Downloading and Installing OpenCV
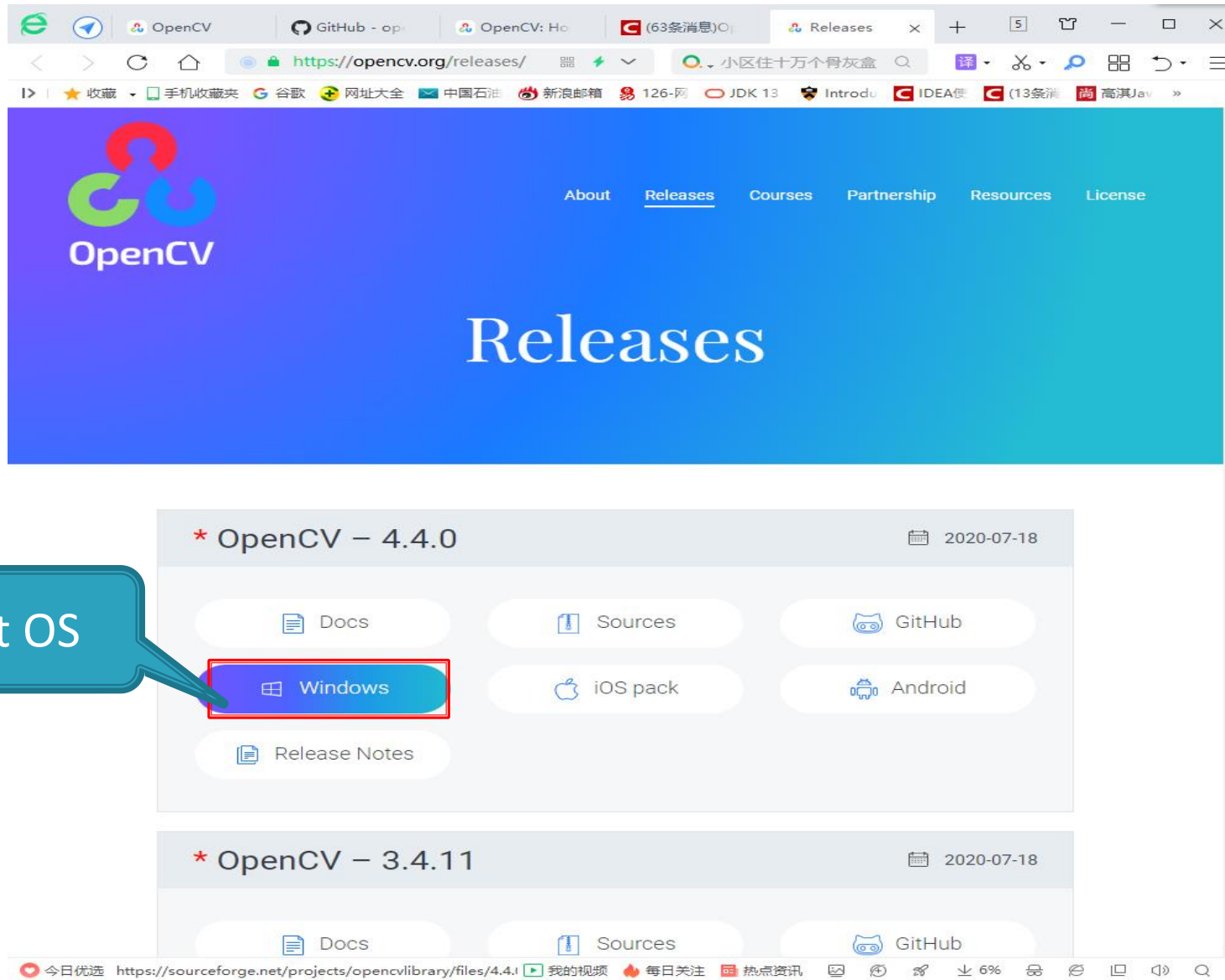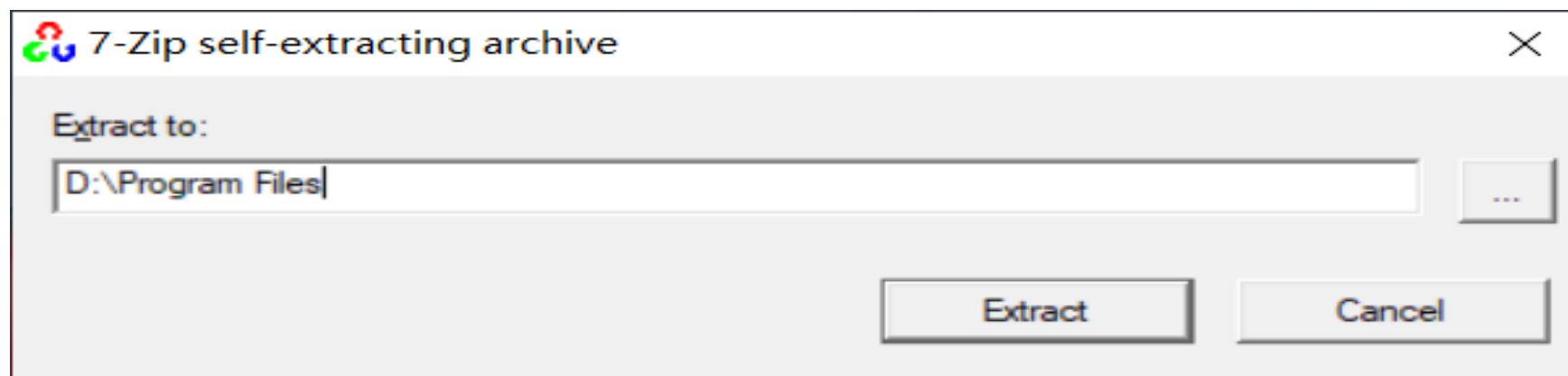
URL: https://opencv.org/releases/

1. Extract the file

Double click the .exe file
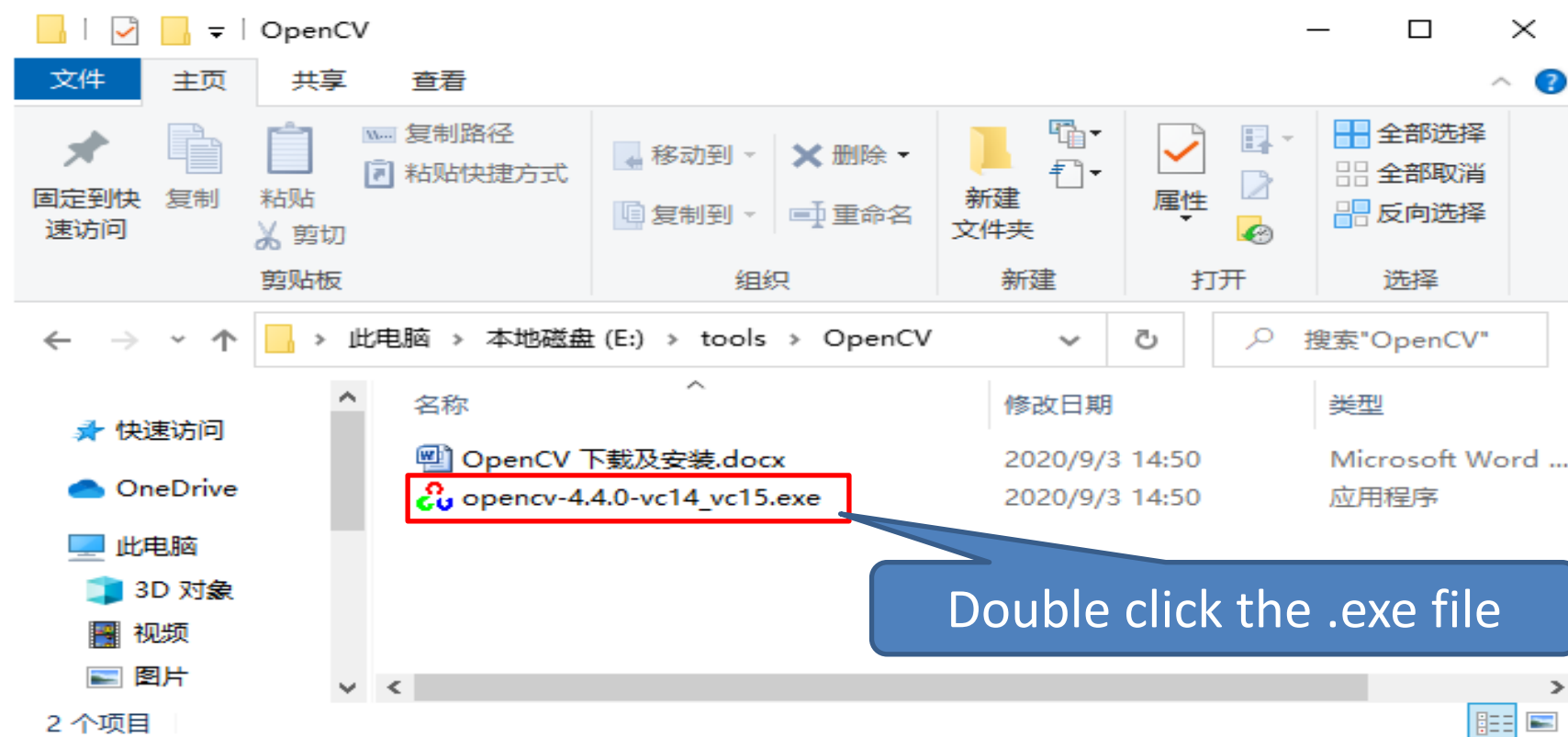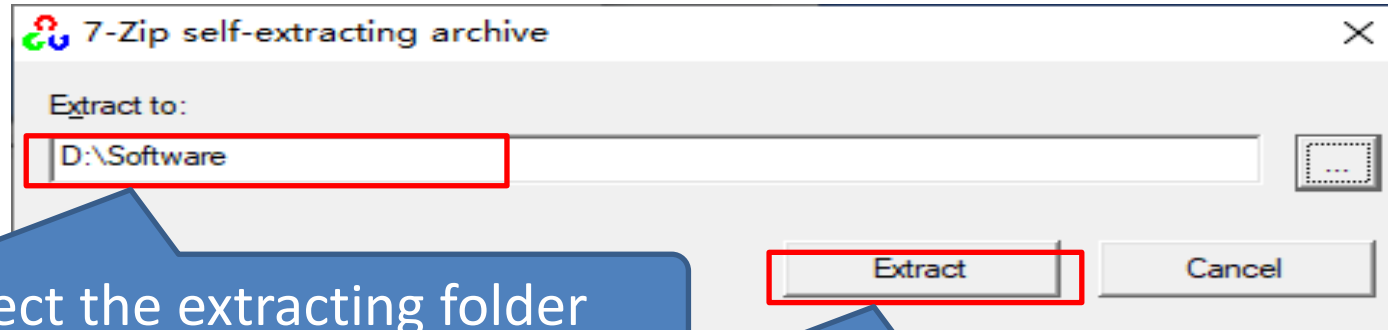
36% Extracting

