

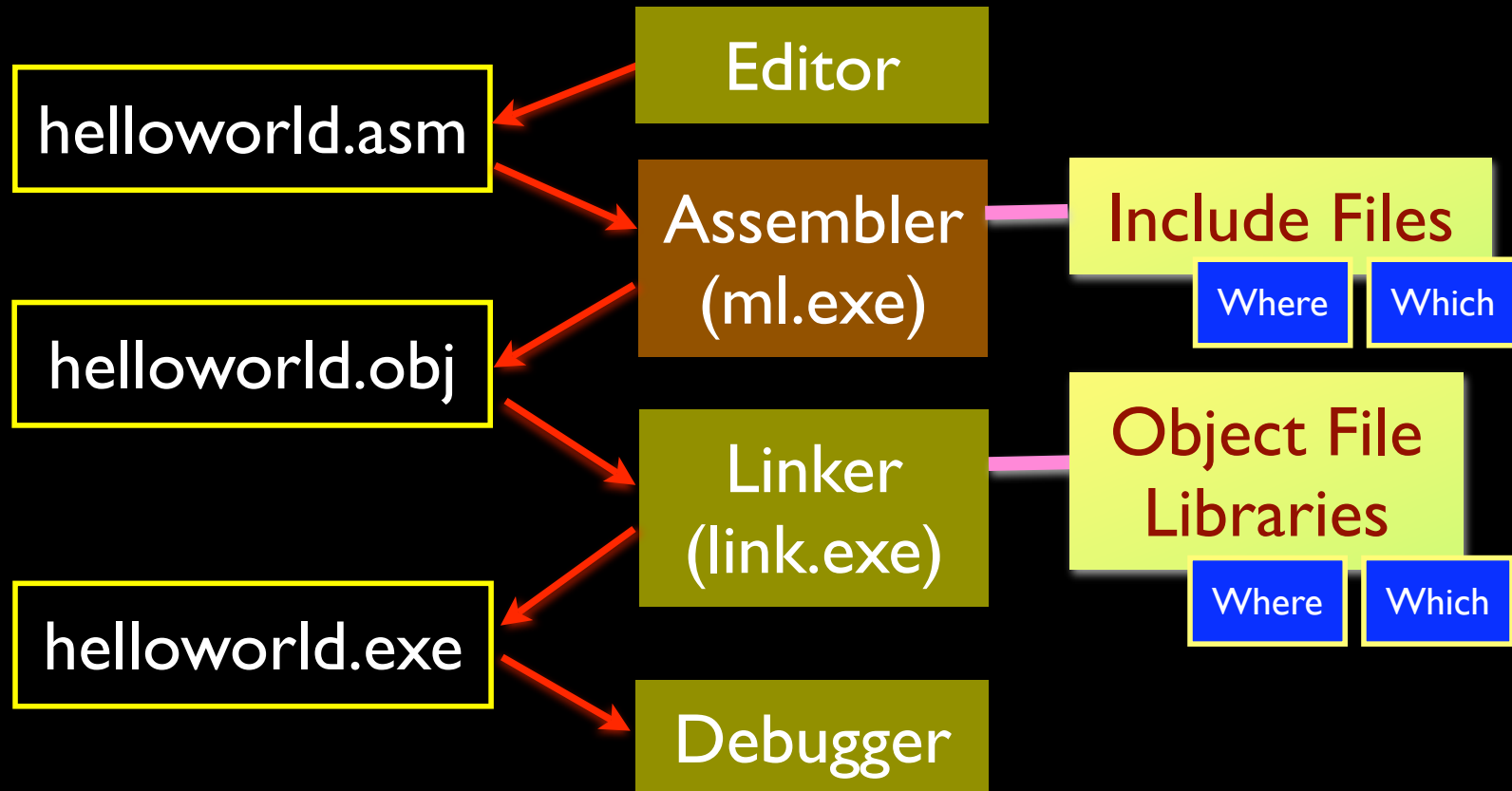
A Tutorial of Writing MASM with VC++ 2005 Express

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Assembly Language 2007

MASM

- Microsoft Macro Assembler
 - MASM 8.0 included with Visual C++ 2005
 - You can download MASM 8.0 and install it with Visual C++ 2005 **Express** by yourself

What do you need ?



