Федеральное государственное образовательное бюджетное   
учреждение высшего образования

**«Финансовый университет при Правительстве Российской Федерации»**

**(колледж информатики и программирования)**

**ОТЧЕТ   
по практической (самостоятельной) работе**

**Практическая работа № 7**

**Студента:** Гнеушева Я. Р.

**Дисциплина /Профессиональный модуль:** УП-01.01

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| --- | --- | --- |
| **Группа:** ПКС-420 |  | **Преподаватель:** |
|  |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_/Альшакова Е. Л.  И. В. Сибирев/ |
|  |  | **Дата выполнения:** |
|  |  | 26. ноября. 2022 г |
|  |  | **Оценка за работу: \_\_\_\_\_\_\_\_\_\_\_\_** |

Москва   
2022

Постановка задачи

Разработать калькулятор на языке С#. В проекте использовать прием

создания одного обработчика для нескольких событий.

Листинг программы

MainWindow.xaml

<Window x:Class="Calculator\_WPF.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:Calculator\_WPF"

mc:Ignorable="d"

Title="Калькулятор Гнеушев 420 ПР1" Height="600" Width="600" WindowStartupLocation="CenterScreen" ResizeMode="NoResize" Background="Gainsboro">

<Grid>

<Grid.ColumnDefinitions>

<ColumnDefinition Width="10\*"/>

<ColumnDefinition Width="109\*"/>

</Grid.ColumnDefinitions>

<Button Content="7" HorizontalAlignment="Left" Margin="48,145,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.ColumnSpan="2" Background="#FFF39696" Cursor="Hand"/>

<Button Content="8" HorizontalAlignment="Left" Margin="98.5,145,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="9" HorizontalAlignment="Left" Margin="198.5,145,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="4" HorizontalAlignment="Left" Margin="48,249,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.ColumnSpan="2" Background="#FFF39696" Cursor="Hand"/>

<Button Content="5" HorizontalAlignment="Left" Margin="98.5,249,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="6" HorizontalAlignment="Left" Margin="198.5,249,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="2" HorizontalAlignment="Left" Margin="98.5,353,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="1" HorizontalAlignment="Left" Margin="48,353,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.ColumnSpan="2" Background="#FFF39696" Cursor="Hand"/>

<Button Content="3" HorizontalAlignment="Left" Margin="198.5,353,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="0" HorizontalAlignment="Left" Margin="48,451,0,0" VerticalAlignment="Top" Width="280" Height="80" FontSize="30" Click="Button0\_Click" Grid.ColumnSpan="2" Background="#FFF39696" Cursor="Hand"/>

<TextBox Name="screen" TextAlignment="Center" IsEnabled="False" HorizontalAlignment="Left" Height="56" Margin="48,45,0,0" TextWrapping="Wrap" Text="" VerticalAlignment="Top" Width="500" FontSize="40" Grid.ColumnSpan="2" Background="#FFF9AEAE"/>

<Button HorizontalContentAlignment="Center" Content="+" HorizontalAlignment="Left" Margin="310.5,145,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="40" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="-" HorizontalAlignment="Left" Margin="310.5,249,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="40" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="\*" HorizontalAlignment="Left" Margin="310.5,353,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="40" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="/" HorizontalAlignment="Left" Margin="310.5,451,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="32" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="." HorizontalAlignment="Left" Margin="418.5,451,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="40" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button Content="=" HorizontalAlignment="Left" VerticalContentAlignment="Center" HorizontalContentAlignment="Center" Margin="418,353,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="60" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="CA" HorizontalAlignment="Left" Margin="418.5,145,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

<Button HorizontalContentAlignment="Center" Content="DEL" HorizontalAlignment="Left" Margin="418,249,0,0" VerticalAlignment="Top" Width="80" Height="80" FontSize="30" Click="Button0\_Click" Grid.Column="1" Background="#FFF39696" Cursor="Hand"/>

