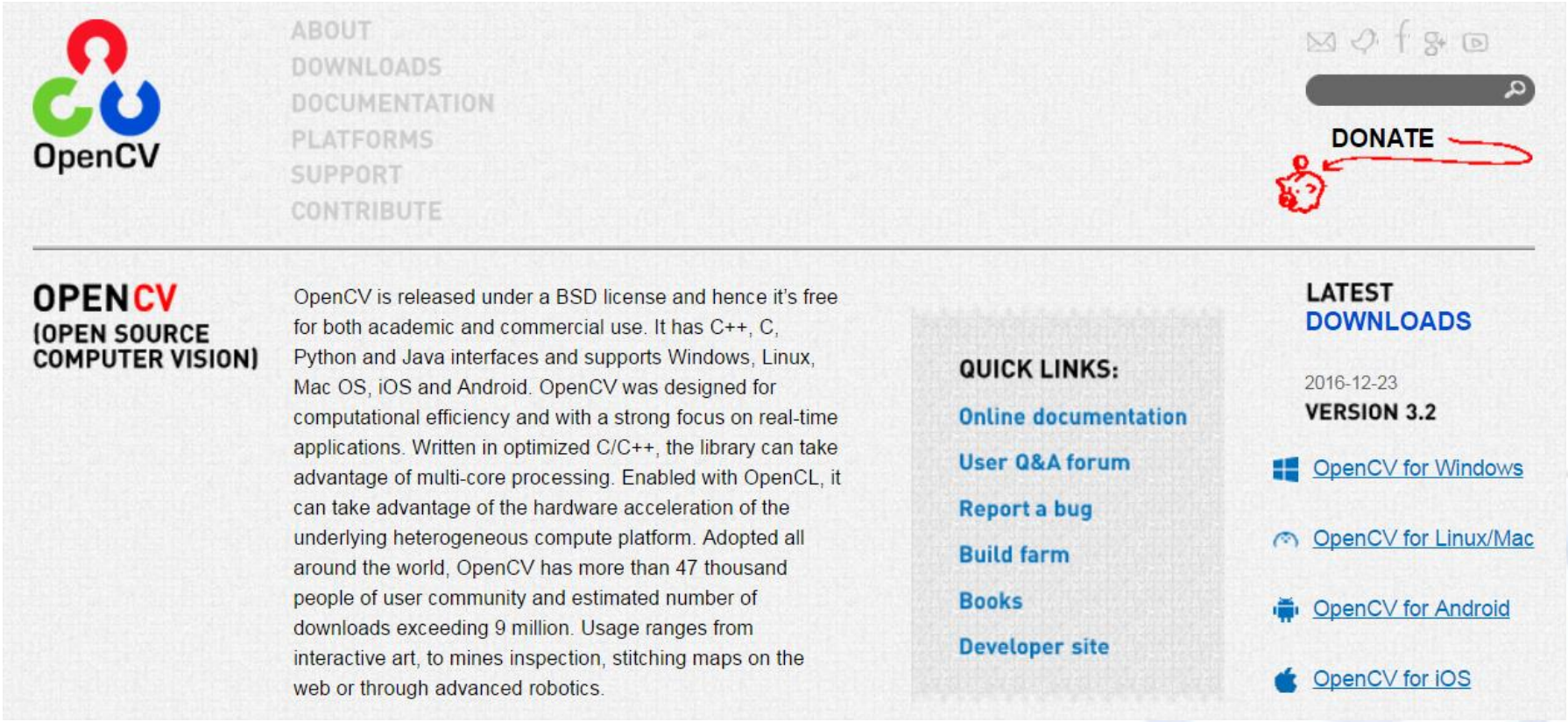
C/C++程式設計

OpenCV on Visual Studio

講師：張傑帆
CSIE, NTU

下載 OpenCV


OpenCV
ABOUT
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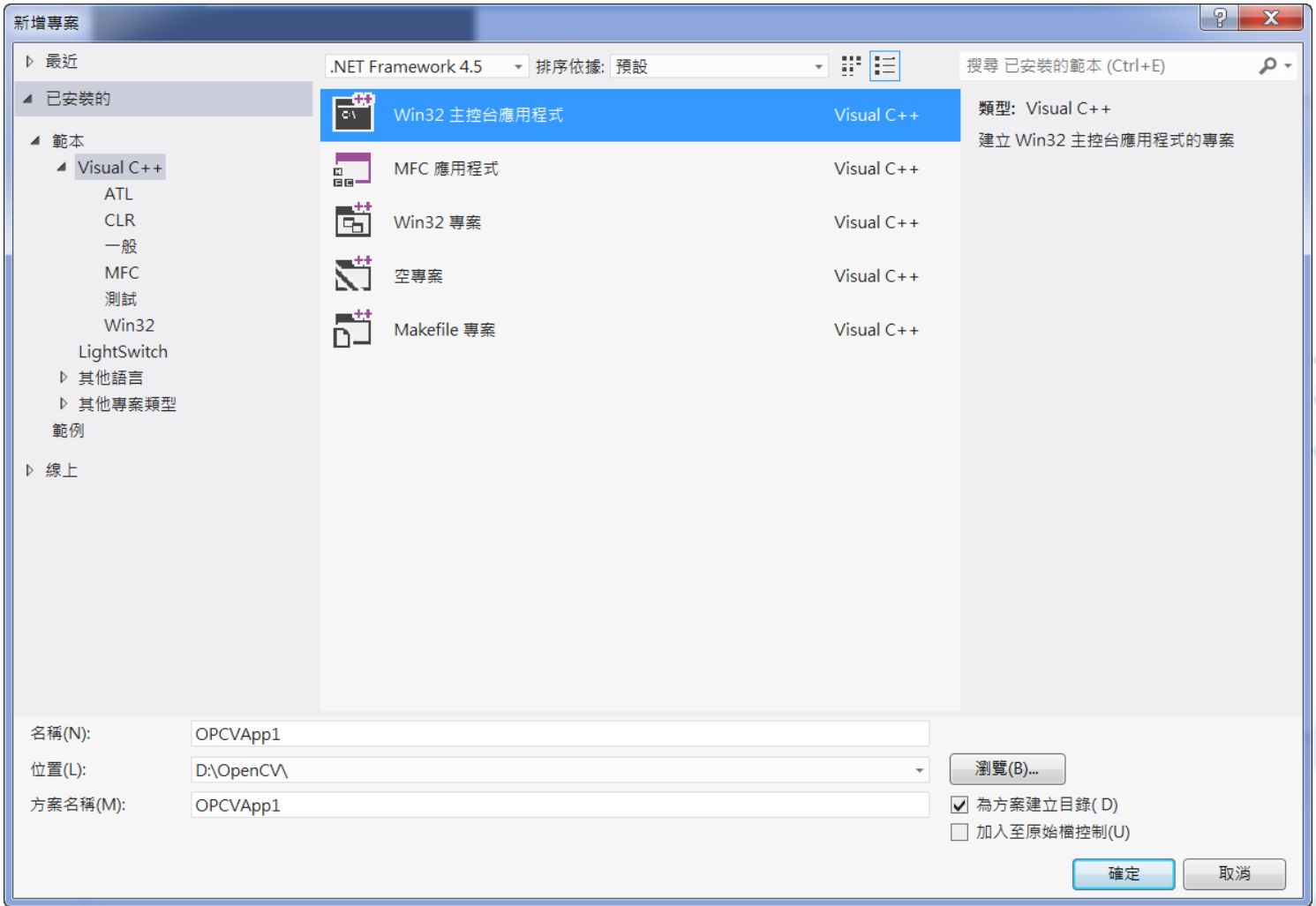
OPENCV
(OPEN SOURCE COMPUTER VISION)
OpenCV is released under a BSD license and hence it's free for both academic and commercial use. It has C++, C, Python and Java interfaces and supports Windows, Linux, Mac OS, iOS and Android. OpenCV was designed for computational efficiency and with a strong focus on real-time applications. Written in optimized C/C++, the library can take advantage of multi-core processing. Enabled with OpenCL, it can take advantage of the hardware acceleration of the underlying heterogeneous compute platform. Adopted all around the world, OpenCV has more than 47 thousand people of user community and estimated number of downloads exceeding 9 million. Usage ranges from interactive art, to mines inspection, stitching maps on the web or through advanced robotics.
QUICK LINKS:
Online documentation
User Q&A forum
Report a bug
Build farm
Books
Developer site
LATEST DOWNLOADS
2016-12-23
VERSION 3.2
OpenCV for Windows
OpenCV for Linux/Mac
OpenCV for Android
OpenCV for iOS

