

FACULTY OF COMPUTERS, INFORMATICS AND MICROELECTRONICS

TECHNICAL UNIVERSITY OF MOLDOVA

WINDOWS PROGRAMMING

LABORATORY WORK #2

Window. Basic window's form elements

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Laboratory work #2

1 Purpose of the laboratory

Gain knowledge about basics of event-driven programming, understanding of window's class and basic possibilities of Win32 API. Also she will try to understand and process OS messages.

2 Laboratory Work Requirements

- **Basic Level (grade 5 - 6) you should be able to:**
 - a) Create a Windows application what will display a dialog box on some event (ex. on clicking some button)
 - b) Add a system menu to your application with at least 3 items (add actions to that items)
 - c) Hook keyboard input. Add 2 custom events for 2 different keyboard combinations (ex. change window background on ctrl+space)
- **Normal Level (grade 7 - 8) you should be able to:**
 - a) Realize the tasks from *Basic Level*.
 - b) Add a scroll bar that will change any visible parameter of any other element (color of a text) OR other 2 scroll bars that will manage main window size or position
- **Advanced Level (grade 9 - 10) you should be able to:**
 - a) Realize the tasks from *Normal Level*.
 - b) Customize your application by adding an icon and using different cursor in application
 - c) Add a listbox and attach some events when any element is accessed (clicked)

3 Laboratory work implementation

3.1 Tasks and Points

- a) Basic tasks: all tasks
- b) Normal tasks: all tasks
- c) Advanced tasks: all tasks

3.2 Laboratory work analysis

Link to my repo: <https://github.com/sspatari/WP>

A read me file has been added and it quickly explains what was done.

Brief description of what I did:

1. Create a Window application that displays a dialog box when clicking on "Press to enter Name"
2. Added a system menu to the application with 3 items. The first 2 will display a MessageBox and the last will delete a system menu items
3. Hooked keyboard input. Added 2 custom events for 2 different keyboard combinations ctrl+space to increase and alt+space to decrease width of window
4. Added menu resource with 3 items that basically are the same as system menus.
5. Added 3 buttons, the first will create a dialog box that will ask for a name. After entering it and pressing ok it will change the text in the top child window that represents a static text field.
6. The second button creates dialog box that will show 3 scroll bars that will change dynamically the color of the text in the top child window.
7. The third button will create a dialog box that will display 3 scrolls to change the color of the main window color
8. Changed the icon and cursor
9. Added a listbox and inserted some elements in it. When you click on an item the top child window with the text will display the name of the item you clicked