Visual C++ 2005 Express with MASM 8.0

- Visual C++ 2005 Express
 - Editor, Linker, and Debugger
 - Custom build rules
 - Set library paths and library dependencies [if needed]
 - Select “console” as your subsystem
- MASM 8.0
 - Assembler
 - Set include paths [if needed]

Visual C++ 2005 Express with MASM 8.0 (contd.)

- Download and Install Visual C++ 2005 Express
 - <http://0rz.tw/253mH>
- Download and Install MASM 8.0
 - <http://0rz.tw/8d1Xn>
 - You should install VC 2005 Express first

Hello MASM !

A simple example to set up the environment

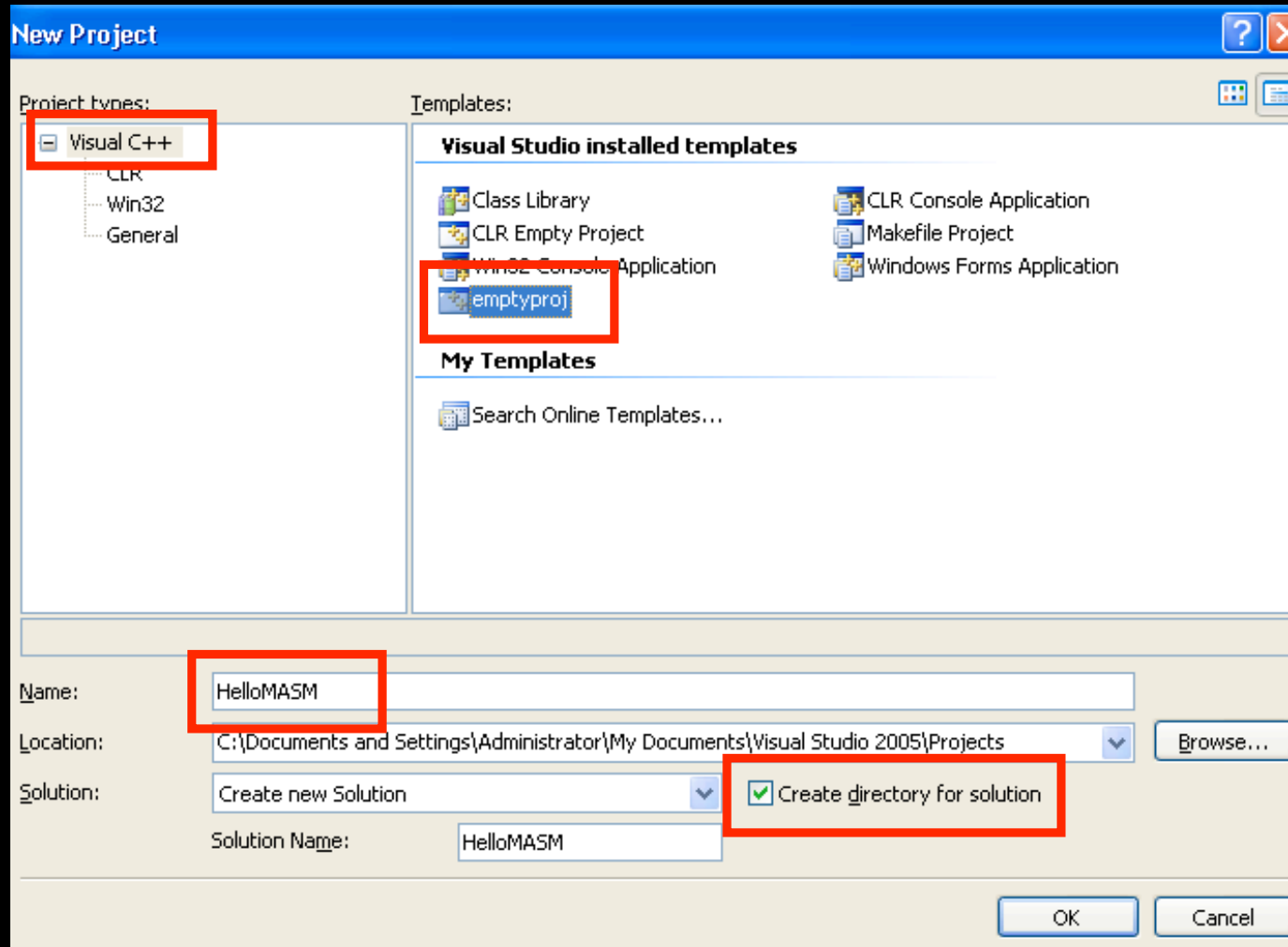
HelloMASM

- My Settings:

- Project Name: HelloMASM
- Solution Name: HelloMASM
- Source code filename: hellomasm.asm
- Additional library dependencies: Irvine32.lib
user32.lib
- Used headers: Irvine32.inc
- Additional library Paths: C:\irvine\
- Additional Include Paths: C:\irvine\

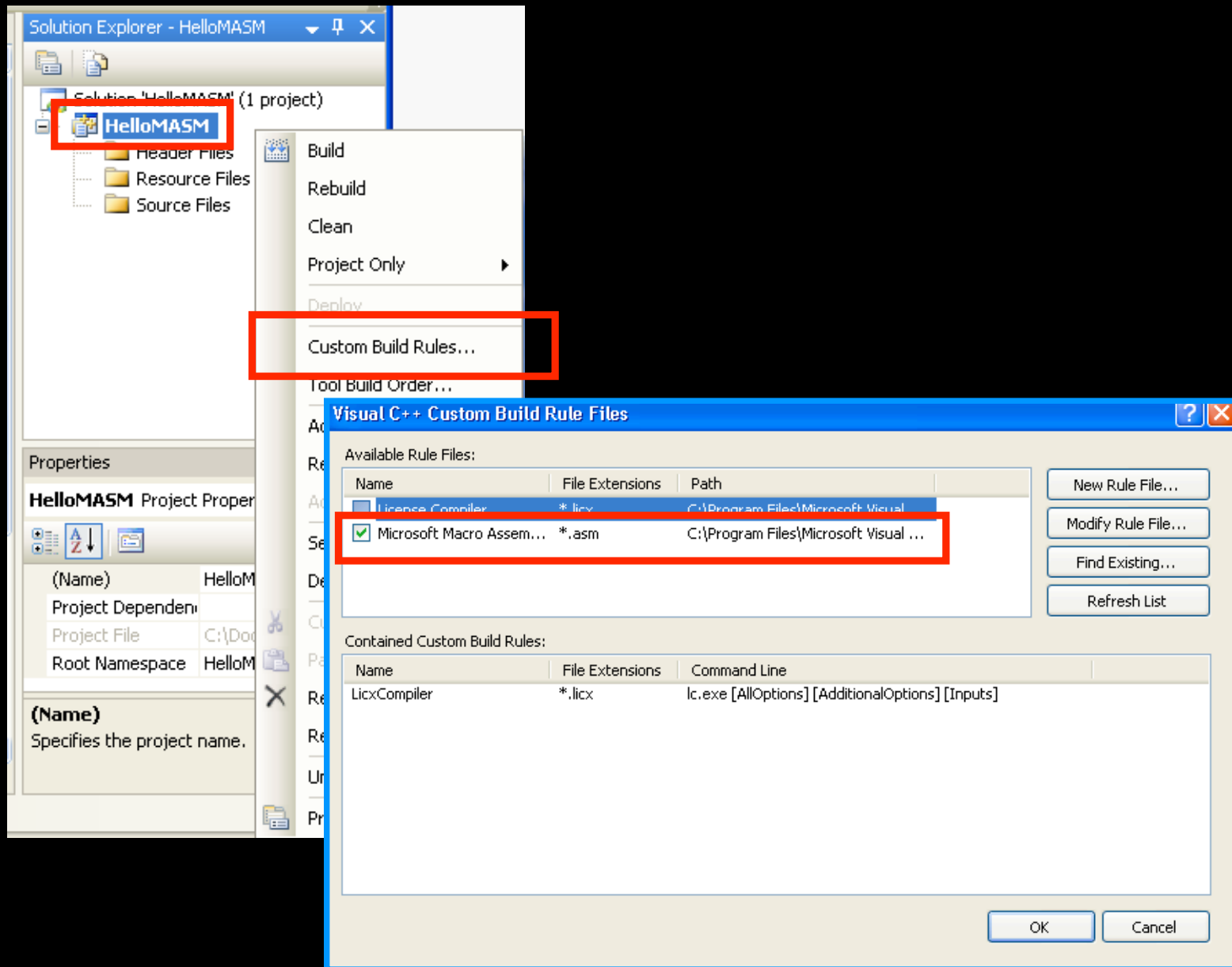
Create a new project

- [File > New > Project],
[Visual C++ > emptyproj]
 - Enter a name for your project