解壓縮檔案 並移動至C槽

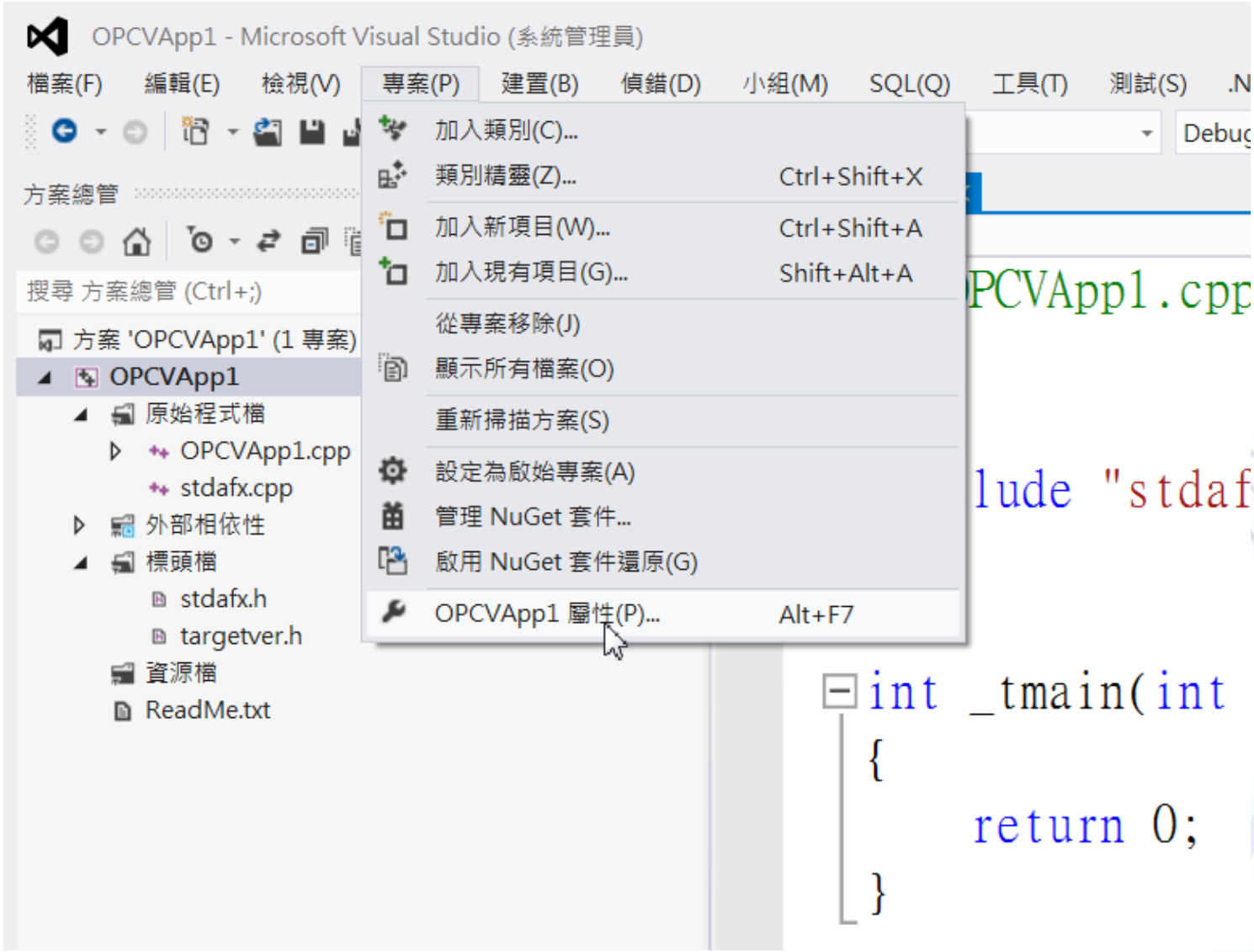
- 移動到C槽是個不成文的規定，多數使用OpenCV的人都會直接放置在C槽目錄下

