Faculty of Computers, Informatics and Microelectronics

Technical University of Moldova

Event-Driven Programming

Laboratory work #1

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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

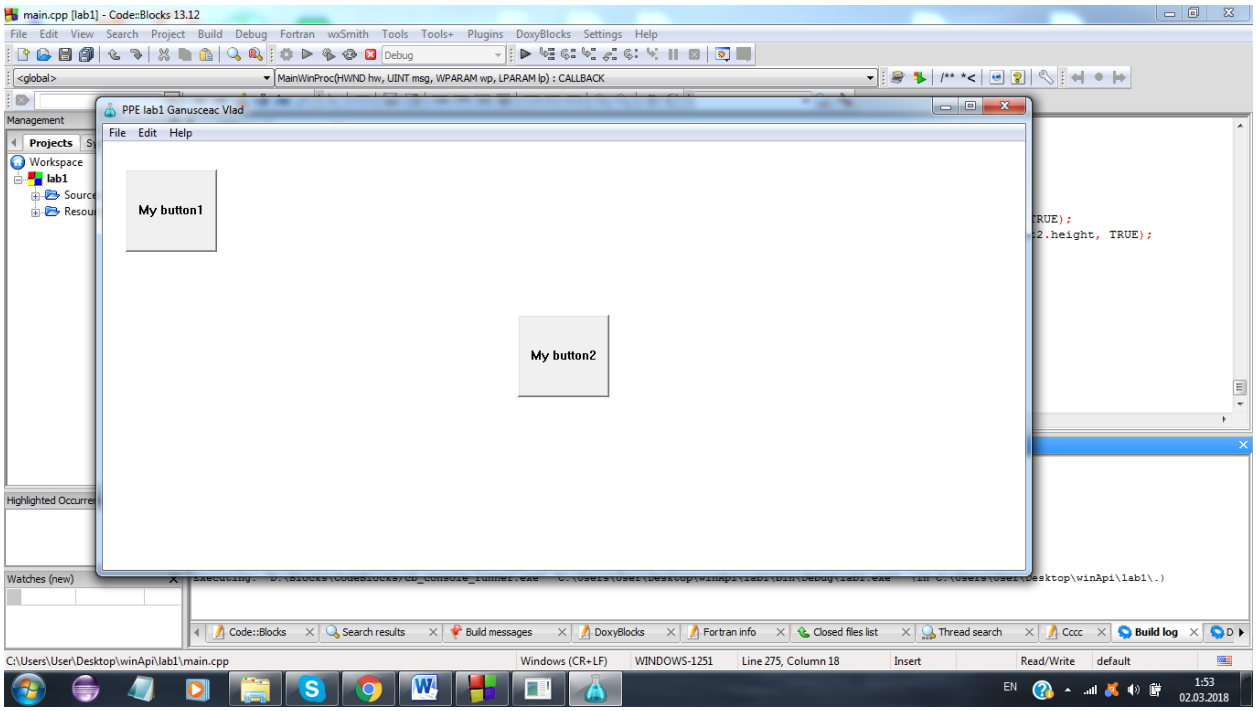
Mandatory Objectives:

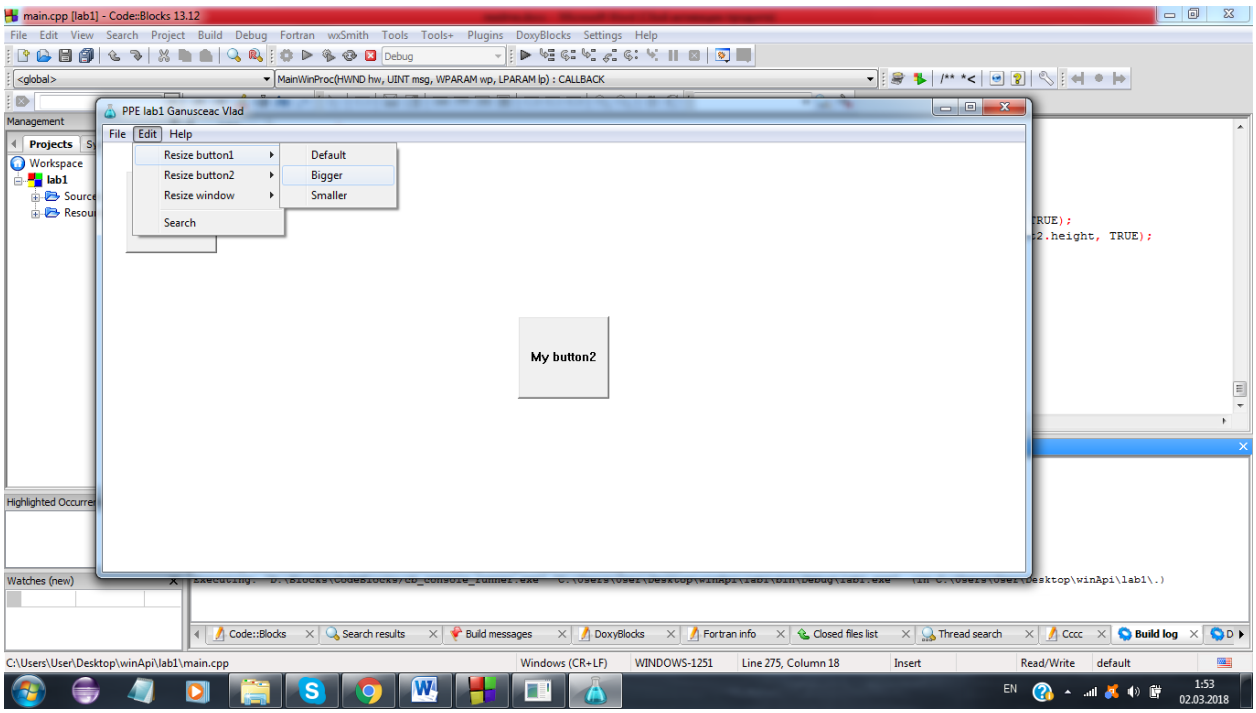
- Choose a Programming Style Guideline that you'll follow
- Create a **Windows application**
- Add 2 buttons to window: one with default styles, one with custom styles (size, background, text color, font family, font size)
- Add 2 text elements to window: one with default styles, one with custom styles (size, background, text color, font family, font size) [one of them should be something funny]
- On windows resize, one of the texts should "reflow" and be in window's center (vertically and horizontally)