Elapsed time:	00:00:03	Total size:	1203 MB
Remaining time:	00:00:05	Speed:	142 MB/s
Files:	0	Processed:	438 MB
Compression ratio:		Compressed size:	
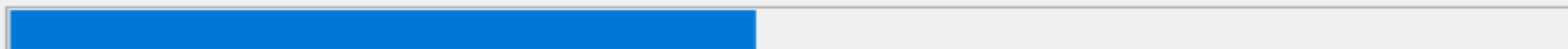
Background   Pause   Cancel

2. Configure the environment variable

Choose "Advanced system settings"

环境变量   ×

liaoqm 的用户变量(U)

变量	值
IntelliJ IDEA Community Ed...	C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2020...
OneDrive	C:\Users\liaoqm\OneDrive
Path	C:\Users\liaoqm\AppData\Local\Microsoft\WindowsApps;;C:\Pr...
TEMP	C:\Users\liaoqm\AppData\Local\Temp
TMP	C:\Users\liaoqm\AppData\Local\Temp

新建(N)...   编辑(E)...   删除(D)

系统变量(S)

变量	值
ComSpec	C:\Windows\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
JAVA_HOME	C:\Program Files\Java\jdk1.8.0_221
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\W...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

新建(W)...   编辑(I)...   删除(L)

Click "Path" in system variable and click
"Edit" button

确定   取消

编辑环境变量

C:\Program Files (x86)\Common Files\Oracle\Java\javapath
C:\Program Files (x86)\Intel\iCLS Client\
C:\Program Files\Intel\iCLS Client\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
C:\Program Files (x86)\Intel\Intel(R) Management Engine Comp...
C:\Program Files\Intel\Intel(R) Management Engine Component...
C:\Program Files (x86)\Intel\Intel(R) Management Engine Comp...
C:\Program Files\Intel\Intel(R) Management Engine Component...
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files\Intel\WiFi\bin\
C:\Program Files\Common Files\Intel\WirelessCommon\
%JAVA_HOME%\bin
C:\Program Files\MATLAB\R2016a\runtime\win64
C:\Program Files\MATLAB\R2016a\bin
C:\Program Files\MATLAB\R2016a\polyspace\bin
C:\cygwin64\bin

新建(N)
编辑(E)
浏览(B)...
删除(D)
上移(U)
下移(O)
编辑文本(T)...

确定   取消

Click "New" button

环境变量

lichuanwei 的用户变量(U)

变量	值
CLASSPATH	E:\tools\stdlib.jar;
CLion	C:\Program Files\JetBrains\CLion 2020.1.2\bin;
IntelliJ IDEA Community E...	C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 20...
MOZ_PLUGIN_PATH	E:\tools\pdf_reader\Foxit PhantomPDF Business v9.5.0 Portab...
OneDrive	C:\Users\lichuanwei\OneDrive
Path	C:\Users\lichuanwei\AppData\Local\Programs\Python\Python...
PyCharm Community Editi...	C:\Program Files\JetBrains\PyCharm Community Edition 2020...

新建(N)...　　编辑(E)...　　删除(D)

系统变量(S)

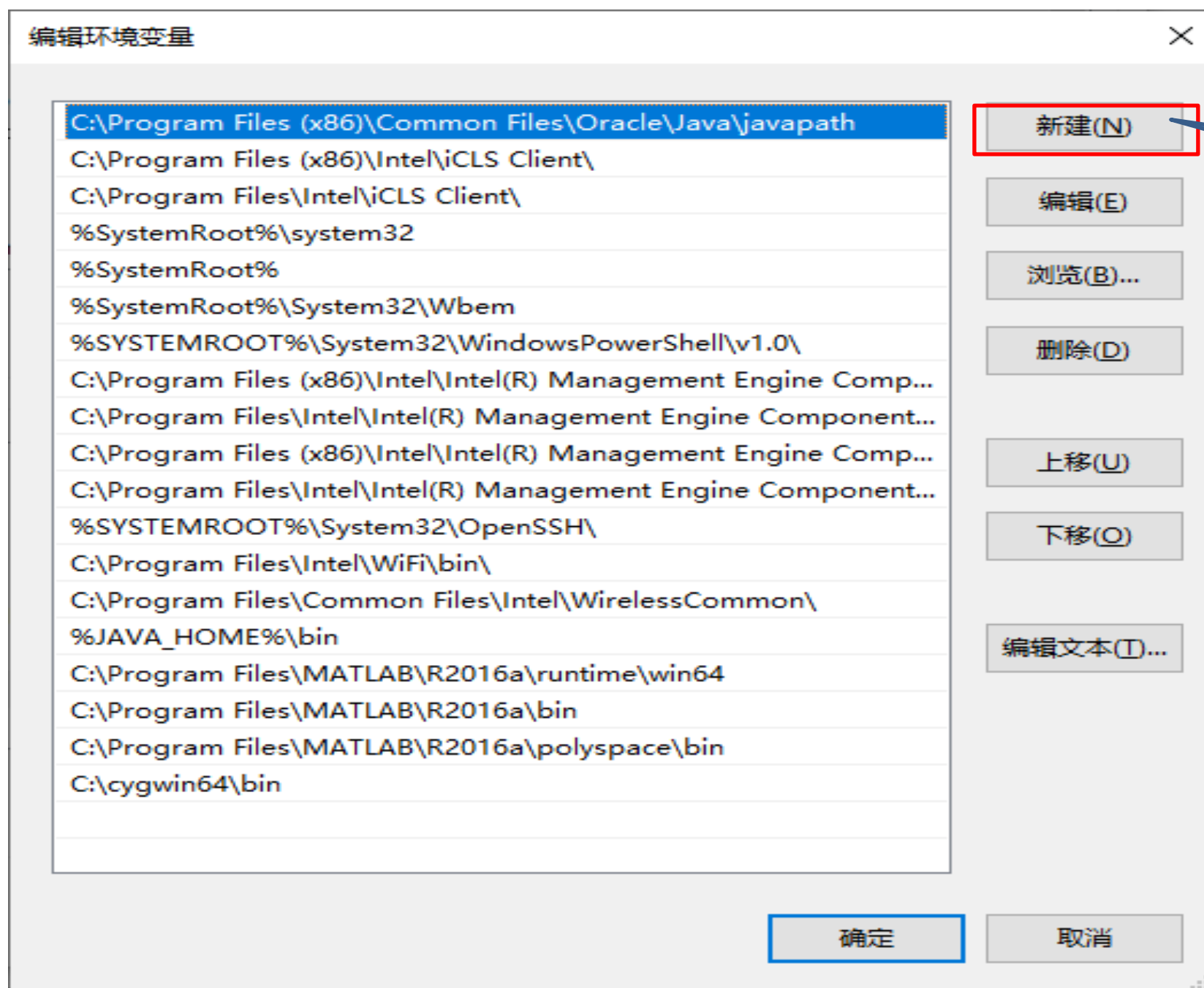| 变量	值
ComSpec	C:\WINDOWS\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
JAVA_HOME	C:\Program Files\Java\jdk1.8.0_221
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC

新建(W)...　　编辑(I)...　　删除(L)

确定　　取消

系统属性
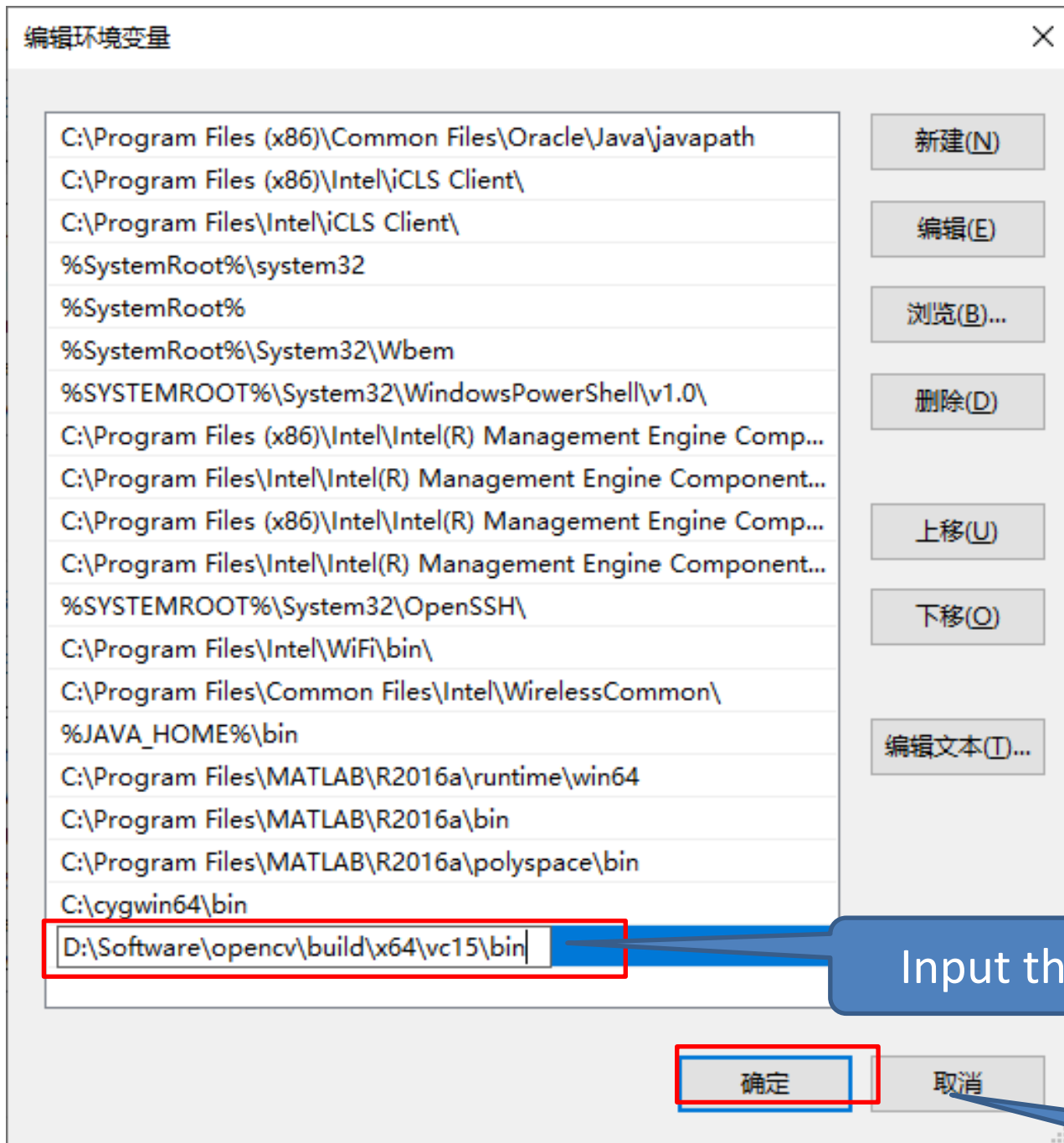
计算机名　硬件　高级　系统保护　远程

要进行大多数更改，你必须作为管理员登录。

性能

视觉效果，处理器计划，内存使用，以及虚拟内存

设置(S)...

用户配置文件

与登录帐户相关的桌面设置

设置(E)...

启动和故障恢复

系统启动、系统故障和调试信息

设置(T)...

环境变量(N)...

确定　　取消　　应用(A)

3. Configure files in VS 2019

(1) Create an empty project in vs2019

Configure your new project

Empty Project   C++   Windows   Console
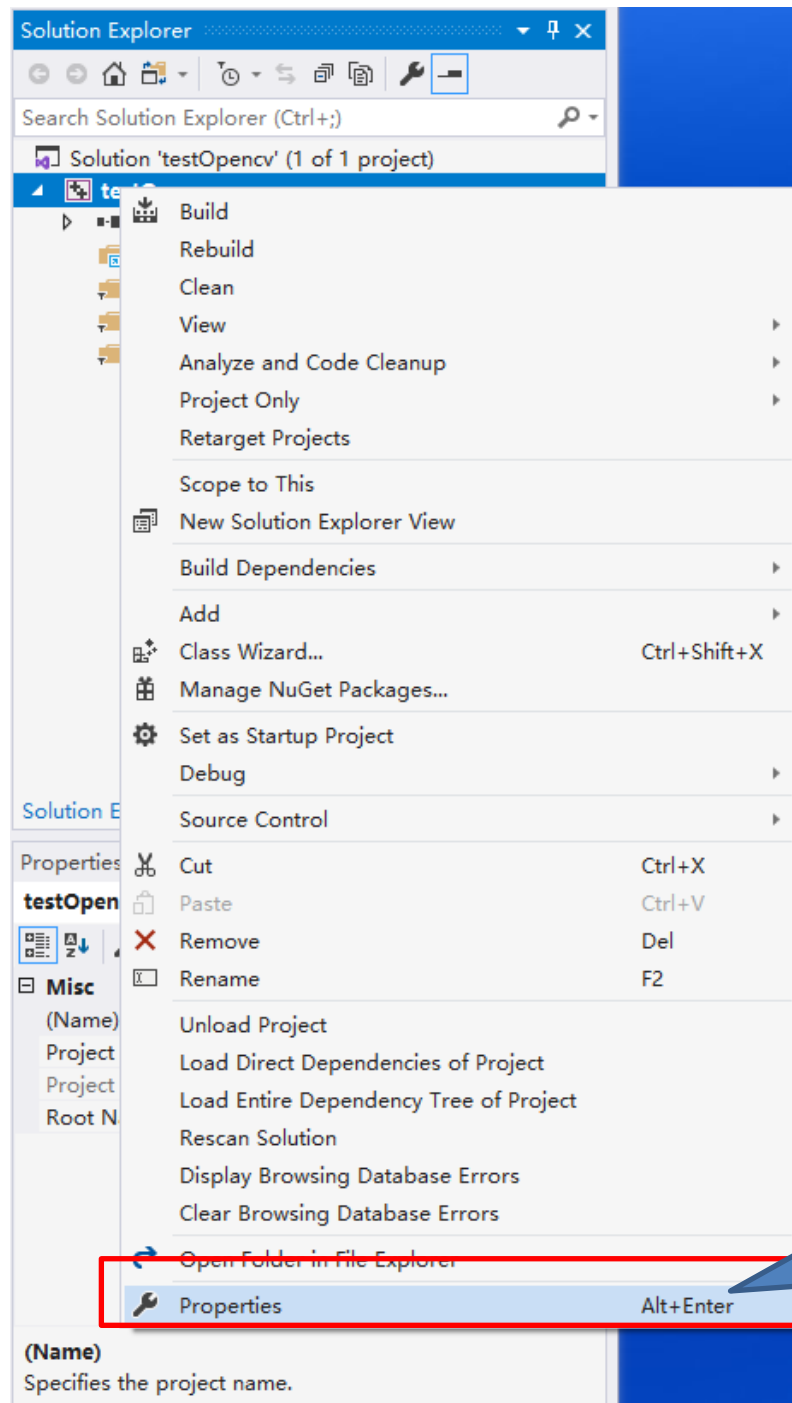
Project name