Custom Build Rules

- Right click on the project name in the solution explorer window and select “Custom Build Rules”
 - Turn on “Microsoft Macro Assembler”



Select “Console” as subsystem

- Right click on the project name in the solution explorer window and select “Properties”
 - [Configuration Properties > Linker > System > Subsystem]
 - Select “Console”

The screenshot shows the Visual Studio IDE with the 'HelloMASM Property Pages' dialog box open. The dialog box is titled 'HelloMASM Property Pages' and has a 'Configuration' dropdown set to 'Active(Debug)' and a 'Platform' dropdown set to 'Active(Win32)'. The 'SubSystem' property is highlighted in the 'Common Properties' section, and its value is 'Console (/SUBSYSTEM:CONSOLE)'. The 'Linker' and 'System' sections are also highlighted in the left-hand tree view. The 'Properties' window in the background shows the project name 'HelloMASM' and the project file path 'C:\Doc...'. The 'Properties' button in the bottom right corner of the dialog box is also highlighted.

Configuration: Active(Debug) **Platform:** Active(Win32) **Configuration Manager...**

SubSystem Console (/SUBSYSTEM:CONSOLE)

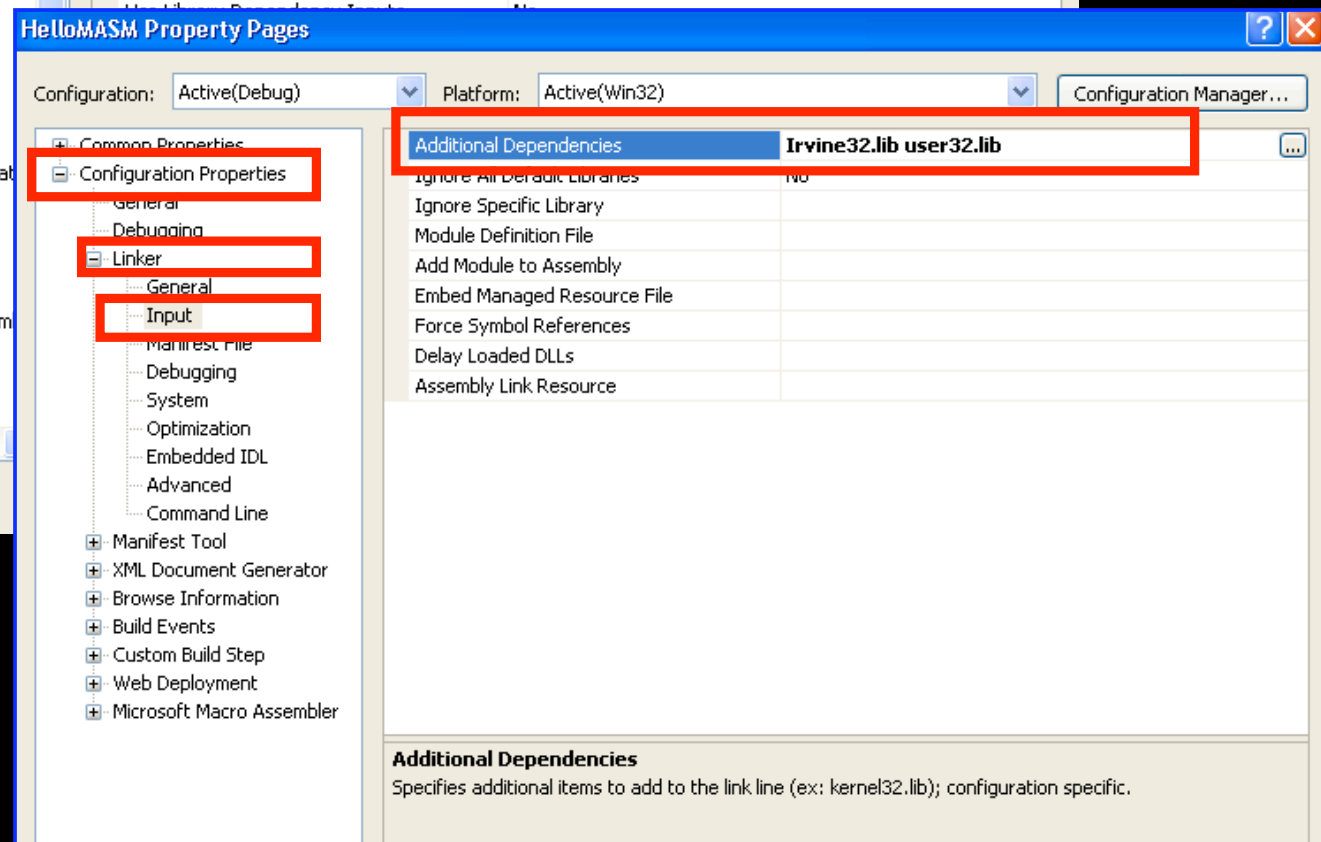
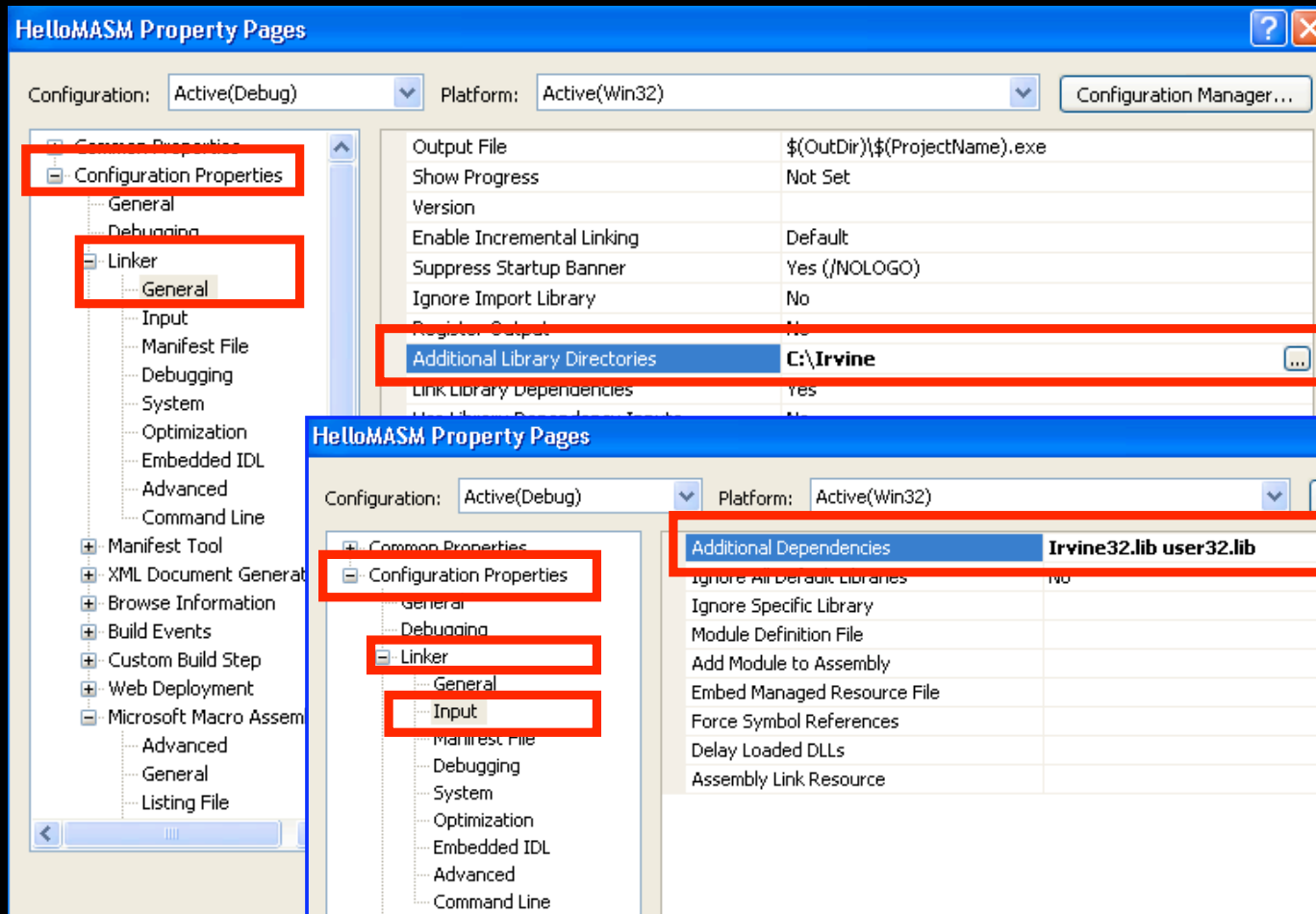
Heap Commit Size	0
Stack Reserve Size	0
Stack Commit Size	0
Enable Large Addresses	Default
Terminal Server	Default
Swap Run From CD	No
Swap Run From Network	No
Driver	Not Set