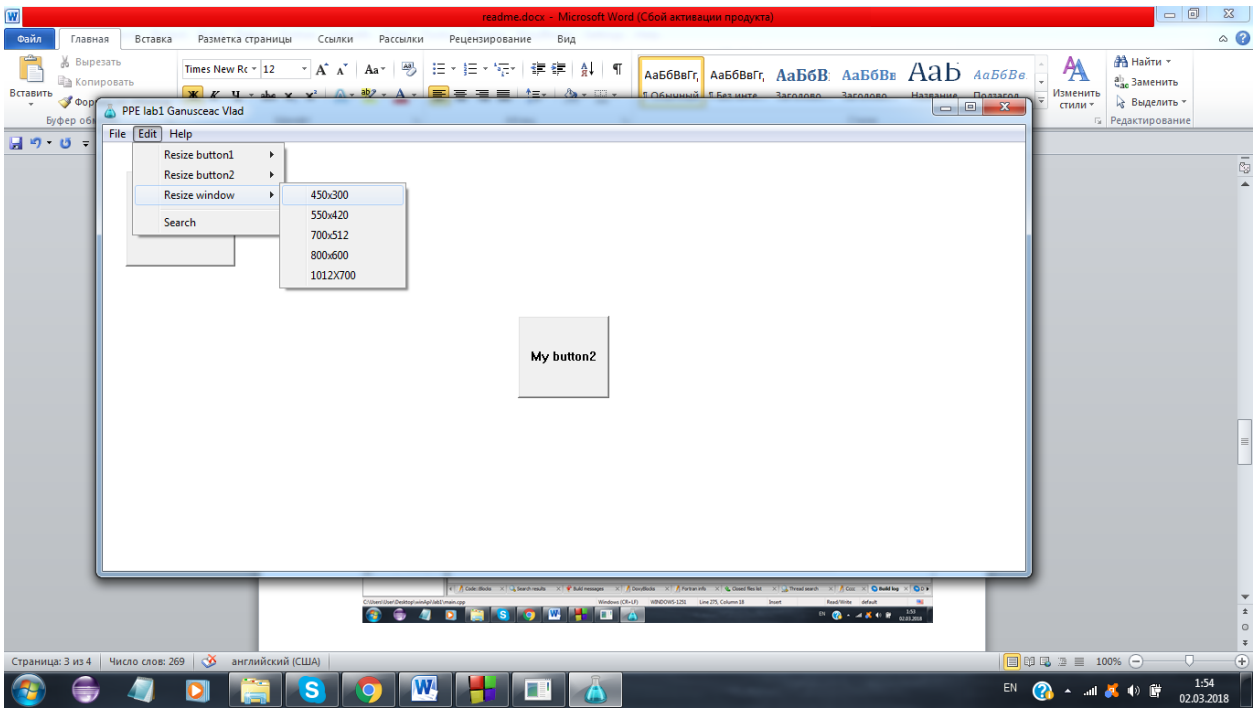
Objectives With Points:

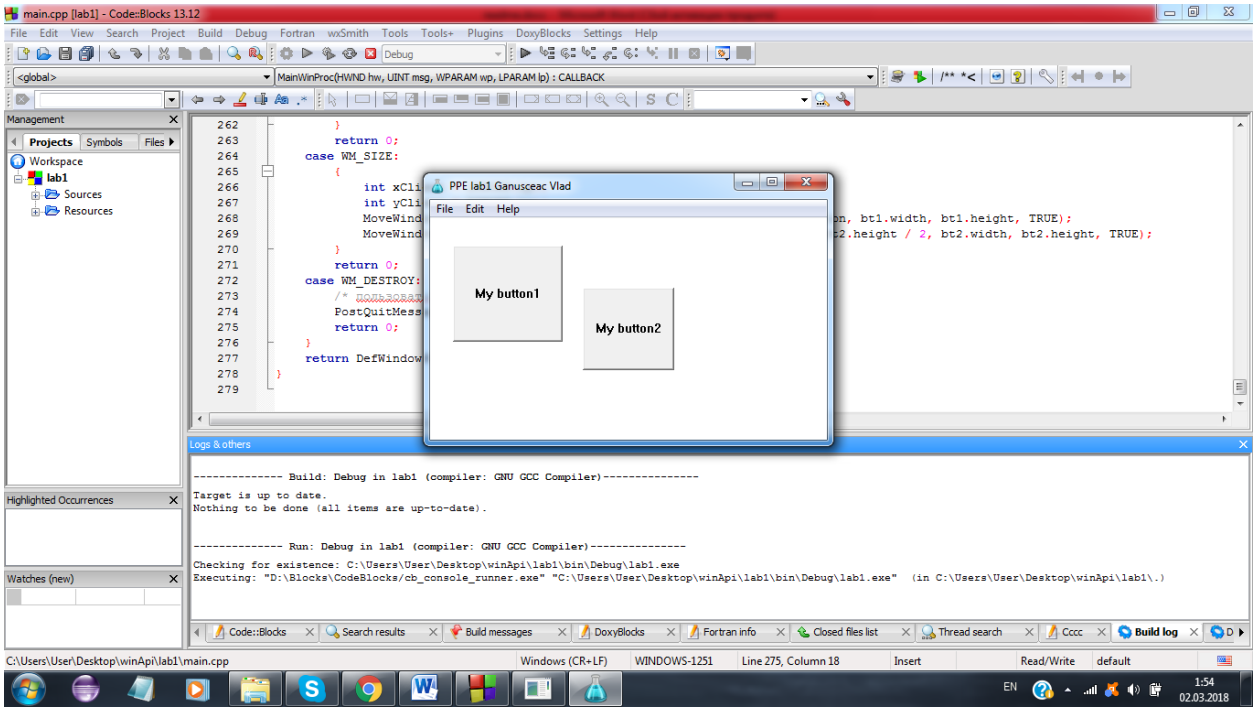
- (1pt) Add 2 text inputs to window: one with default styles, one with custom styles (size, background, text color, font family, font size)
- (1pt) Make elements to fit window on resize (hint: you can limit minimal window width and height)
- (0-2pt)Make elements to interact or change other elements (1pt each different interactions) (ex. on button click, change text element color or position)
- (1pt) Change behavior of different window actions (at least 3). For ex.: on clicking close button, move window to a random location on display's working space
- (1pt) Write your own PSG (you can take existent one and modify it) and argue why it is better (for you)