testOpencv

Location

D:\csourcecode

Solution name ⓘ

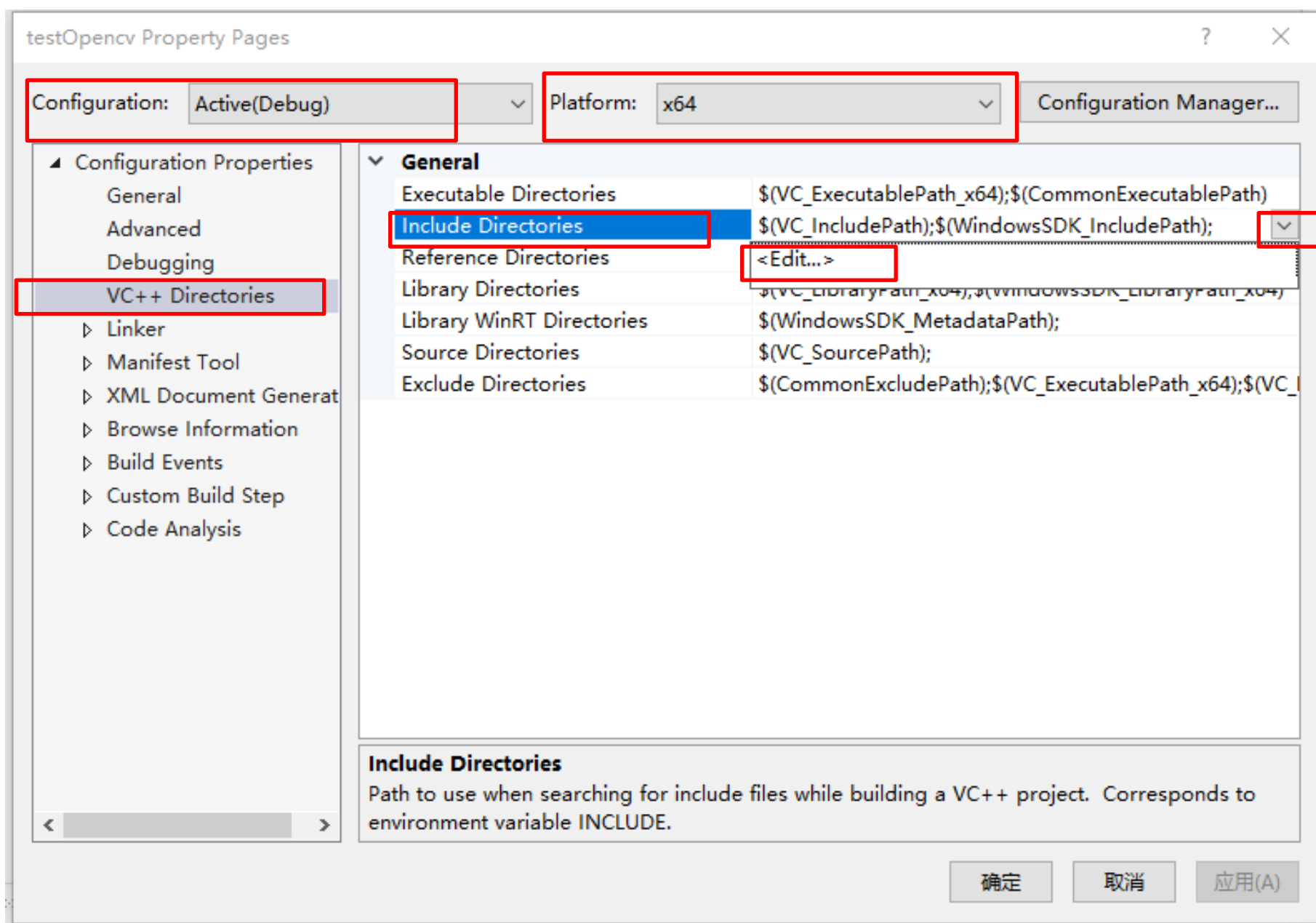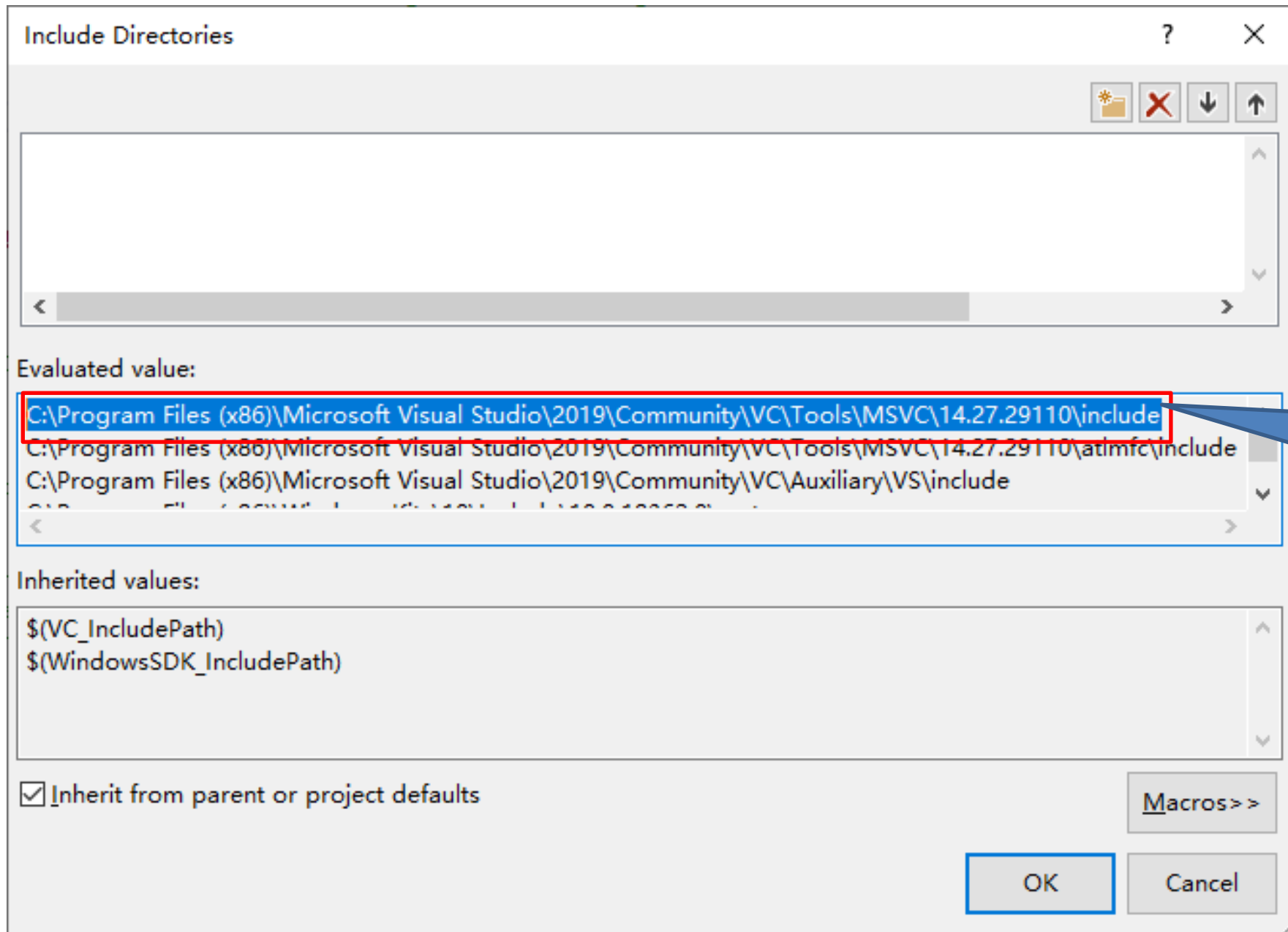testOpencv

☐ Place solution and project in the same directory

Back   Create

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'testOpencv' (1 of 1 project)

te...

	Build	
	Rebuild	
	Clean	
	View	▶
	Analyze and Code Cleanup	▶
	Project Only	▶
	Retarget Projects	
	Scope to This	
	New Solution Explorer View	
	Build Dependencies	▶
	Add	▶
	Class Wizard...	Ctrl+Shift+X
	Manage NuGet Packages...	
	Set as Startup Project	
	Debug	▶
	Source Control	▶
	Cut	Ctrl+X
	Paste	Ctrl+V
	Remove	Del
	Rename	F2
	Unload Project	
	Load Direct Dependencies of Project	
	Load Entire Dependency Tree of Project	
	Rescan Solution	
	Display Browsing Database Errors	
	Clear Browsing Database Errors	
	Open Folder in File Explorer	
	Properties	Alt+Enter

