

Министерство науки и высшего образования Российской Федерации
Муромский институт (филиал)
Федерального государственного бюджетного образовательного учреждения
высшего образования
«Владимирский государственный университет
имени Александра Григорьевича и Николая Григорьевича Столетовых»

Факультет _____ ИТР _____

Кафедра _____ ПИИ _____

ЛАБОРАТОРНАЯ РАБОТА №3

По Проектирование человеко-машинного интерфейса

Тема Создание горячих клавиш в WPF приложениях

Руководитель

Каряев В.В.

(фамилия, инициалы)

(подпись)

(дата)

Студент _____ ПИИ - 121

(группа)

Ермилов М.В.

(фамилия, инициалы)

(подпись)

(дата)

Муром 2023

Лабораторная работа №3

Тема: Создание горячих клавиш в WPF приложениях.

Цель: Научится создавать горячие клавиши в WPF приложениях.

Задание:

1. Изучить материал, представленный в данных методических указаниях к лабораторной работе;
2. Разработать WPF приложение, согласно заданию преподавателя;
3. Составить отчет. В отчете отобразить:
 - цели и задачи лабораторной работы;
 - XAML разметку;
 - исходный код приложения (отображающий только логику программы и описание файлов ресурсов);
 - скриншоты работы приложения;
 - выводы по проделанной лабораторной работе.

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Разраб.		Ермилов М.В.								
Провер.		Каряев В.В.							2	10
Реценз.								ПИН-121		
Н. Контр.										
Утверд.										

Листинг программы:

```
<Window x:Class="work.test"
    xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
    xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
    Title="ShortKey"    MinHeight="78"    MinWidth="270"    MaxHeight="78"
    MaxWidth="270">
    <Window.Resources>
        <RoutedUICommand x:Key="First" Text="First" />
        <RoutedUICommand x:Key="Second" Text="Second" />
        <RoutedUICommand x:Key="Third" Text="Third" />
    </Window.Resources>
    <Window.CommandBindings>
        <CommandBinding Command="{StaticResource First}" Executed="One" />
        <CommandBinding Command="{StaticResource Second}" Executed="Two" />
        <CommandBinding Command="{StaticResource Third}" Executed="Three" />
    </Window.CommandBindings>
    <Window.InputBindings>
        <KeyBinding Key="Q" Modifiers="Ctrl" Command="{StaticResource First}" />
        <KeyBinding Key="W" Modifiers="Ctrl+Alt" Command="{StaticResource
Second}" />
        <KeyBinding Key="E" Modifiers="Shift" Command="{StaticResource Third}" />
    </Window.InputBindings>

    <Grid>
        <Button x:Name="bOne"
            Margin="10,10,0,0"
            Height="25"
            Width="75"
            HorizontalAlignment="Left"
            VerticalAlignment="Top"
```

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```

        Content="Па3"
        Command="{DynamicResource First}" />
<Button x:Name="bTwo"
        Margin="90,10,0,0"
        Height="25"
        Width="75"
        HorizontalAlignment="Left"
        VerticalAlignment="Top"
        Content="Два"
        Command="{DynamicResource Second}" />
<Button x:Name="bThree"
        Margin="170,10,0,0"
        Height="25"
        Width="75"
        HorizontalAlignment="Left"
        VerticalAlignment="Top"
        Content="Три"
        Command="{DynamicResource Third}" />
</Grid>
</Window>

```

```

using System.Windows;
using System.Windows.Input;

namespace work
{
    public partial class test : Window
    {
        public test()
        {

```

```

        InitializeComponent();
    }
    private void One(object sender, ExecutedRoutedEventArgs e)
    {
        MessageBox.Show("Вы нажали \'Ctrl+Q\'");
    }
    private void Two(object sender, ExecutedRoutedEventArgs e)
    {
        MessageBox.Show("Вы нажали \'Ctrl+Alt+W\'");
    }
    private void Three(object sender, ExecutedRoutedEventArgs e)
    {
        MessageBox.Show("Вы нажали \'Shift+E\'");
    }
}
}

```

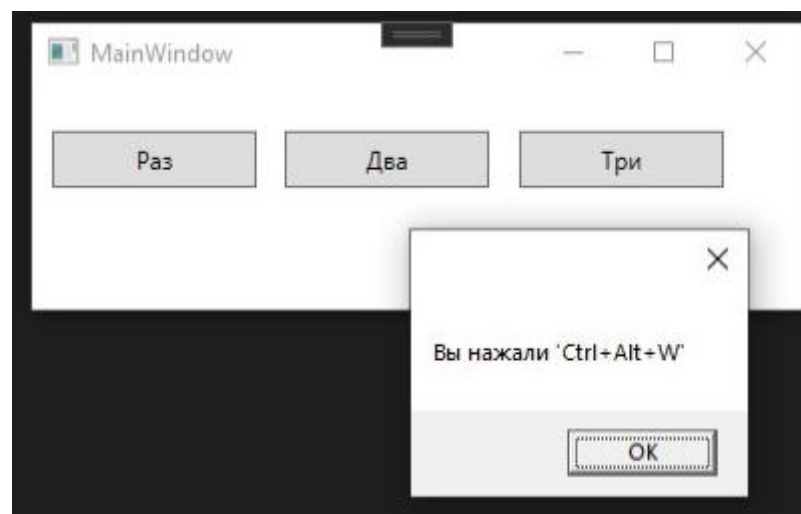


Рисунок 1 - пример работы

Листинг программы:

```

<Window x:Class="LB3.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:LB3"
    mc:Ignorable="d"
    Title="Учёт данных студентов" Height="342" Width="525">
    <Window.Resources>
        <RoutedUICommand x:Key="Add" Text="Add"/>
        <RoutedUICommand x:Key="Change" Text="Change"/>
        <RoutedUICommand x:Key="Delete" Text="Delete"/>
    </Window.Resources>
    <Window.CommandBindings>
        <CommandBinding Command="{StaticResource Add}" Executed="Add" />
        <CommandBinding Command="{StaticResource Change}" Executed="Change" />
        <CommandBinding Command="{StaticResource Delete}" Executed="Delete" />
    </Window.CommandBindings>
    <Window.InputBindings>
        <KeyBinding Key="A" Modifiers="Ctrl" Command="{StaticResource Add}" />
        <KeyBinding Key="E" Modifiers="Ctrl" Command="{StaticResource Change}" />
        <KeyBinding Key="X" Modifiers="Ctrl" Command="{StaticResource Delete}" />
    </Window.InputBindings>
    <Grid HorizontalAlignment="Center" VerticalAlignment="Center">
        <DataGrid x:Name="Students" HorizontalAlignment="Left" Height="243"
Margin="10,10,0,0" VerticalAlignment="Top" Width="470" IsReadOnly="True"
SelectionMode="Single"/>
        <Button Content="Добавить" HorizontalAlignment="Left" Height="21"
Margin="10,266,0,0" VerticalAlignment="Top" Width="96" Click="Add"/>
        <Button Content="Изменить" HorizontalAlignment="Left" Height="21"
Margin="121,266,0,0" VerticalAlignment="Top" Width="96" Click="Change"/>
        <Button Content="Удалить запись" HorizontalAlignment="Left" Height="22"
Margin="383,265,0,0" VerticalAlignment="Top" Width="97" Click="Delete"/>
    </Grid>
</Window>

<Window x:Class="LB3.WindowStudent"
    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:LB3"
    mc:Ignorable="d"
    Title="Данные студента" MinHeight="443.937" MinWidth="292" MaxHeight="443.937"
MaxWidth="292">
    <Window.Resources>
        <RoutedUICommand x:Key="Save" Text="Save"/>
        <RoutedUICommand x:Key="Clear" Text="Clear"/>
        <RoutedUICommand x:Key="Cancel" Text="Cancel"/>
    </Window.Resources>
    <Window.CommandBindings>
        <CommandBinding Command="{StaticResource Save}" Executed="Save" />
        <CommandBinding Command="{StaticResource Clear}" Executed="Clear" />
        <CommandBinding Command="{StaticResource Cancel}" Executed="Cancel" />
    </Window.CommandBindings>
    <Window.InputBindings>
        <KeyBinding Key="S" Modifiers="Ctrl" Command="{StaticResource Save}" />
        <KeyBinding Key="X" Modifiers="Ctrl+Alt" Command="{StaticResource Clear}" />
        <KeyBinding Key="Q" Modifiers="Ctrl" Command="{StaticResource Cancel}" />
    </Window.InputBindings>
    <Grid>

```