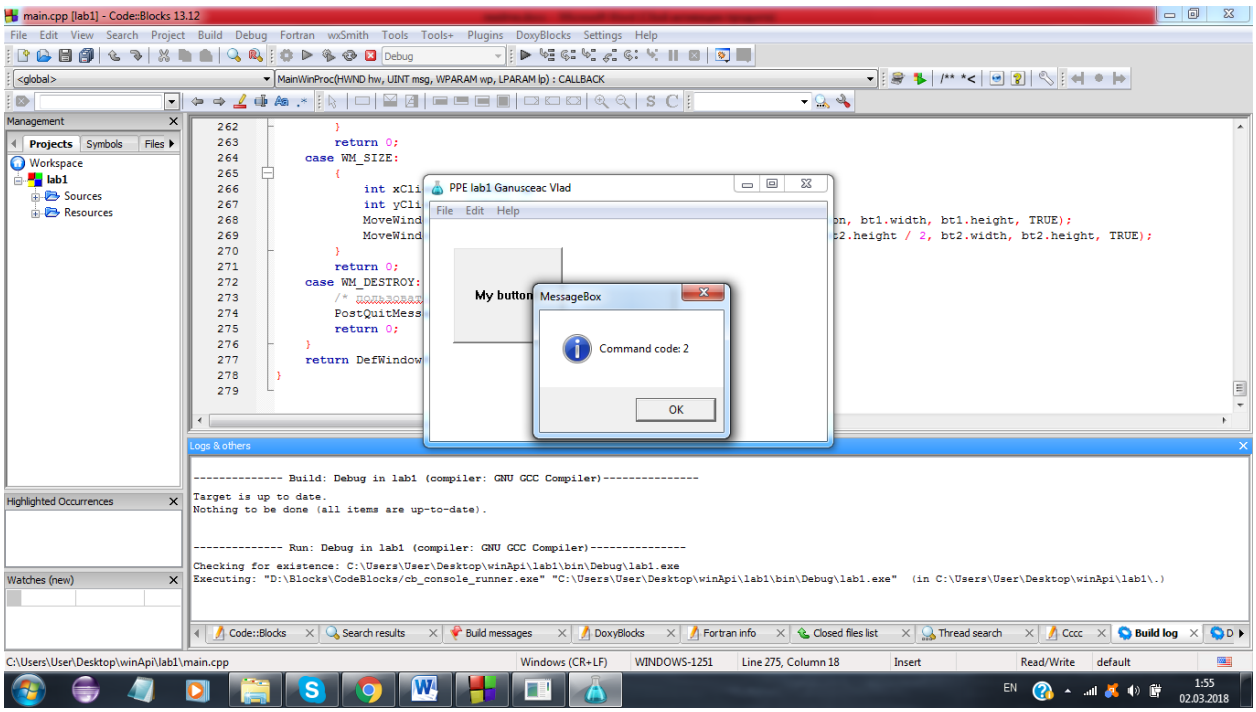
3 Laboratory work implementation

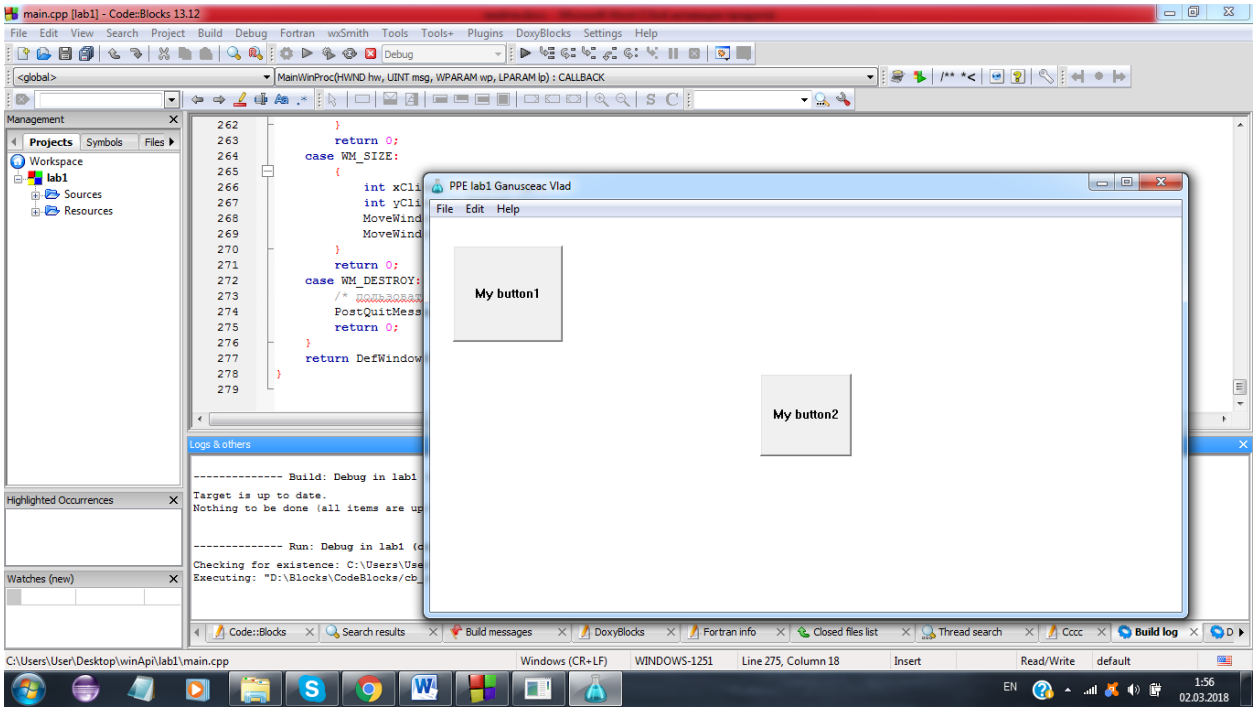


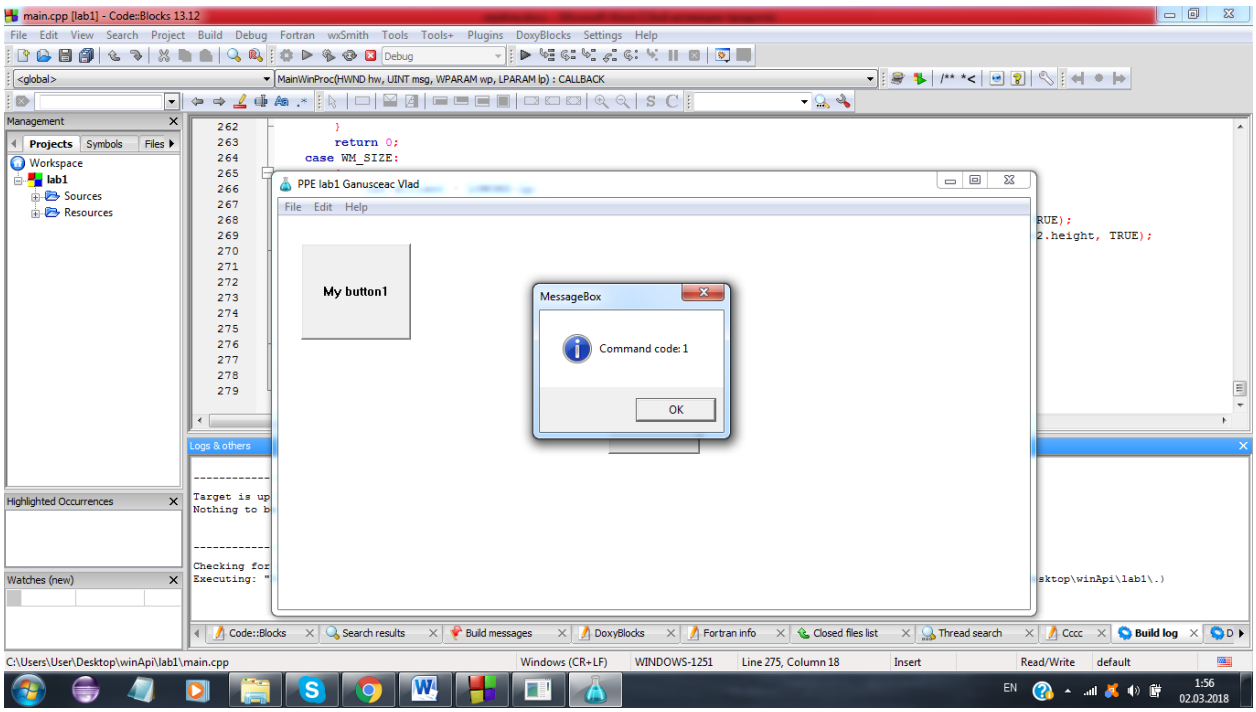


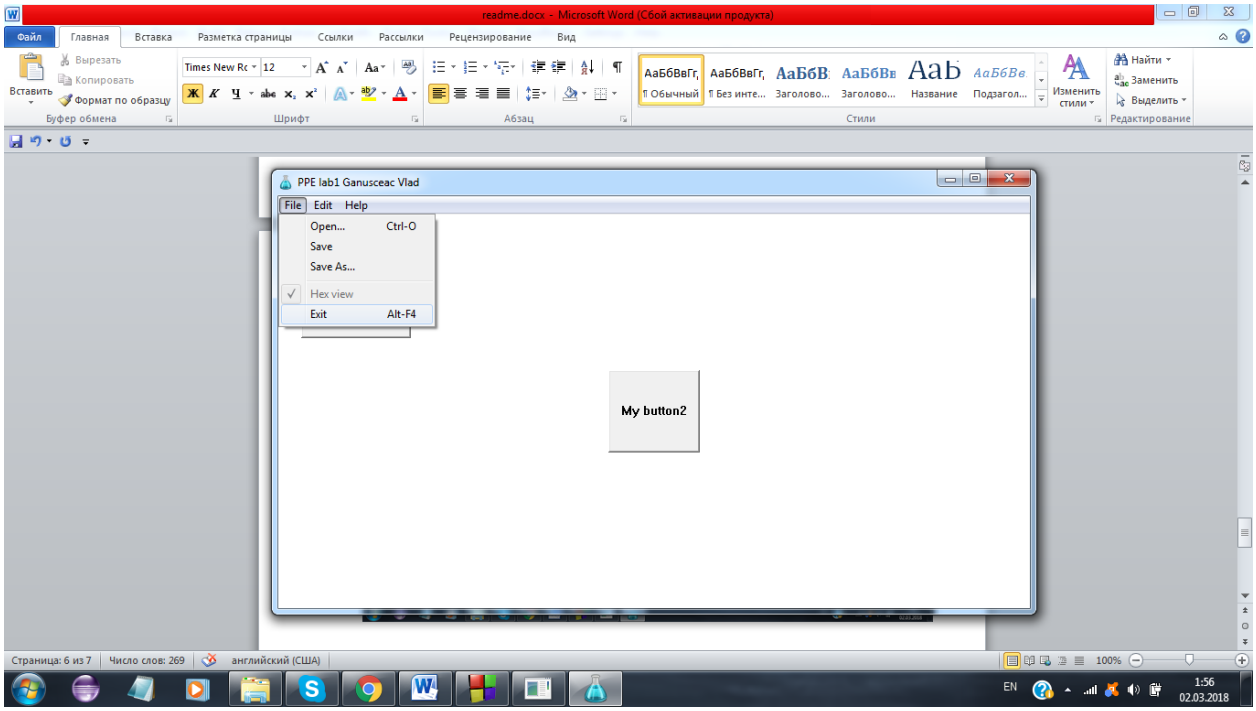

readme.docx - Microsoft Word (Сбой активации продукта)
PPE lab1 Ganusceac Vlad
File
Edit
Help
Resize button1
Resize button2
Resize window
Search
450x300
550x420
700x512
800x600
1012X700
My button2


main.cpp [lab1] - Code::Blocks 13.12
PPE lab1 Ganusceac Vlad
File
Edit
Help
My button1
My button2
Management
Projects
Symbols
Files
Workspace
lab1
Sources
Resources
Logs & others
