Faculty of Computers, Informatics and Microelectronics

Technical University of Moldova

WINDOWS PROGRAMMING

Laboratory work No.2

Window. Window handling. Basic window's form elements

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Laboratory work #2

1 Purpose of the laboratory

Gain knowledge about basics of advanced form elements, understanding of working with child windowses. Also she will try to understand Working With Keyboard.

2 Laboratory Work Requirements

– **Basic Level (grade 5 - 6) you should be able to:**

a) Create a Windows application what will dispaly 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

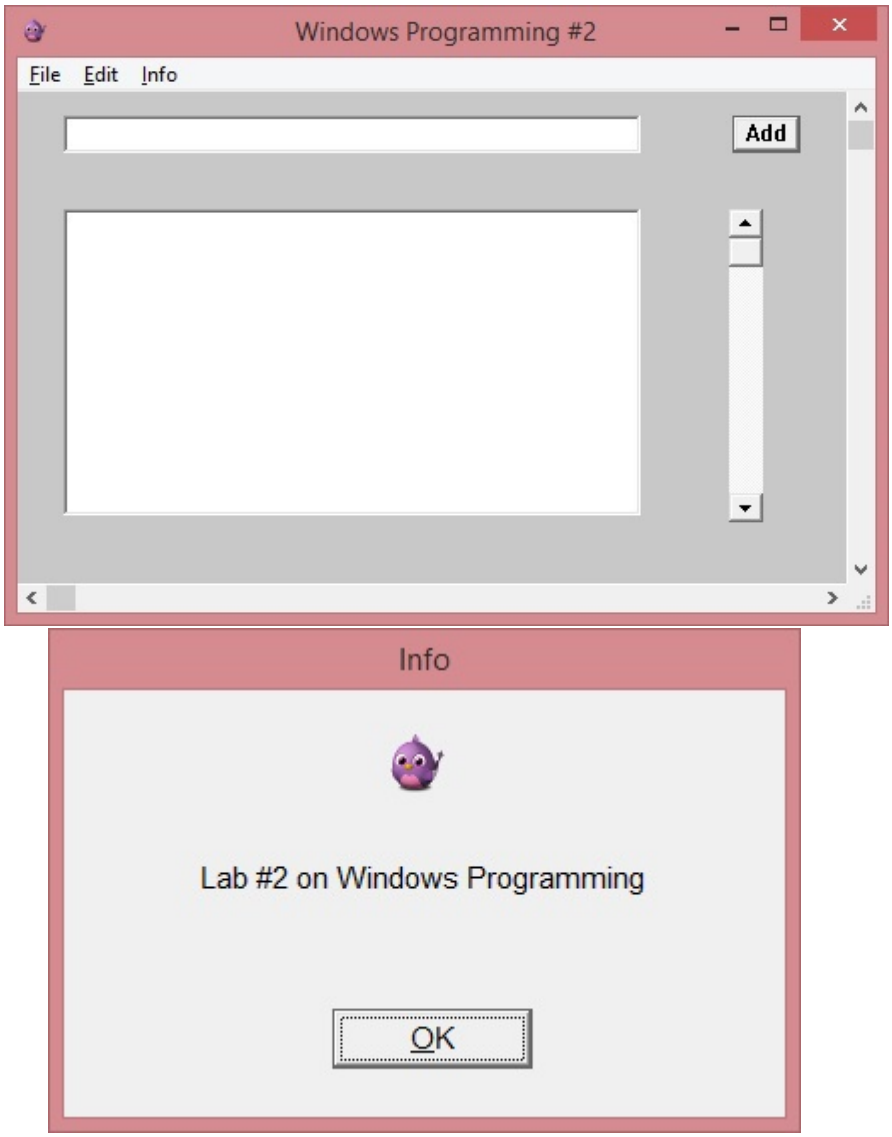
3.1 Tasks and Points

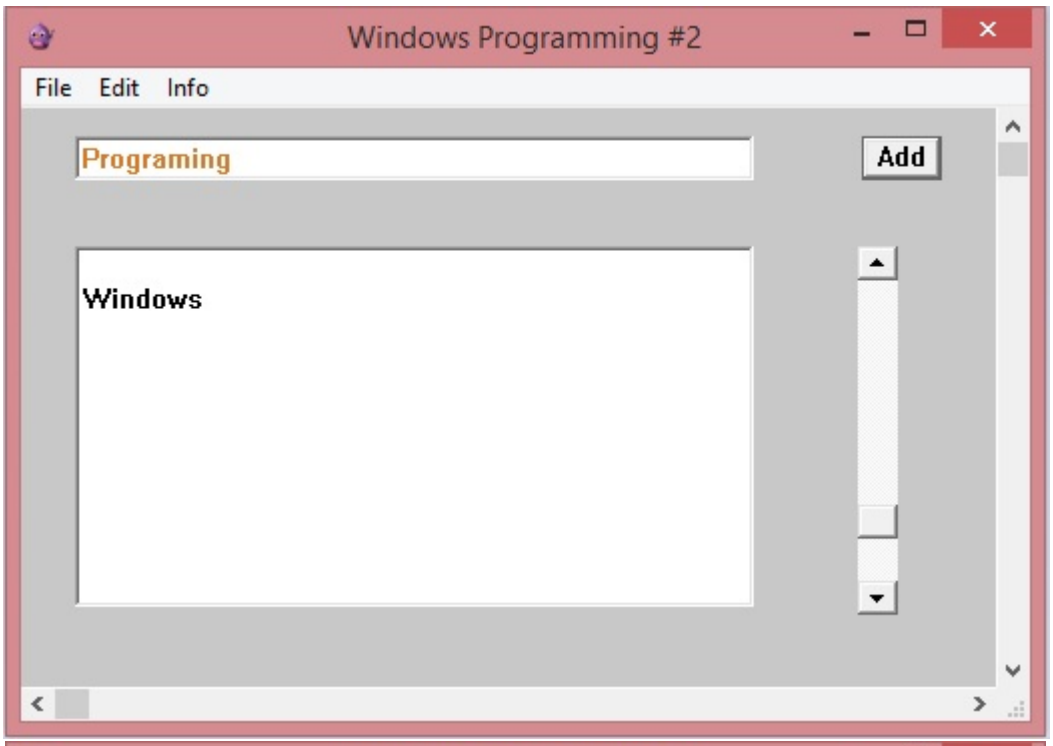
We haven't got tasks with points

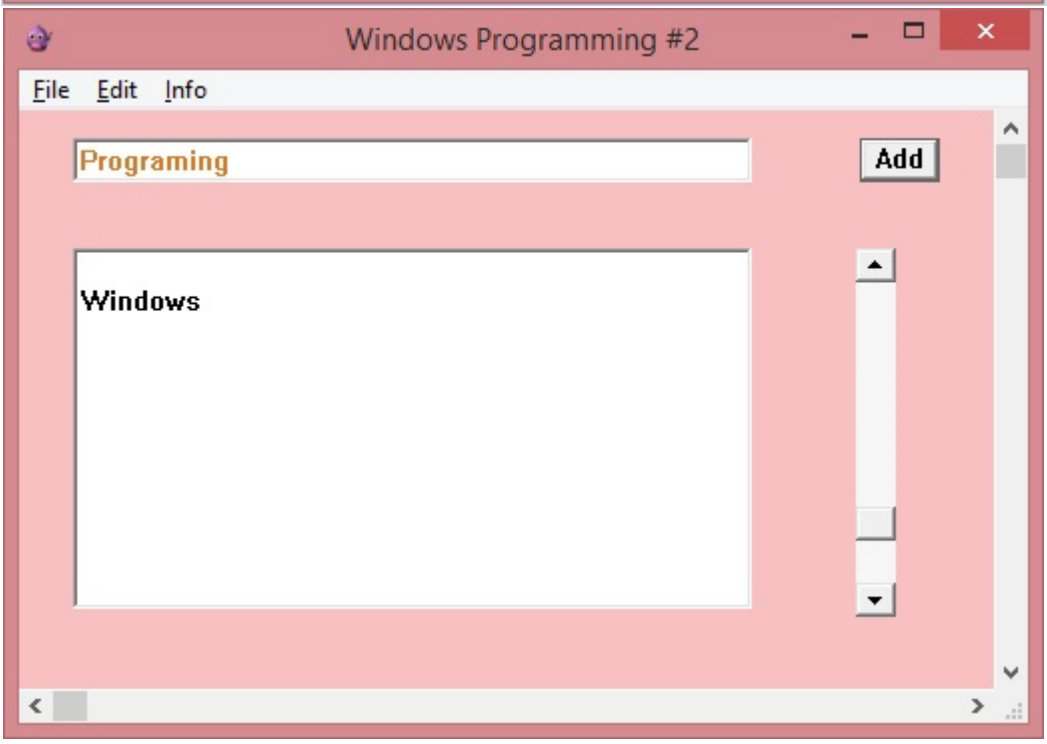