```

        <Label Content="Фамилия" HorizontalAlignment="Left" Height="27"
Margin="18,10,0,0" VerticalAlignment="Top" Width="65"/>
        <TextBox x:Name="InputSurname" HorizontalAlignment="Left" Height="27"
Margin="24,37,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="234"/>
        <Label Content="Имя" HorizontalAlignment="Left" Height="27" Margin="18,64,0,0"
VerticalAlignment="Top" Width="65"/>
        <TextBox x:Name="InputName" HorizontalAlignment="Left" Height="27"
Margin="24,91,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="234"/>
        <Label Content="Отчество" HorizontalAlignment="Left" Height="27"
Margin="18,118,0,0" VerticalAlignment="Top" Width="65"/>
        <TextBox x:Name="InputPatronymic" HorizontalAlignment="Left" Height="27"
Margin="24,145,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="234"/>
        <Label Content="Факультет" HorizontalAlignment="Left" Height="27"
Margin="18,172,0,0" VerticalAlignment="Top" Width="65"/>
        <TextBox x:Name="InputFaculty" HorizontalAlignment="Left" Height="27"
Margin="24,201,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="234"/>
        <Label Content="Группа" HorizontalAlignment="Left" Height="27"
Margin="18,226,0,0" VerticalAlignment="Top" Width="65"/>
        <TextBox x:Name="InputGroup" HorizontalAlignment="Left" Height="27"
Margin="24,253,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="234"/>
        <Label Content="Дата рождения" HorizontalAlignment="Left" Height="27"
Margin="19,280,0,0" VerticalAlignment="Top" Width="101"/>
        <DatePicker x:Name="InputDateBirth" HorizontalAlignment="Left" Height="28"
Margin="24,307,0,0" VerticalAlignment="Top" Width="234"/>
        <Button Content="Сохранить" HorizontalAlignment="Left" Height="21"
Margin="24,374,0,0" VerticalAlignment="Top" Width="79" Click="Save"/>
        <Button Content="Очистить все" HorizontalAlignment="Left" Height="21"
Margin="179,340,0,0" VerticalAlignment="Top" Width="79" Click="Clear"/>
        <Button Content="Отменить" HorizontalAlignment="Left" Height="21"
Margin="179,374,0,0" VerticalAlignment="Top" Width="79" Click="Cancel"/>
    </Grid>
</Window>

```

```

using System.Collections.Generic;
using System.Windows;
using System.Windows.Controls;

```

```

namespace LB3
{
    public partial class MainWindow : Window
    {
        public List<Student> students = new List<Student>();
        public MainWindow()
        {
            InitializeComponent();
            Students.ItemsSource = students;
        }
        private void Add(object sender, RoutedEventArgs e)
        {
            WindowStudent window = new WindowStudent();
            if(window.ShowDialog() == true)
            {
                students.Add(window.student);
                Students.Items.Refresh();
            }
        }
        private void Change(object sender, RoutedEventArgs e)
        {
            if(Students.SelectedIndex >= 0 && students.Count < Students.SelectedIndex)
            {
                WindowStudent window = new
WindowStudent(students[Students.SelectedIndex]);
                if (window.ShowDialog() == true)

```

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```

        {
            students[Students.SelectedIndex] = window.student;
            Students.Items.Refresh();
        }
    }

private void Delete(object sender, RoutedEventArgs e)
{
    if (Students.SelectedIndex >= 0 && students.Count < Students.SelectedIndex)
    {
        students.Remove(students[Students.SelectedIndex]);
        Students.Items.Refresh();
    }
}

}

using System.Windows;

namespace LB3
{
    public partial class WindowStudent : Window
    {
        public Student student = new Student();
        public WindowStudent() => InitializeComponent();

        public WindowStudent(Student student):this()
        {
            InputSurname.Text = student.Surname;
            InputName.Text = student.Name;
            InputPatronymic.Text = student.Patronymic;
            InputFaculty.Text = student.Faculty;
            InputGroup.Text = student.Group;
            InputDateBirth.Text = student.DateBirth;
        }

        private void Save(object sender, RoutedEventArgs e)
        {
            if(
                InputSurname.Text.Trim() == "" ||
                InputName.Text.Trim() == "" ||
                InputPatronymic.Text.Trim() == "" ||
                InputFaculty.Text.Trim() == "" ||
                InputGroup.Text.Trim() == "" ||
                InputDateBirth.Text == null)
            {
                MessageBox.Show("Введите все данные!");
                return;
            }
            student.Name = InputName.Text.Trim();
            student.Surname = InputSurname.Text.Trim();
            student.Patronymic = InputPatronymic.Text.Trim();
            student.Faculty = InputFaculty.Text.Trim();
            student.Group = InputGroup.Text.Trim();
            student.DateBirth = InputDateBirth.Text;
            DialogResult = true;
        }

        private void Cancel(object sender, RoutedEventArgs e) => DialogResult = false;
        private void Clear(object sender, RoutedEventArgs e)
        {
            InputSurname.Clear();

```