建立OpenCV專案

- 選擇C++空專案/主控台應用程式



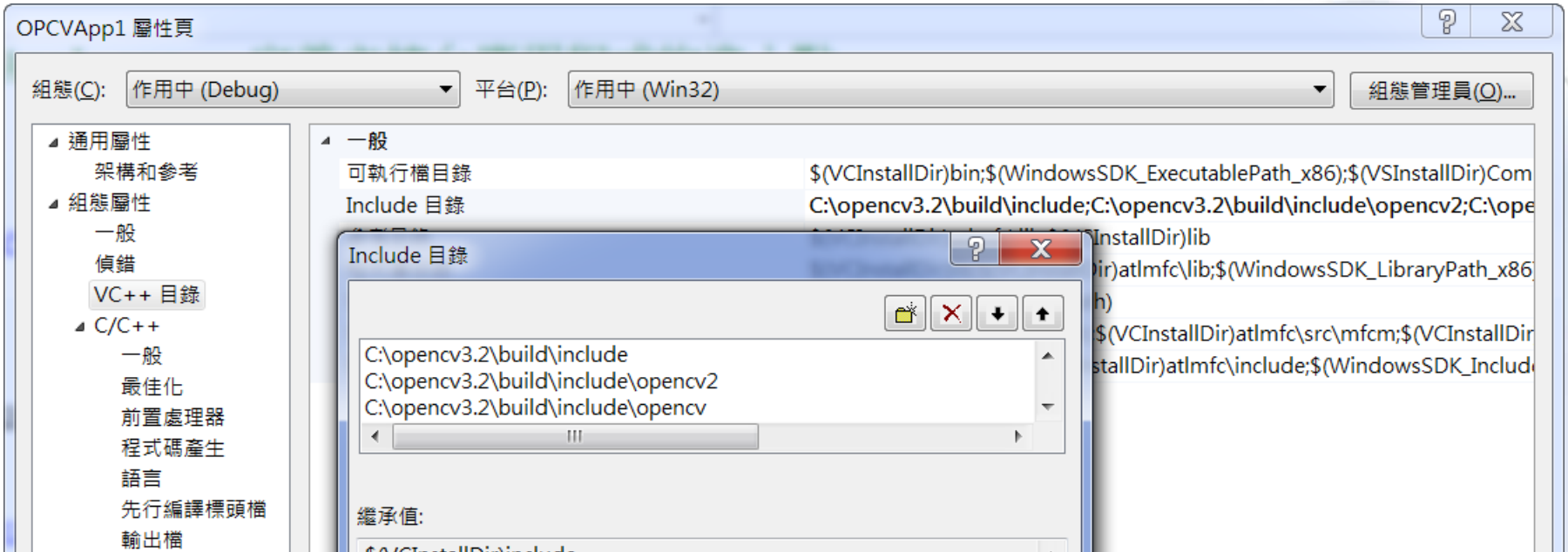
設定專案屬性


OPCVApp1 - Microsoft Visual Studio (系統管理員)
檔案(F)
編輯(E)
檢視(V)
專案(P)
建置(B)
偵錯(D)
小組(M)
SQL(Q)
工具(T)
測試(S)
方案總管
搜尋 方案總管 (Ctrl+;)
方案 'OPCVApp1' (1 專案)
OPCVApp1
原始程式檔
OPCVApp1.cpp
stdafx.cpp
外部相依性
標頭檔
stdafx.h
targetver.h
資源檔
ReadMe.txt
加入類別(C)...
類別精靈(Z)... Ctrl+Shift+X
加入新項目(W)... Ctrl+Shift+A
加入現有項目(G)... Shift+Alt+A
從專案移除(J)
顯示所有檔案(O)
重新掃描方案(S)
設定為啟始專案(A)
管理 NuGet 套件...
啟用 NuGet 套件還原(G)
OPCVApp1 屬性(P)... Alt+F7
PCVApp1.cpp
lude "stdaf
int _tmain(int
{
return 0;
}