3.2 Laboratory work analysis

https://github.com/TUM-FAF/FAF-141-Cotovici-Sanda/tree/master/PW
I had explained all the features that I had been added to my window in README.md.

3.3 Prove your work with screens




Windows Programming #2
File Edit Info
Programing
Add
Windows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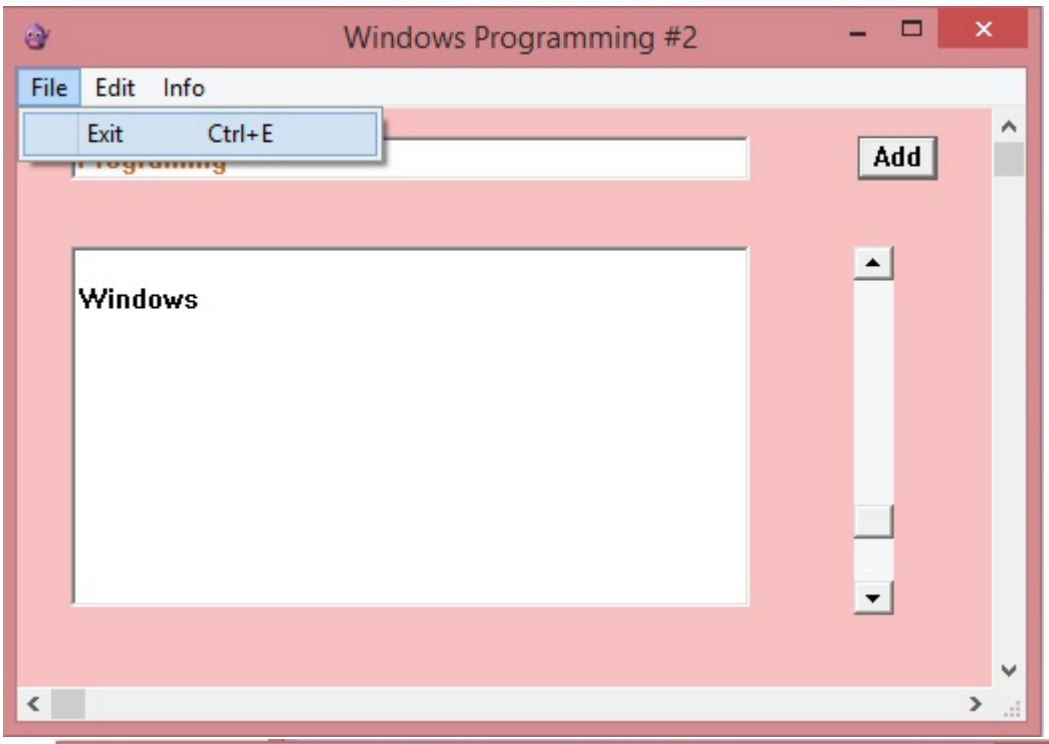
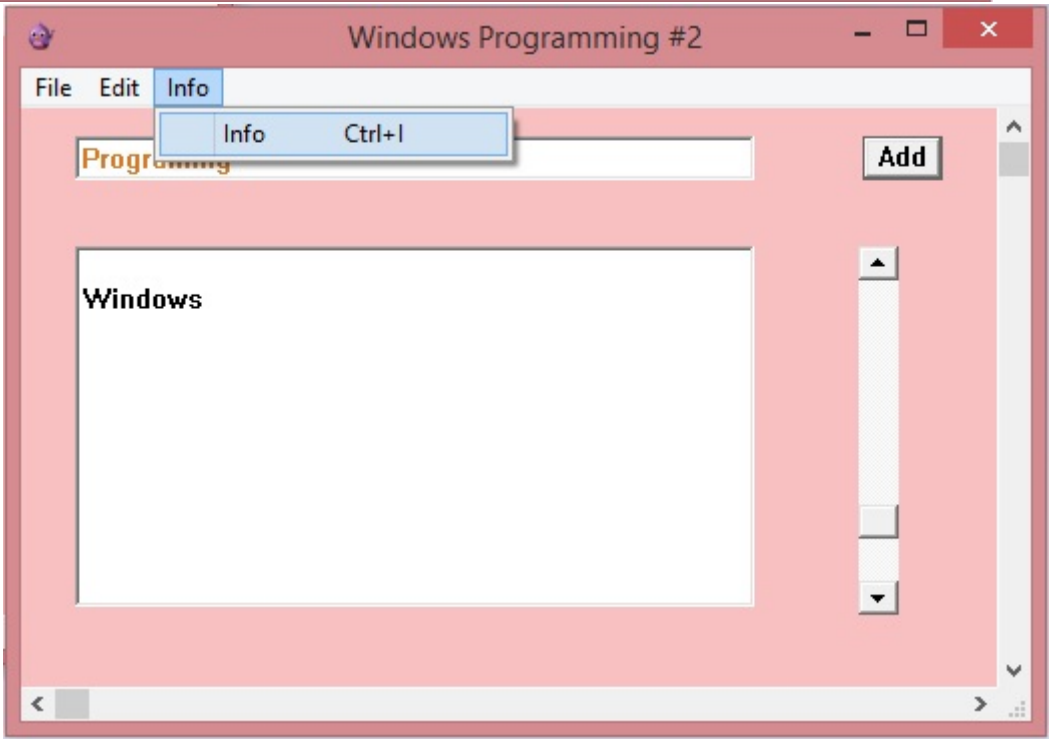