3.3 Prove your work with screens



Figure 3.1 – Window before pressing buttons

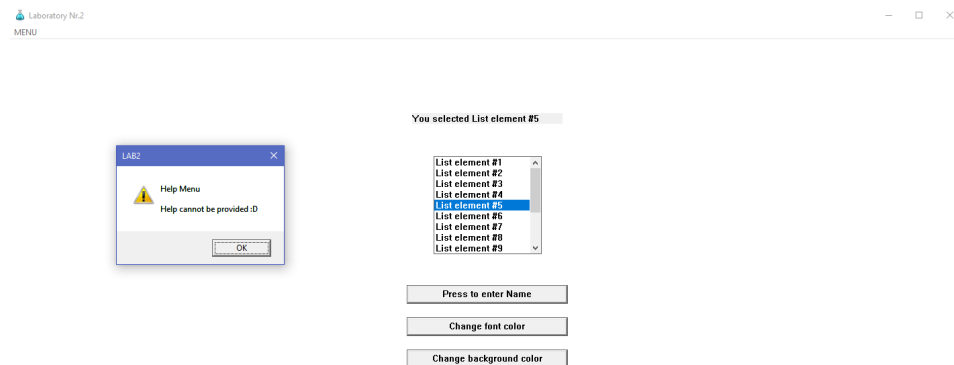


Figure 3.2 – Window after pressing first menu button

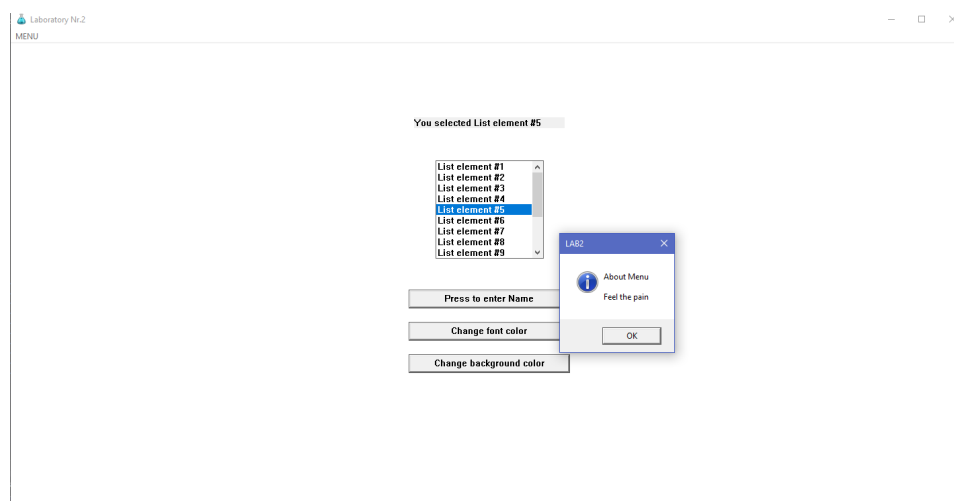


Figure 3.3 – Window after pressing second menu button

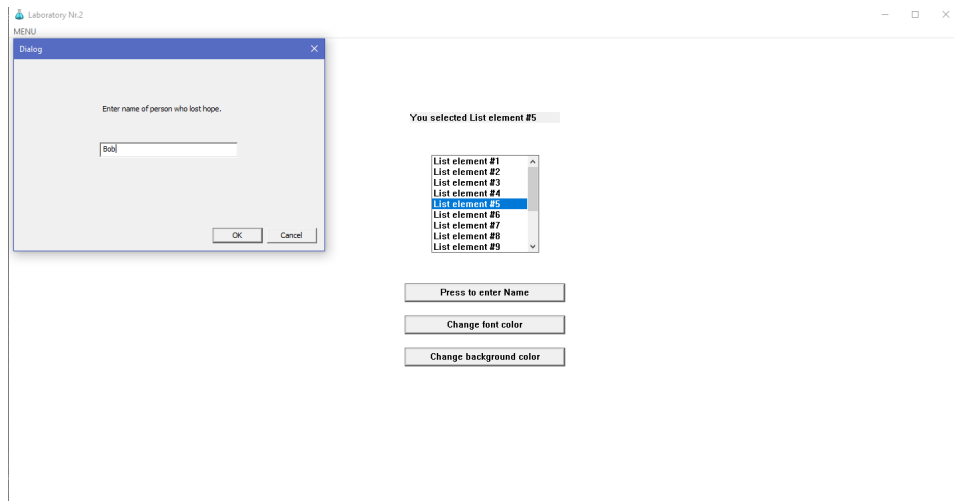


Figure 3.4– Windows after pressing first button

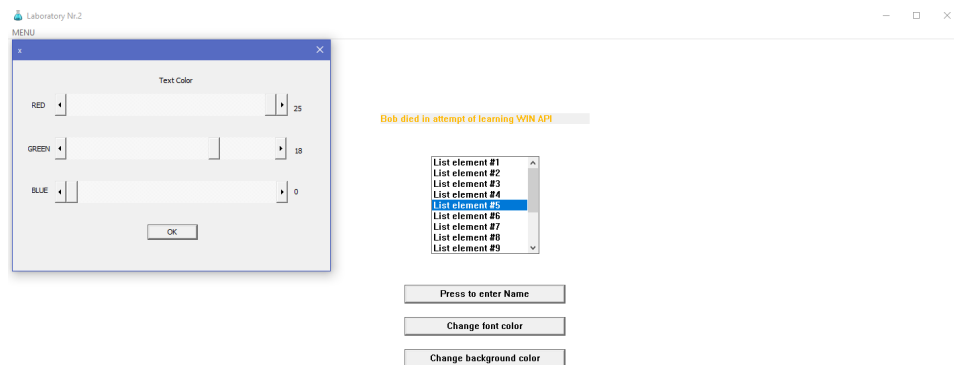


Figure 3.5– Windows after pressing second button

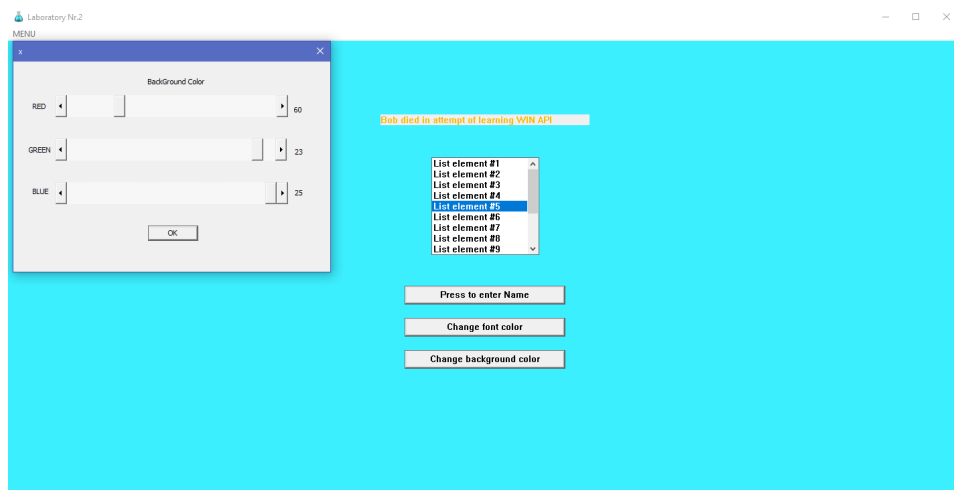


Figure 3.6– Windows after pressing the third button

Conclusions

I learned how the elements of the window are created, how their behavior can be changed. I worked with messages, understood how the elements and their actions are interconnected. This concepts can be applied not only in windows programming, but also in another systems of programming.

References

- 1 *official page*, <http://msdn.microsoft.com>
- 2 Charlez Petzold, *Programming in Windows 5th edition*,