SubSystem
Specifies subsystem for the linker. (/SUBSYSTEM:[type])

OK Cancel Apply

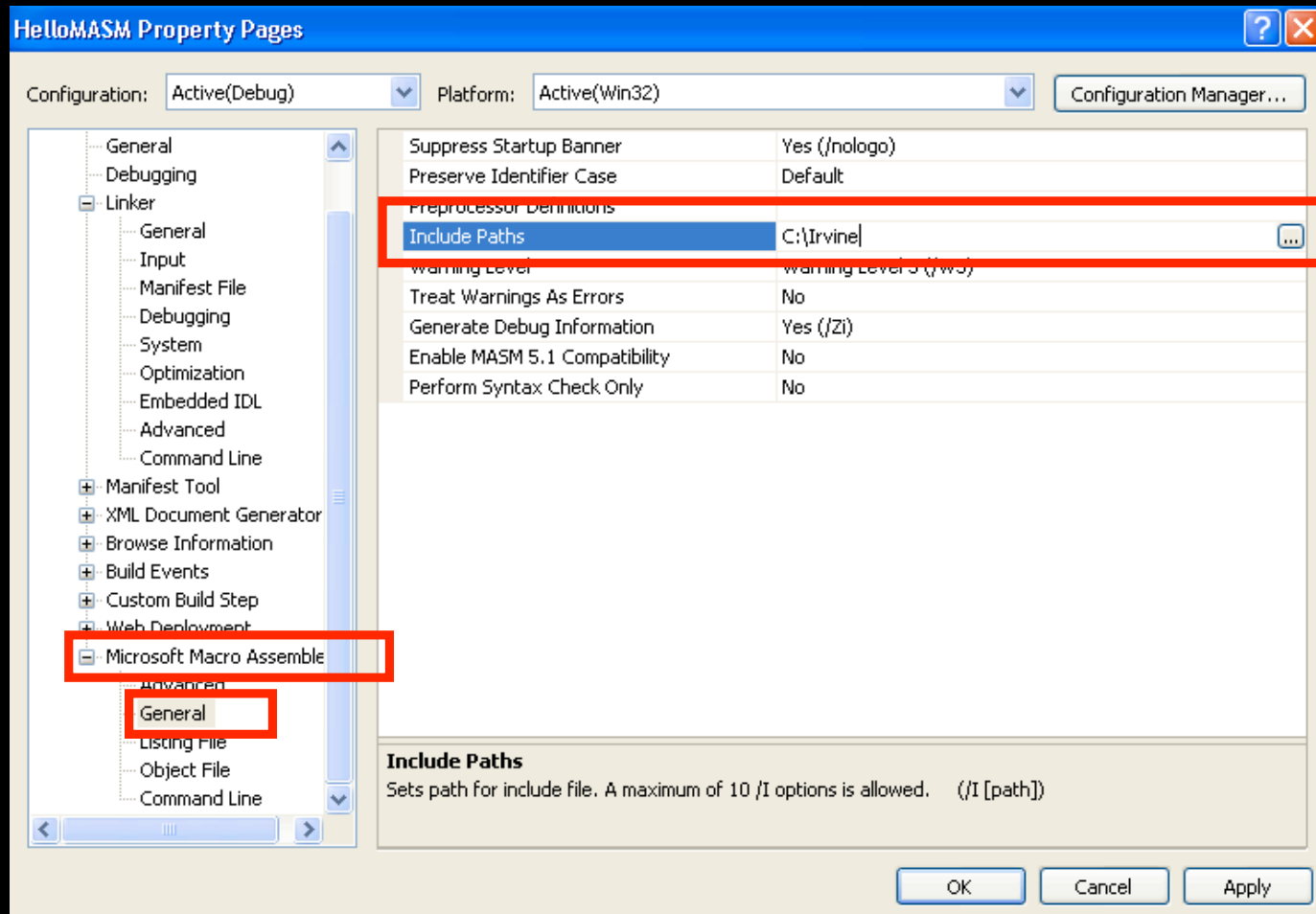
To work with other libraries

- In the same window,
 - [Configuration Properties > Linker > General > Additional Library Directories]
 - Enter the paths to library files
 - [Configuration Properties > Linker > Input > Additional Dependency]
 - Enter library filenames