Solution E

Properties

testOpen

Misc
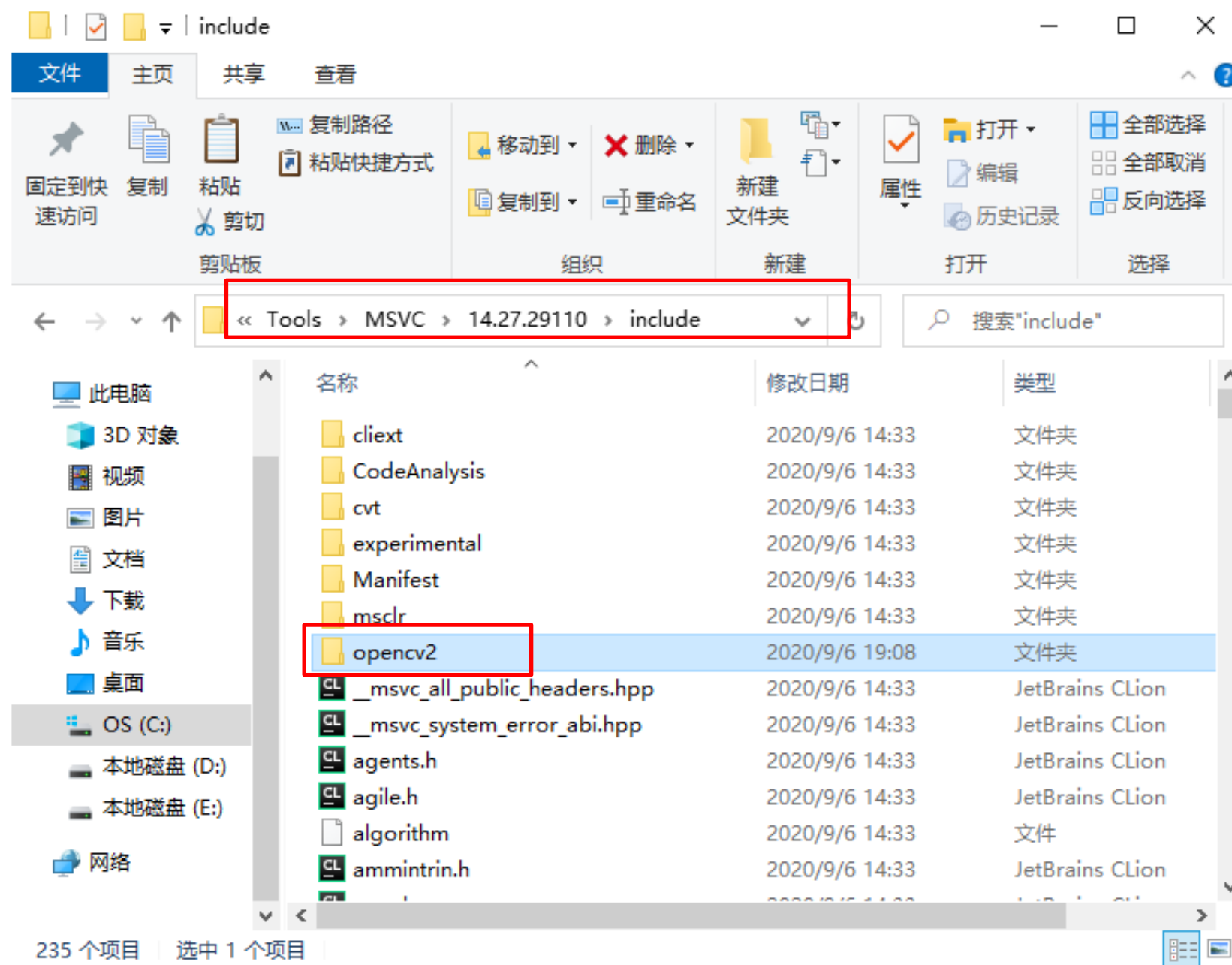
(Name)

Project

Project

Root N

(Name)

Specifies the project name.

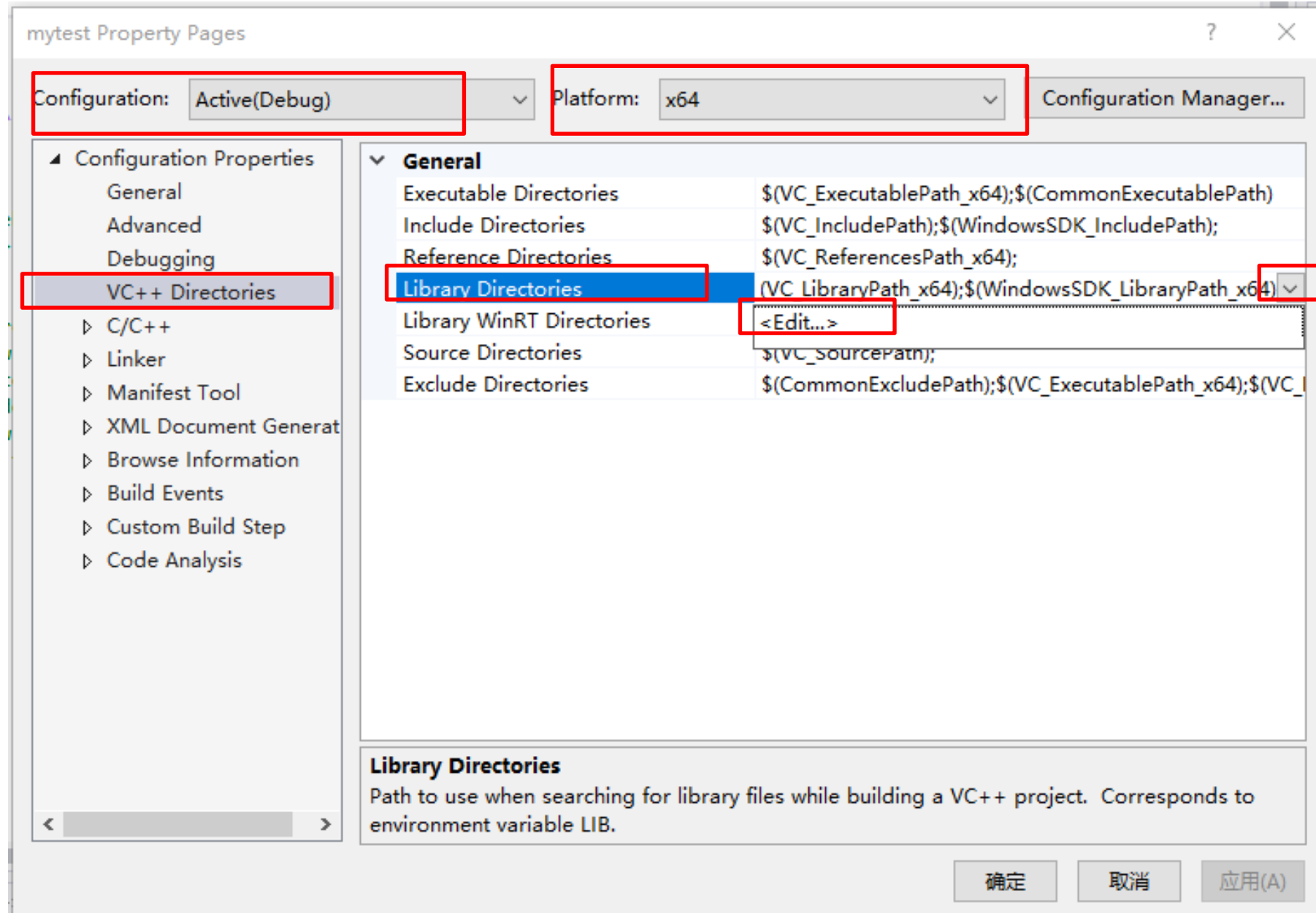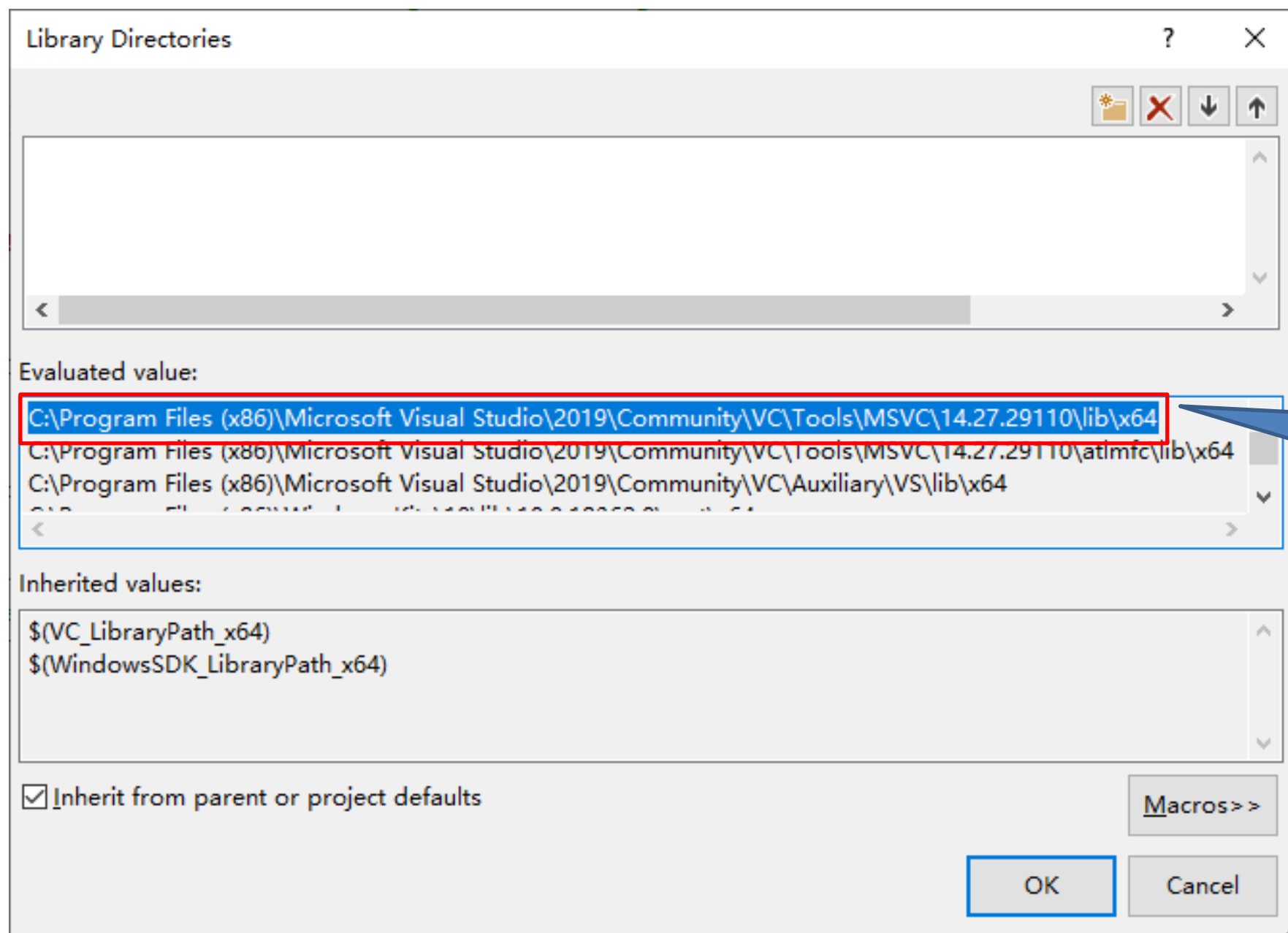Right click the mouse at your project name and choose "Properties" menu item