include目錄

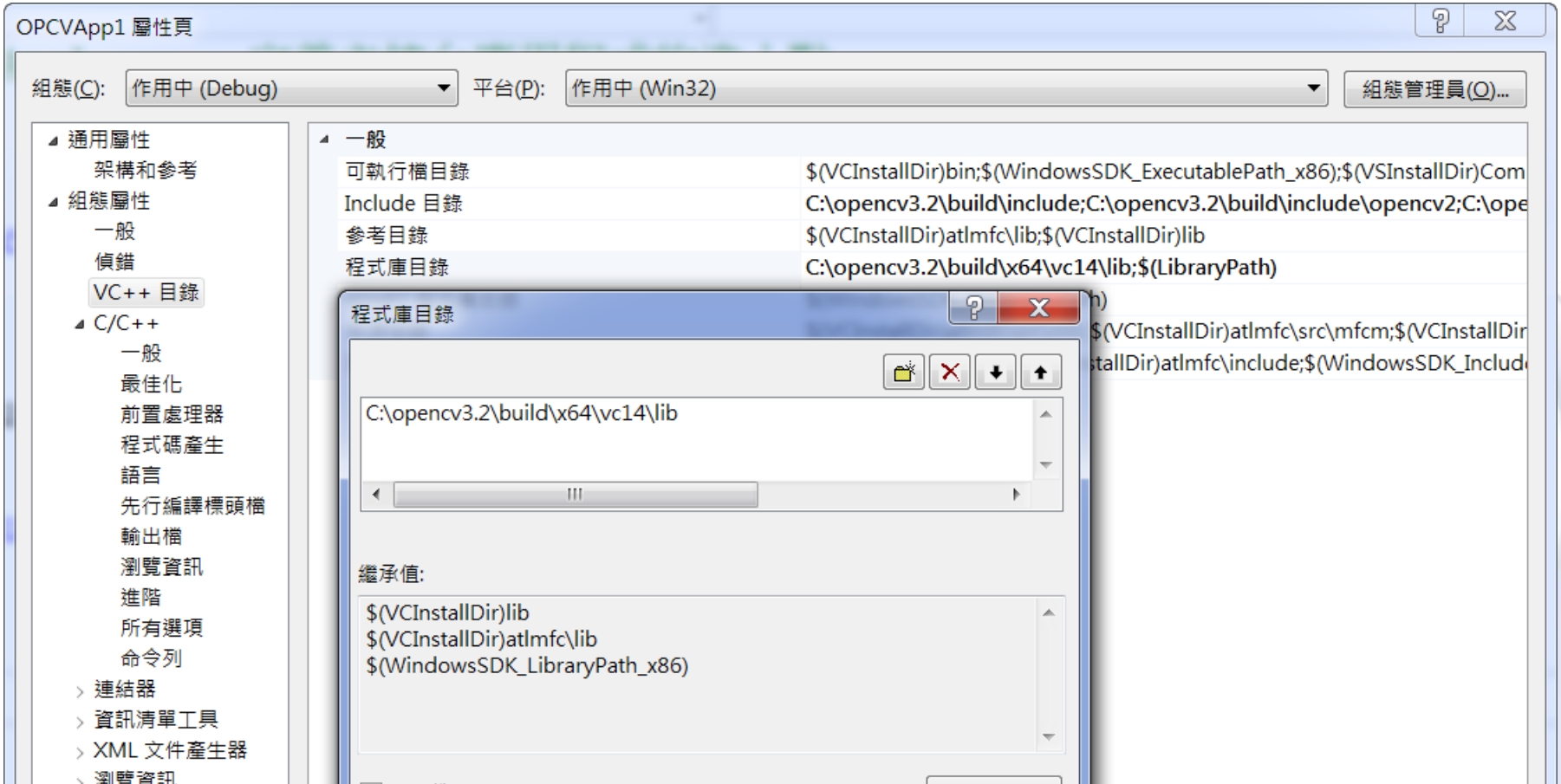
- 在VC++目錄－＞include目錄中加入之後要include的openCV檔案路徑

C:\opencv\build\include\opencv
C:\opencv\build\include\opencv2
C:\opencv\build\include



