

FACULTY OF COMPUTERS, INFORMATICS AND MICROELECTRONICS

TECHNICAL UNIVERSITY OF MOLDOVA

WINDOWS PROGRAMMING

LABORATORY WORK #2

**Advanced Form Elements. Child Windowses.
Basics of Working With Keyboard.**

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Laboratory work #1

1 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)
- **for Bonus Point Tasks :**
 - a) Use a scroll bar to scroll through application working space. Scroll should appear only when necessary (eg. when window width is smaller than 300px)

2 Laboratory work implementation

2.1 Tasks and Points

– **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)

– **for Bonus Point Tasks :**

- a) Use a scroll bar to scroll through application working space. Scroll should appear only when necessary (eg. when window width is smaller than 300px)

2.2 Prove your work with screens



Figure 2.1– Add/Rmv/Show elements to list and select one to display in the right part of window.

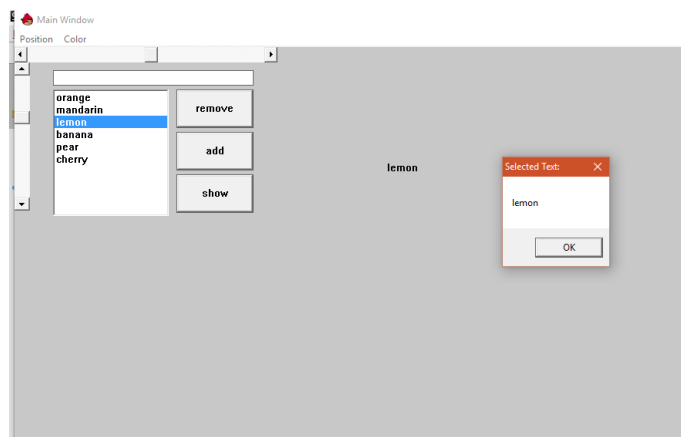


Figure 2.2– Click show button to pop up the name of selected element

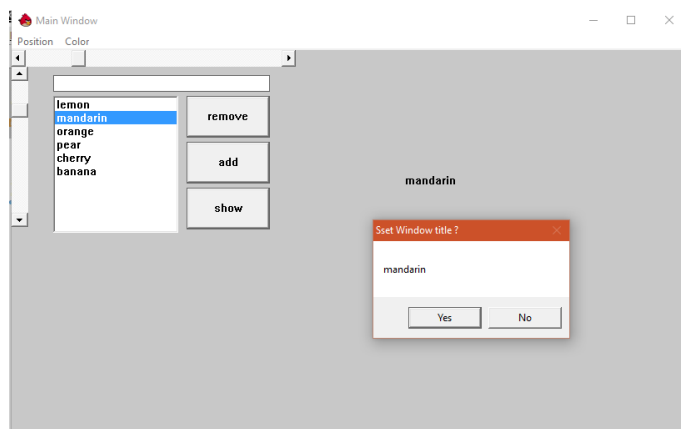


Figure 2.3– Double click on an element from the list to set it as window title

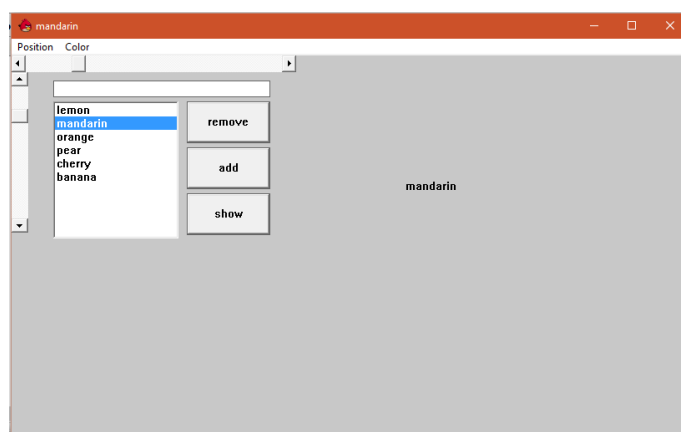