Windows Programming #2
File
Edit
Info
Exit Ctrl+E
Add
Windows


Windows Programming #2
File
Edit
Info
Info Ctrl+I
Add
Windows

Conclusions

In this laboratory work I have learned a lot of new things: creating a dialog box, working with resource files, adding icons and new cursor, creating scroll bars with another purpose then original one, using hotkeys from keyboard for some actions.I had worked a lot and I think that wasn't enough, the next time will be better.

I wasn't worked step by step, like is written in tasks. In the beggining I choose to add another scroll and icon. So I have created file resource.rc,in which I have declared IDI_ICON ICON DISCARDABLE "icon.ico" . This icon is a small bird, downloaded from internet. For cursor I declared ID_CURSOR CURSOR DISCARDABLE "Button.cur". Then in .rc file I created a dialog box, it pops up when I click on Info(from Menu) or on pressing hotkeys Ctrl+I. Also in MENU besides of item Info, there are items File-¿Exit(exits from program,or you can press Ctrl+E) and Edit-¿ Change Background color. Also I have created a scroll bar which changes text's color. The last task was to add a listbox. My listbox receives elements from a editable box and from Add button. Element could be double-clicked, and apears window with the element's name. Or you can press right click and is displayed a Warning that you can delete element.

So, in this laboratory I have learned a lot about working with mouse, with keyboard,some child window controls,like scroll bars and listbox. A great deal was adding an icon, was so great! Also I was amazed about adding of another cursor. At the beginning I want to put a hand like a cursor, but was hard to find type .cur, so I choose to put an beautiful arrow. Working with scroll bar also was interesting, there are some parameters which you should use and seems that is not so hard. But I felt some pain with creation and fit in the window.The biggest problems I found in creating scroll bar and adding a listbox, but these troubles helped in understanding of processes.

References

1 Charles Petzhold, *official page*, http://www.charlespetzold.com/pw5/

2 How to create ListBox ,page:,http://stackoverflow.com/questions/4473431/win32-how-to-create-a-listbox-control-using-the-createwindowexw-function/4474663#4474663

3 How to create Button ,page:,http://www.winprog.org/tutorial/controls.html

4 Virtual Key Codes,page: hhttp://www.kbdedit.com/manual/low_level_vk_list.html

5 Microsoft source, official page,https://msdn.microsoft.com