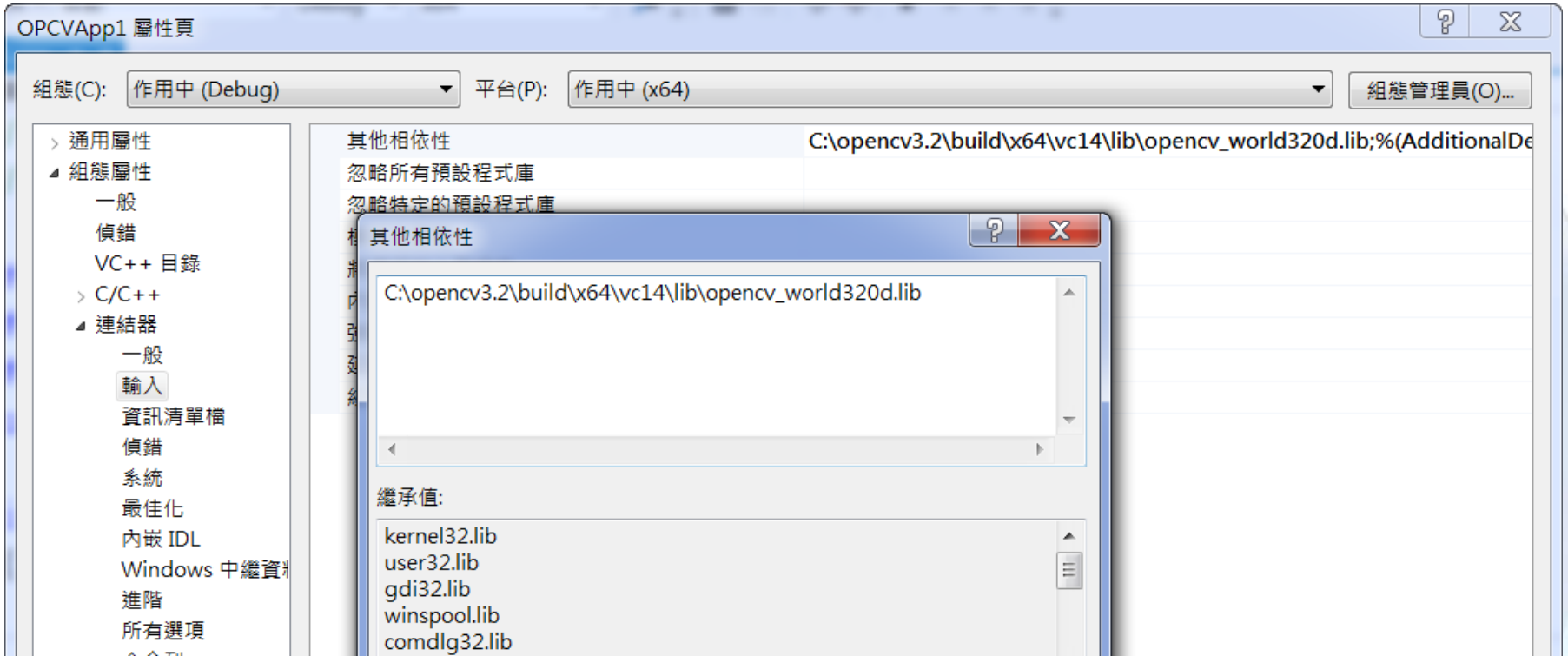
lib函式庫

- C:\opencv\build\x64\vc12\lib
- C:\opencv\build\x64\vc14\lib



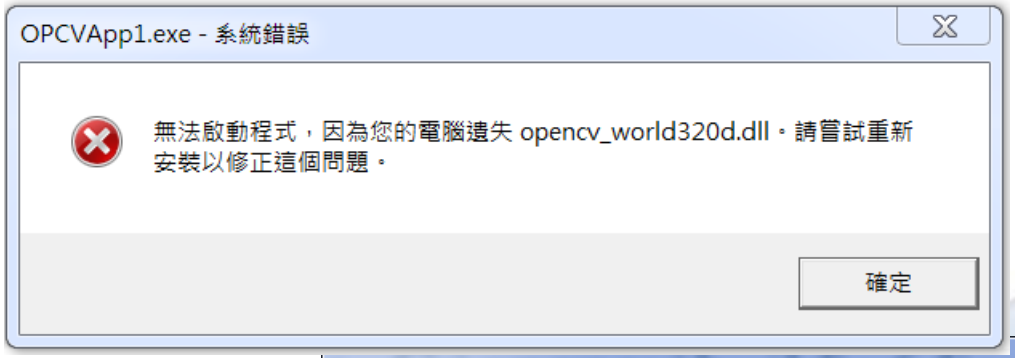
加入相依性的檔案

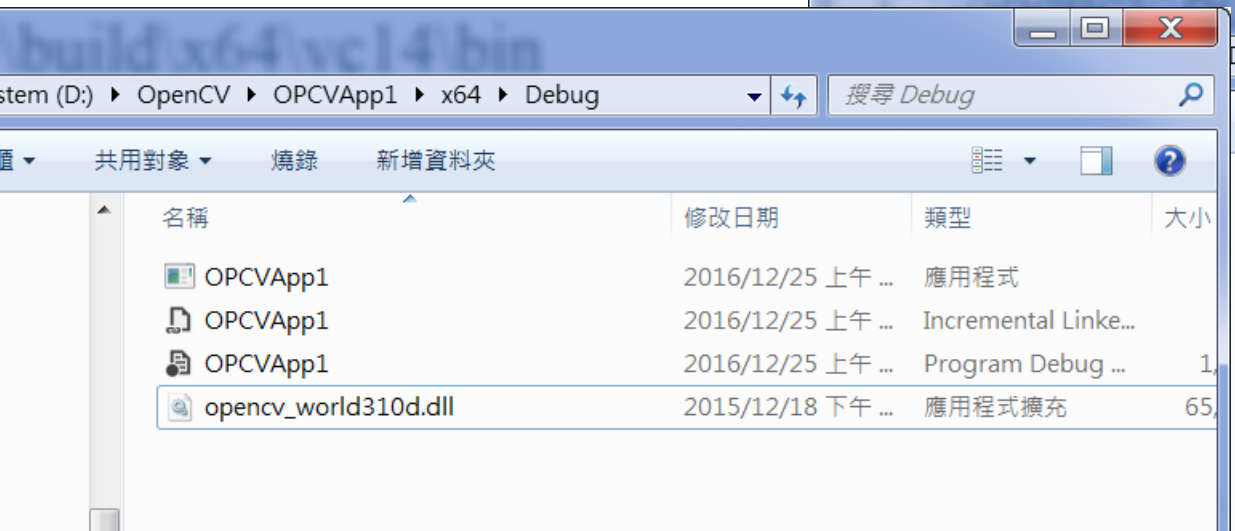
- 連結器(Linker)－＞輸入－＞加入相依性的檔案