Figure 2.4– For example double click mandarin press ok and see mandarin title

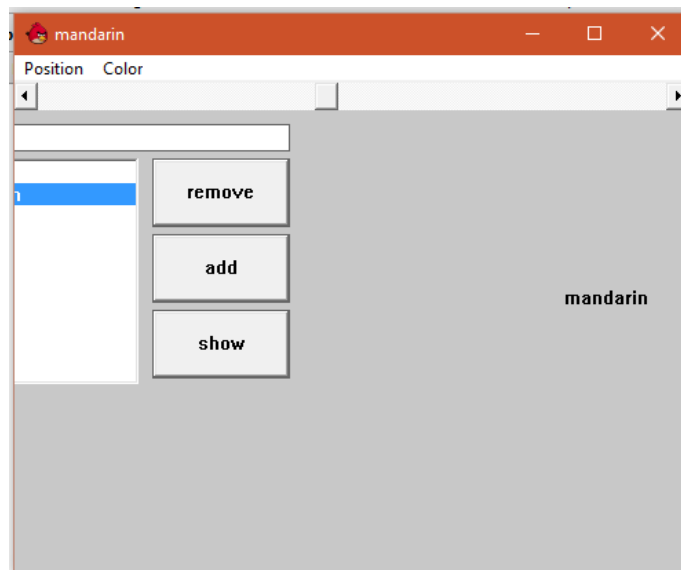


Figure 2.5– Resize the window and move the scroll to see all content

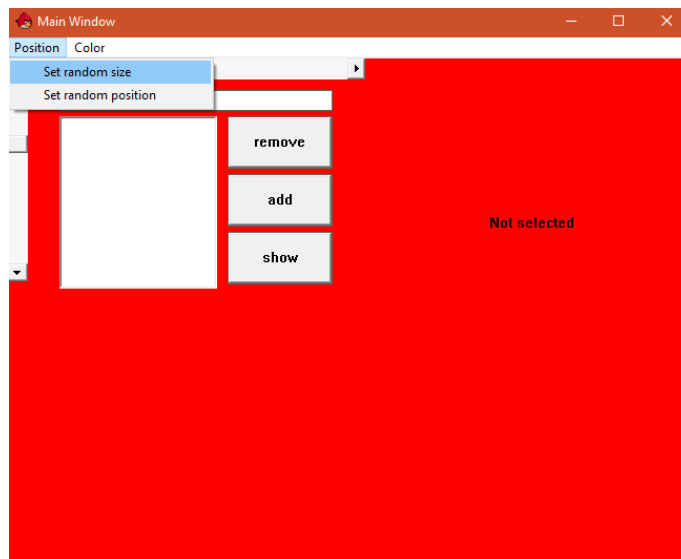


Figure 2.6– Chose from window menu set random size to set random size



Figure 2.7– Chose from window menu set position size to set random position

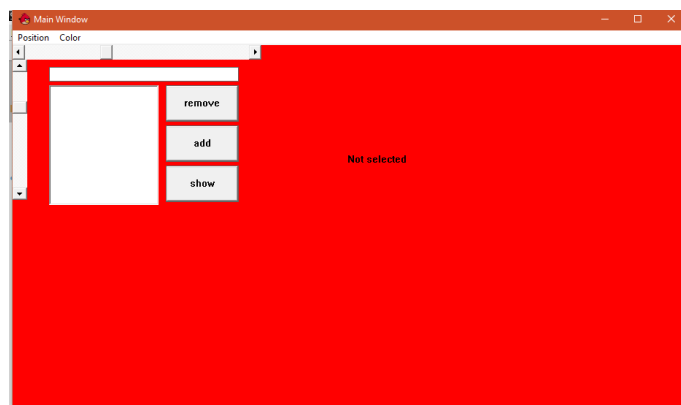


Figure 2.8– Press ctrl+C to change window color also press ctrl+V to close window

Conclusions

On my opinion this laboratory work was easier than previous, I've learned a lot of things as how to create a list box and of course the most interesting thing that I've learned how to work with resources. Also I've learned how to set a window menu and add menu items to it. I think that the most difficult task of this lab was the task from bonus point , to create a scrollbar that will scroll the Window content.

References

- 1 Aldebran Robotics, *official page*, www.aldebaran.com/en
- 2 Timo Ojala, *Multiresolution gray-scale and rotation invariant texture classification with local binary patterns*, 2002
- 3 Biometric, www.biometricupdate.com/201501/history-of-biometrics