(Core Module).

3 Listingul Programului.

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Threading;
using System.Threading.Tasks;
using System.Globalization;
using System.Windows.Forms;

namespace CalculatorV2
{
    public partial class Form1 : Form
    {

        Double resultVal = 0;
        String opPerformed = "";
```

```
        bool isopPerformed = false;
        bool s = true;


        public Form1()
        {
              InitializeComponent();
              Thread.CurrentThread.CurrentCulture =
               Thread.CurrentThread.CurrentUICulture =
                new CultureInfo("en-US");
        }


        private void button1_Click(object sender, EventArgs e)
        {
         if ((textBox1_Result.Text == "0") || (isopPerformed))
        textBox1_Result.Clear();

         isopPerformed = false;
         Button button = (Button)sender;
         if (button.Text == ".")
         {
          if (!textBox1_Result.Text.Contains("."))
          textBox1_Result.Text = textBox1_Result.Text
             + button.Text;
              }
              else
             textBox1_Result.Text = textBox1_Result.Text +
              button.Text;
        }

        private void func_Click(object sender, EventArgs e)
        {
              Button button = (Button)sender;
              if (resultVal != 0)
              {
                    if (button.Text == "Sqrt")
    textBox1_Result.Text =
Math.Sqrt(Double.Parse(textBox1_Result.Text)).ToString();
                    if (button.Text == "Log")
```

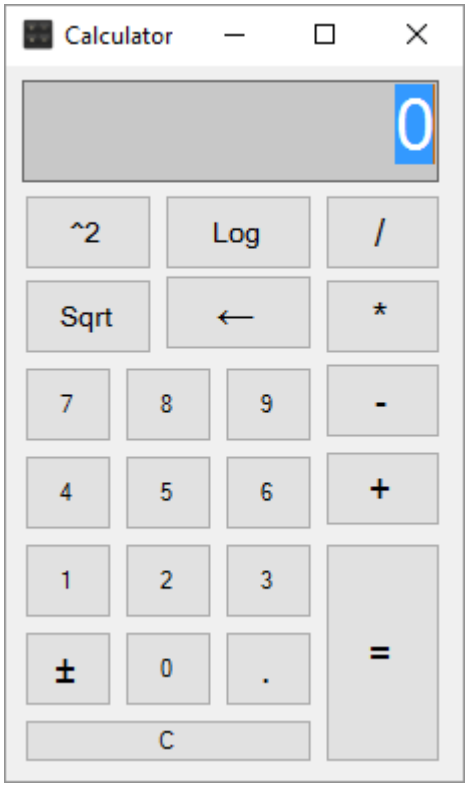
```
 textBox1_Result.Text =
  Math.Log(Double.Parse(textBox1_Result.Text)).ToString();
                    if (button.Text == "^2")
textBox1_Result.Text =
 Math.Pow(Double.Parse(textBox1_Result.Text), 2).ToString();




                    equal.PerformClick();
                    opPerformed = button.Text;
        // lbCurentOp.Text = resultVal + " " + opPerformed;
                    isopPerformed = true;
                }
                else if (button.Text == "Sqrt")
                {
     textBox1_Result.Text =
    Math.Sqrt(Double.Parse(textBox1_Result.Text)).ToString();
  resultVal =
  Math.Sqrt(Double.Parse(textBox1_Result.Text));
                }
                else if (button.Text == "Log")
                {
   textBox1_Result.Text =
    Math.Log(Double.Parse(textBox1_Result.Text)).ToString();
resultVal = Math.Log(Double.Parse(textBox1_Result.Text));
                }
else if (button.Text == "^2")
                {
      textBox1_Result.Text =

   Math.Pow(Double.Parse(textBox1_Result.Text), 2).ToString();
          resultVal = Math.Pow(Double.Parse
          (textBox1_Result.Text), 2);
                }
                else
                {
                    opPerformed = button.Text;
                    resultVal = Double.Parse(textBox1_Result.Text);
                    opPerformed = button.Text;
```

```
                //lbCurentOp.Text = resultVal +
                " " + opPerformed;
                 isopPerformed = true;

            }
            //lbCurentOp.Focus();
        }

    private void deletCar_Click(object sender, EventArgs e)
        {
          int length = textBox1_Result.Text.Length - 1;
          string text = textBox1_Result.Text;
          textBox1_Result.Clear();
        for (int i = 0; i < length; i++)
             {
           textBox1_Result.Text = textBox1_Result.Text
           + text[i];
             }
        }

        private void clear_Click(object sender, EventArgs e)
        {
             textBox1_Result.Text = "0";
             resultVal = 0;
        }


private void button10_Click(object sender, EventArgs e)
        {
            if (s == true)
          {
      textBox1_Result.Text =
       "-" + textBox1_Result.Text;
              s = false;
          }
          else
          {
       textBox1_Result.Text =
        textBox1_Result.Text.Replace("-", "");
              s = true;
```

```
        }
    }

    private void equal_Click(object sender, EventArgs e)
    {
        switch (opPerformed)
        {


   case "+":
textBox1_Result.Text =
(resultVal + Double.Parse(textBox1_Result.Text)).ToString();
                    break;
                case "-":
                    textBox1_Result.Text =
                    (resultVal - Double.Parse(textBox1_Result.Text)).
                    break;
                case "*":
                    textBox1_Result.Text =
                    (resultVal * Double.Parse(textBox1_Result.Text)).
                    break;
                case "/":
                    textBox1_Result.Text =
                     (resultVal / Double.Parse(textBox1_Result.Text))
                    break;
            default:
                 break;
          }

         resultVal =
         Double.Parse(textBox1_Result.Text);
            //lbCurentOp.Text = "";
    }



    private void operator_Click(object sender, EventArgs e)
    {
        Button button = (Button)sender;
        opPerformed = button.Text;
```

```
        resultVal = Double.Parse(textBox1_Result.Text);
        isopPerformed = true;
    }

    private void zecimal_Click(object sender, EventArgs e)
    {
        Button button = (Button)sender;
        if (button.Text == ".")
        {
        if (!textBox1_Result.Text.Contains("."))
          textBox1_Result.Text = textBox1_Result.Text
           + button.Text;
        }
        else
textBox1_Result.Text = textBox1_Result.Text
 + button.Text;
    }

    private void Form1_KeyPress(object sender,
    KeyPressEventArgs e)
    {
        switch (e.KeyChar)
        {
            case "0":
                zero.PerformClick();
                break;
            case "1":
                one.PerformClick();
                break;
            case "2":
                two.PerformClick();
                break;
            case "3":
                three.PerformClick();
                break;
            case "4":
                four.PerformClick();
                break;
            case "5":
                five.PerformClick();
```

```
                    break;
                case "6":
                    six.PerformClick();
                    break;
                case "7":
                    seven.PerformClick();
                    break;
                case "8":
                    eight.PerformClick();
                    break;
                case "9":
                    nine.PerformClick();
                    break;
                case "+":
                    add.PerformClick();
                    break;
                case "-":
                    sub.PerformClick();
                    break;
                case "*":
                    mul.PerformClick();
                    break;
                case "/":
                    div.PerformClick();
                    break;
                case "=":
                    equal.PerformClick();
                    break;
                default:
                    break;
            }
        }
    }
}
```



4 Concluzie

Efectuind aceasta lucrare de la borator am folosit IDE Visual Studio unde am realizat un simplu GUI calculator care suporta functiile +,-,/,*, radacina patrata dintrun numar , ridicarea la putere si schimbarea semnului in limbajul de programare C Sharp.

5 Bibliografie

https://www.youtube.com/watch?v=iJqB6UsM-hs&nohtml5=False