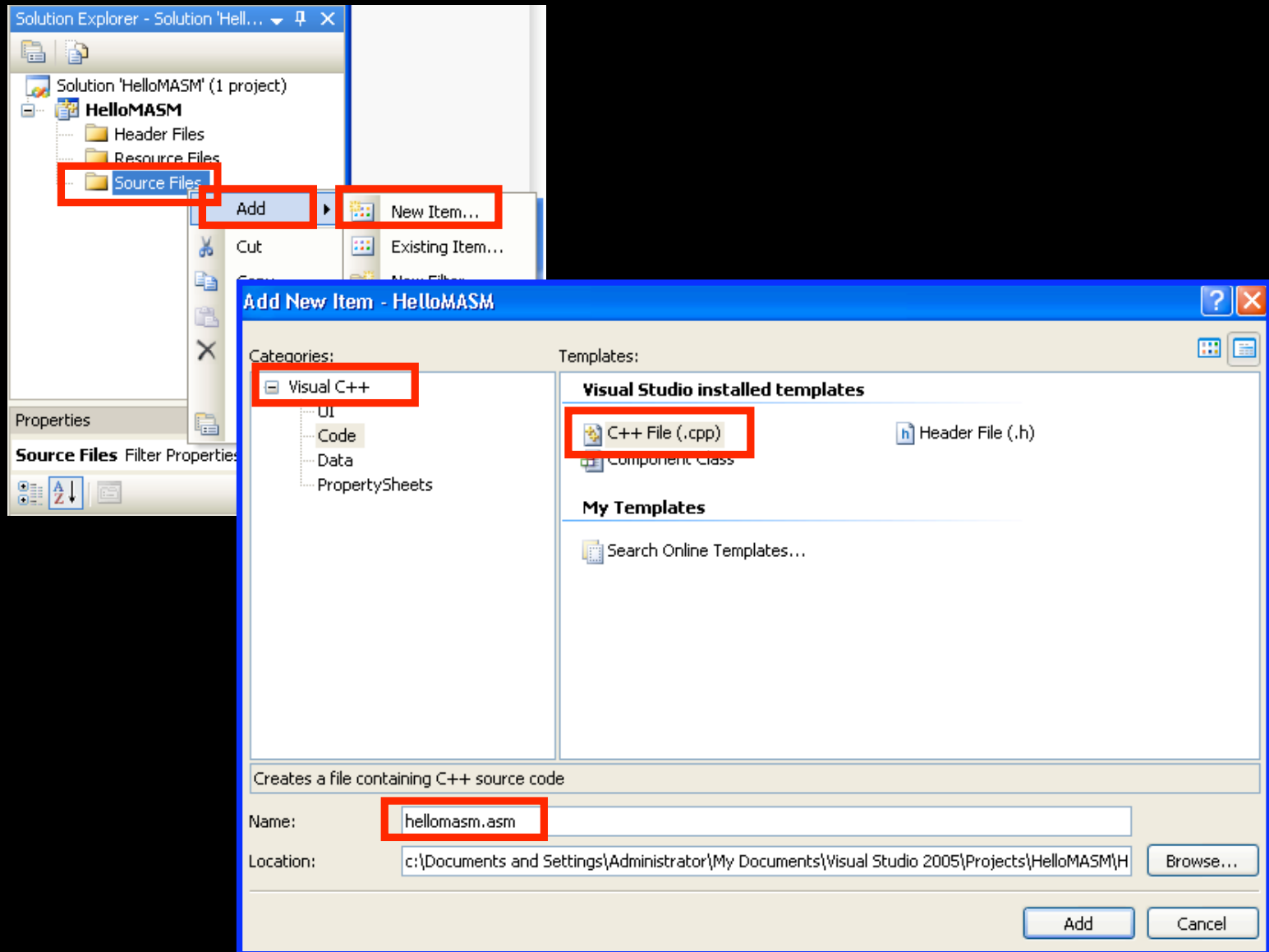
To work with other libraries (contd.)