Copy the "opencv2" folder which is in the "D:\Software\opencv\build\include" to the directory you just copied

Open the "Properties" window for the second time, and choose "Library Directories"

Library Directories

? ✕

Evaluated value:

C:\Program Files (x86)\Microsoft Visual Studio\2019\Community\VC\Tools\MSVC\14.27.29110\lib\x64
C:\Program Files (x86)\Microsoft Visual Studio\2019\Community\VC\Tools\MSVC\14.27.29110\atlmfc\lib\x64
C:\Program Files (x86)\Microsoft Visual Studio\2019\Community\VC\Auxiliary\VS\lib\x64

copy the directory

Inherited values:

$(VC_LibraryPath_x64)
$(WindowsSDK_LibraryPath_x64)

☑ Inherit from parent or project defaults

Macros>>

OK　　Cancel

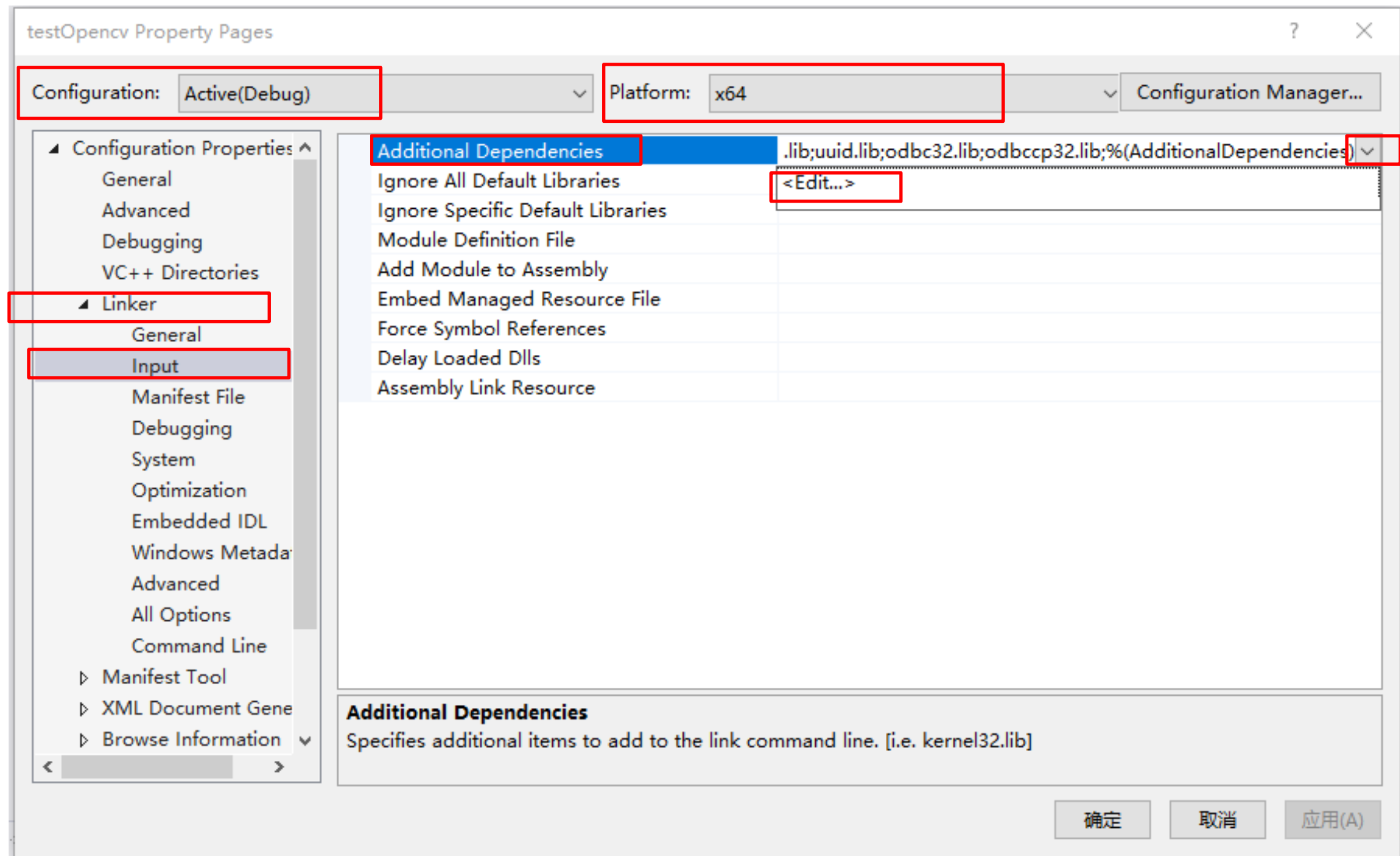Copy the two files(opencv_world440.lib and opencv_world440d.lib) which are in the "D:\Software\opencv\build\x64\vc15\lib" to the directory you just copied
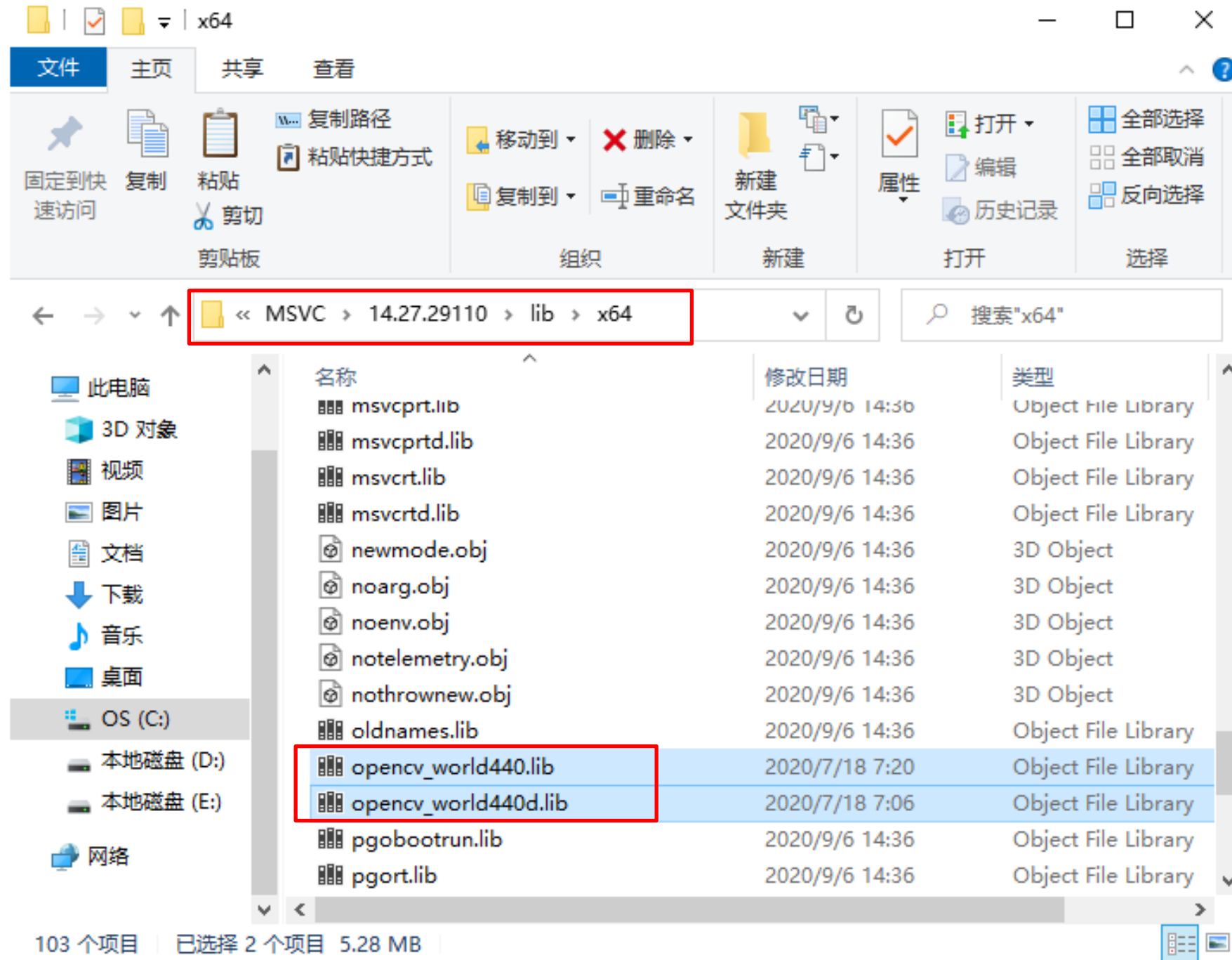
Open the "Properties" window for the third time, and choose "Linker"

testOpencv Property Pages   ?   X

Configuration: Active(Debug)   ⌄   Platform: x64   ⌄   Configuration Manager...