</Grid>

</Window>

MainWindow.xaml.cs

using System;

using System.Collections.Generic;

using System.ComponentModel;

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 Calculator\_WPF

{

/// <summary>

/// Логика взаимодействия для MainWindow.xaml

/// </summary>

public partial class MainWindow : Window

{

public MainWindow()

{

InitializeComponent();

}

private void Button0\_Click(object sender, RoutedEventArgs e)

{

var txt = (e.Source as Button).Content.ToString();

if (new string[9] {"1", "2", "3", "4", "5", "6", "7", "8", "9" }.Contains(txt))

{

screen.Text += txt;

}

else if (txt == "0")

{

if (screen.Text.Length != 0)

{

screen.Text += "0";

}

}

else if(new string[4] { "+", "-", "\*", "/" }.Contains(txt) && !new char[5] { '+', '-', '\*', '/', '.' }.Contains(screen.Text[screen.Text.Length - 1]))

{

screen.Text += txt;

}

else if(txt == ".")

{

if (screen.Text.Length == 0 || !new char[5] { '+', '-', '\*', '/', '.' }.Contains(screen.Text[screen.Text.Length - 1]))

if (screen.Text.Count(x => x == '.') < screen.Text.Count(x => x == '+' || x == '-' || x == '\*' || x == '/') + 1)

screen.Text += ".";

}

else if(txt == "CA")

{

screen.Text = "";

}

else if(txt == "=" && screen.Text.Trim().Length > 0)

{

try

{

screen.Text = Eval(screen.Text).ToString().Replace(',', '.');

}

catch (OverflowException)

{

MessageBox.Show("Переполнение!", "Ошибка!", MessageBoxButton.OK, MessageBoxImage.Error);

}

catch (DivideByZeroException)

{

MessageBox.Show("Деление на ноль!", "Ошибка!", MessageBoxButton.OK, MessageBoxImage.Error);

}

catch (Exception)

{

MessageBox.Show("Ошибка в выражении!");

}

}

else if(txt == "DEL")

{

if (screen.Text.Length > 0)

screen.Text = screen.Text.Substring(0, screen.Text.Length - 1);

}

}

static Double Eval(String expression)

{

System.Data.DataTable table = new System.Data.DataTable();

return Convert.ToDouble(table.Compute(expression, String.Empty));

}

protected override void OnClosing(CancelEventArgs e)

{

e.Cancel = MessageBox.Show("Вы действительно хотите выйти?", "Подтвердите действие", MessageBoxButton.YesNo, MessageBoxImage.Question) == MessageBoxResult.No;

}

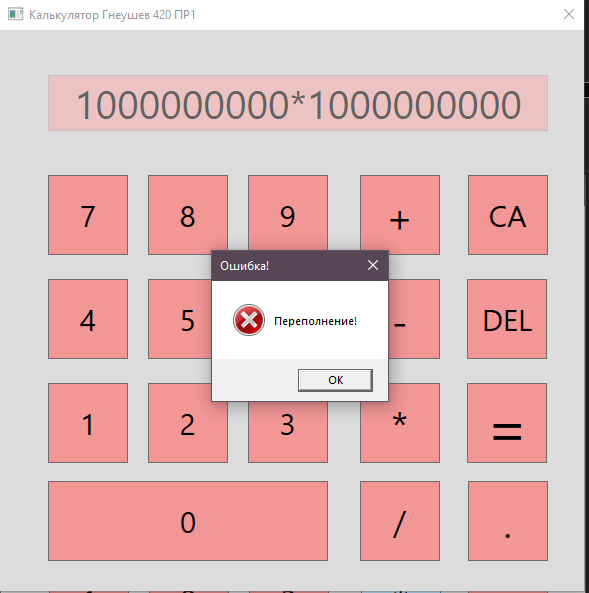
}

}

Изображение выглядит как текст, электроника

Автоматически созданное описание





Изображение выглядит как текст, электроника

Автоматически созданное описание