Build: Debug in lab1 (compiler: GNU GCC Compiler)
Target is up to date.
Nothing to be done (all items are up-to-date).
Run: Debug in lab1 (compiler: GNU GCC Compiler)
Checking for existence: C:\Users\User\Desktop\winApi\lab1\bin\Debug\lab1.exe
Executing: "D:\Blocks\CodeBlocks/cb_console_runner.exe" "C:\Users\User\Desktop\winApi\lab1\bin\Debug\lab1.exe"
C:\Users\User\Desktop\winApi\lab1\main.cpp


main.cpp [lab1] - Code::Blocks 13.12
PPE lab1 Ganusceac Vlad
File Edit Help
My button
MessageBox
Command code: 2
OK
Logs & others
Build: Debug in lab1 (compiler: GNU GCC Compiler)
Target is up to date.
Nothing to be done (all items are up-to-date).
Run: Debug in lab1 (compiler: GNU GCC Compiler)
Checking for existence: C:\Users\User\Desktop\winApi\lab1\bin\Debug\lab1.exe
Executing: "D:\Blocks\CodeBlocks/cb_console_runner.exe" "C:\Users\User\Desktop\winApi\lab1\bin\Debug\lab1.exe"


main.cpp [lab1] - Code::Blocks 13.12
PPE lab1 Ganusceac Vlad
File Edit Help
My button1
My button2


main.cpp [lab1] - Code::Blocks 13.12
PPE lab1 Ganusceac Vlad
My button1
MessageBox
Command code: 1
OK


readme.docx - Microsoft Word (Сбой активации продукта)
PPE lab1 Ganusceac Vlad
File Edit Help
Open... Ctrl-O
Save
Save As...
Hex view
Exit Alt-F4
My button2

Conclusion:

.NET is *intended* to hide the tedious details of the Win32 API. It succeeds at that in some respects, but fails in others. If most of what we write fits well with what MS tries to support, it can succeed quite well. If we depart into "virgin territory", we can lose the advantage entirely, and even cause a great deal of extra work compared to native code using Win32 directly.

References:

http://dims.karelia.ru/win32/ (Основы программирования для Win32 API**)**

https://msdn.microsoft.com/en-us/library/windows/desktop/ff818516(v=vs.85).aspx (Microsoft WinAPI)