▲ Configuration Properties ∧
    General
    Advanced
    Debugging
    VC++ Directories
   ▲ Linker
      General
      Input
      Manifest File
      Debugging
      System
      Optimization
      Embedded IDL
      Windows Metada
      Advanced
      All Options
      Command Line
   ▷ Manifest Tool
   ▷ XML Document Gene
   ▷ Browse Information ⌄

Additional Dependencies	.lib;uuid.lib;odbc32.lib;odbccp32.lib;%(AdditionalDependencies) ⌄
Ignore All Default Libraries	<Edit...>
Ignore Specific Default Libraries	
Module Definition File	
Add Module to Assembly	
Embed Managed Resource File	
Force Symbol References	
Delay Loaded Dlls	
Assembly Link Resource	

Additional Dependencies
Specifies additional items to add to the link command line. [i.e. kernel32.lib]

确定   取消   应用(A)

Copy the filename "opencv_world440d.lib" in the D:\Software\opencv\build\x64\vc15\lib folder to the "Additional Dependencies"
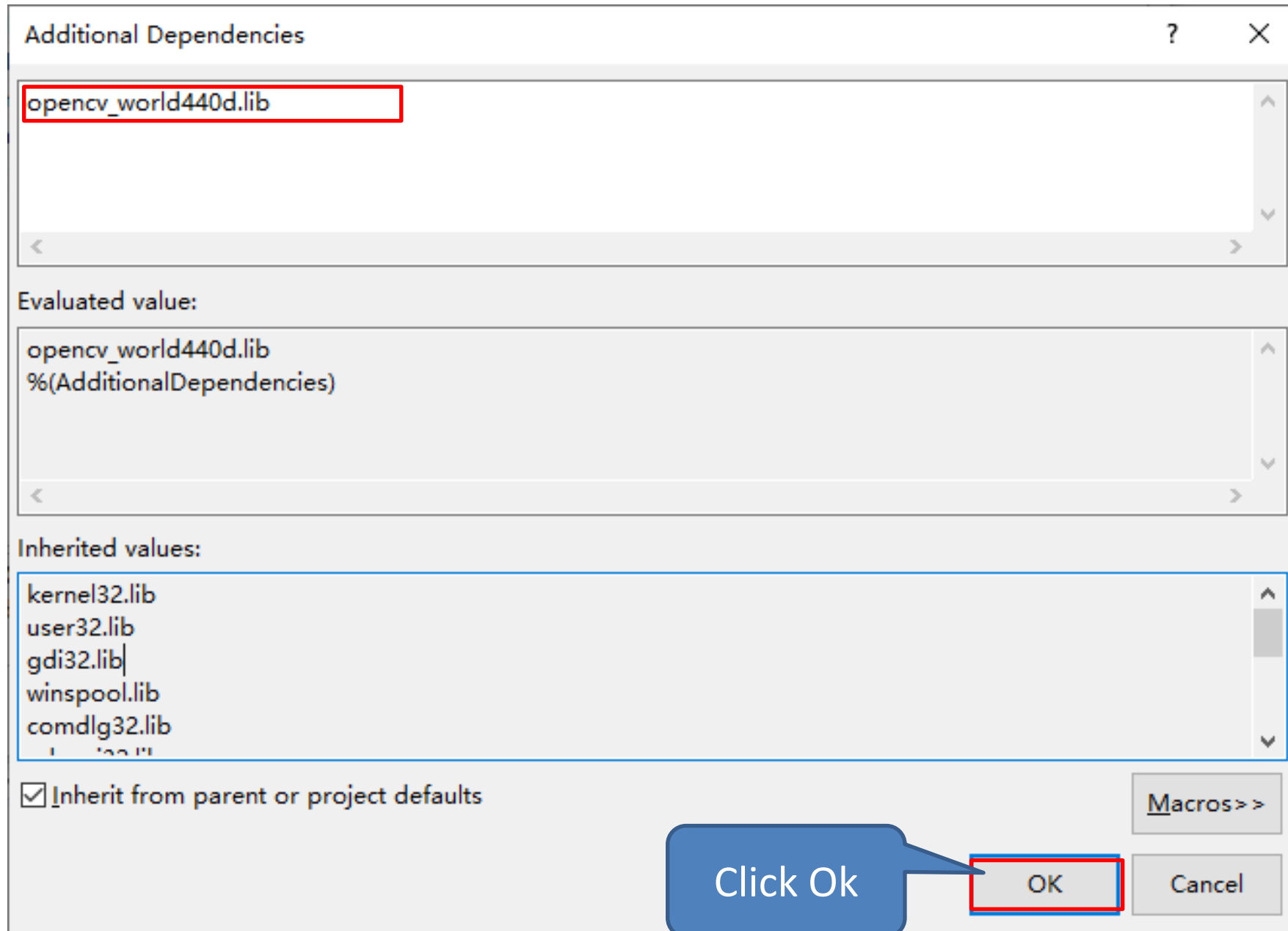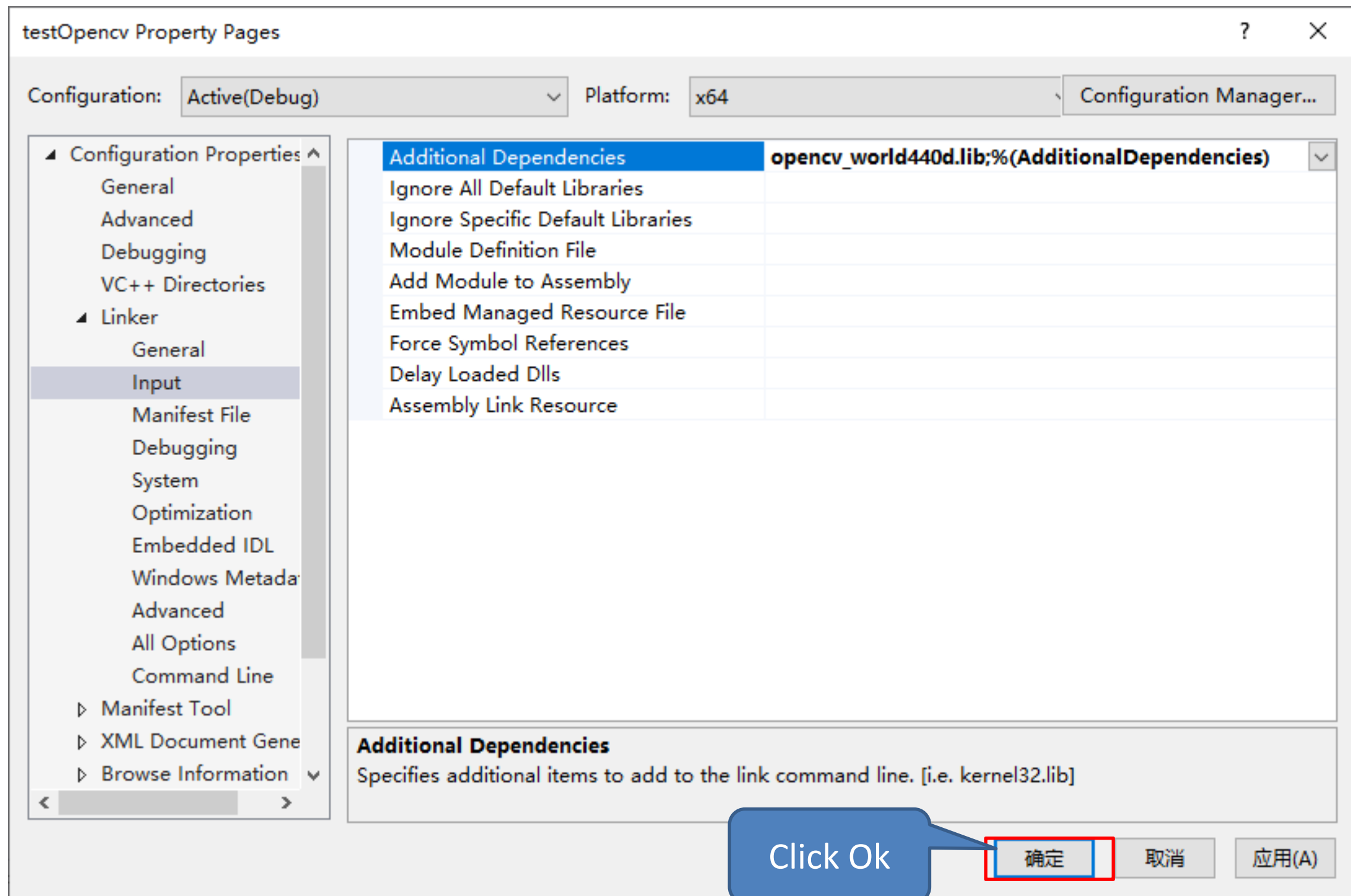
Test your opencv
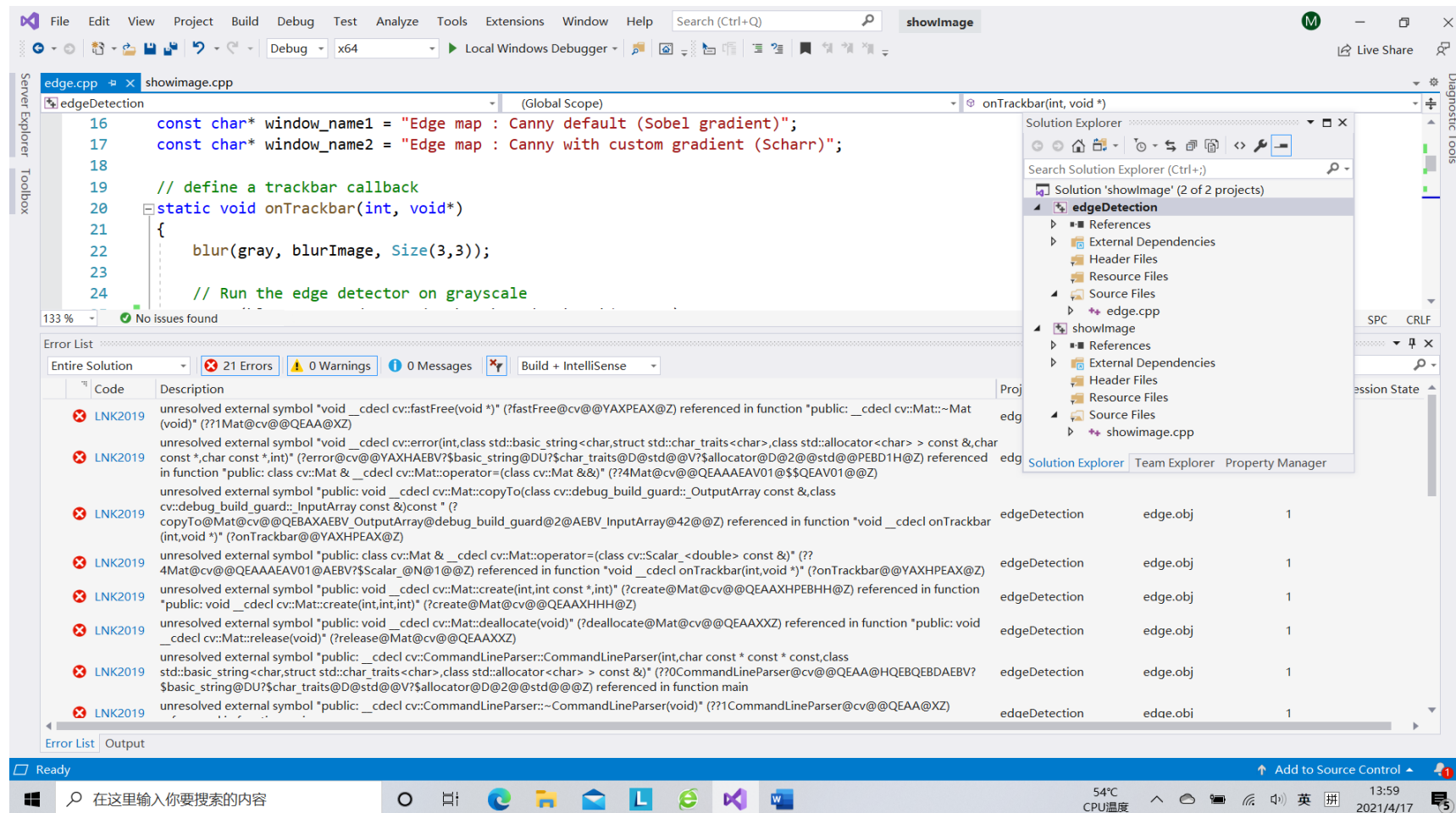
Notice: Debug must be x64
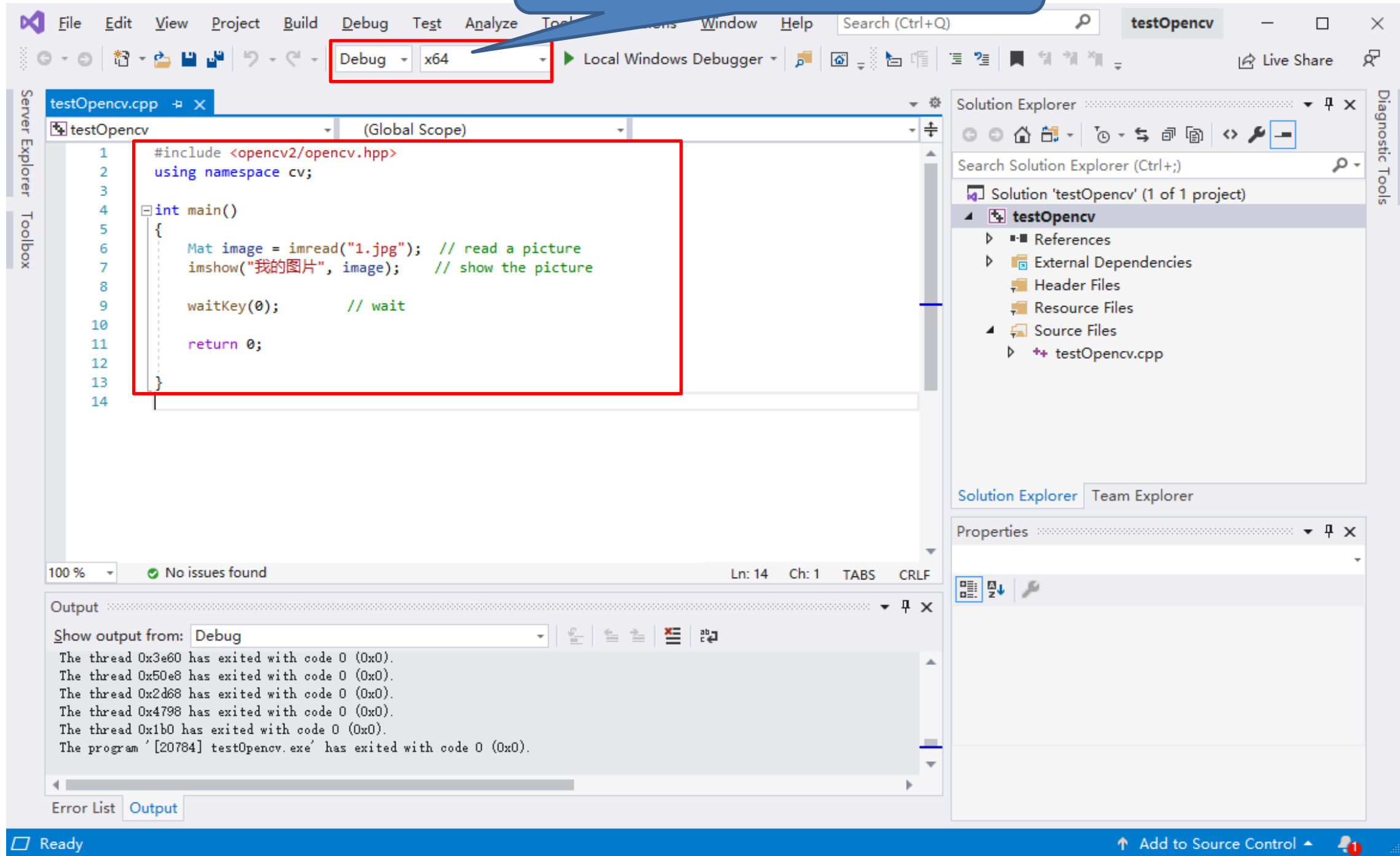
我的图片

Note:

After OpenCV is installed, you will need to add additional dependencies to the **project** each time you use it. Copy the file name of OpenCV_World440d.lib into the additional dependency. Otherwise, the compiler will report a LINK 2019 error, and many OpenCV library functions cannot be resolved.

Install openCV on macOs

https://blog.csdn.net/wo164683812/article/details/80114999

https://www.cnblogs.com/linjk/p/6029306.html

Configure openCV on CLion

https://www.pianshen.com/article/539860361/

Install openCV on ubantu

https://learnopencv.com/install-opencv-3-4-4-on-ubuntu-16-04/