- [Configuration Properties > Microsoft Macro Assembler > General > Include Paths]
 - Enter the paths to your header files



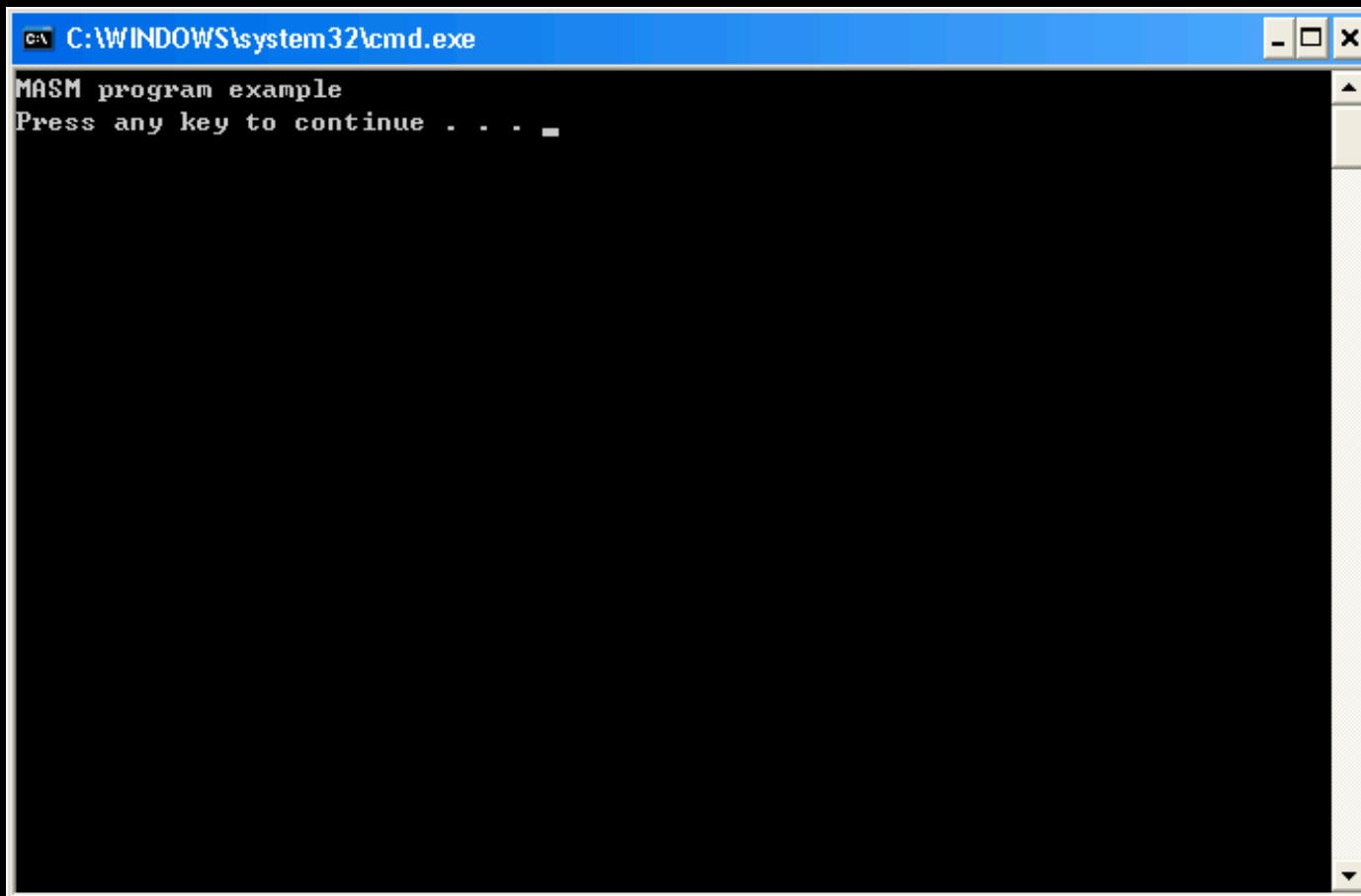
Add a new file

- Right click on “Source file” in the solution explorer window and select “Add > New Item”
- [Visual C++ > Code > C++ File (.cpp)]
 - Enter a filename with “asm” extension
- Write your codes in the editor window



Build and Run

- [Build > Build solution] or [Build > Compile]
- [Start Debugging] or [Start without Debugging]
- Build, Run ... and Debug



A screenshot of a Windows command prompt window. The title bar is blue and contains the text "C:\WINDOWS\system32\cmd.exe" and standard window control buttons (minimize, maximize, close). The main area of the window is black with white text. The text displayed is:

```
MASM program example  
Press any key to continue . . . _
```

The End