- C:\opencv\build\x64\vc14\lib\opencv_world320d.lib
- C:\opencv\build\x64\vc14\lib\opencv_world320.lib

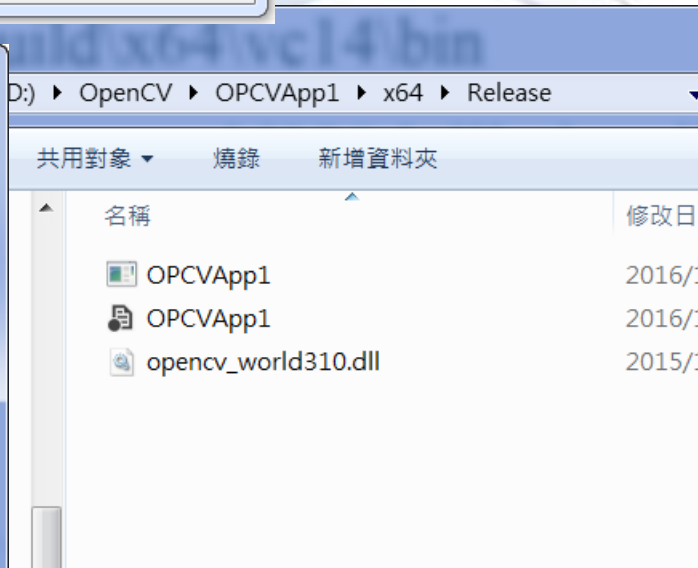


加入系統環境變數

- C:\opencv\build\x64\vc14\bin
- 或是將 opencv_world320d.dll 放入執行檔的目錄
- 不然.....



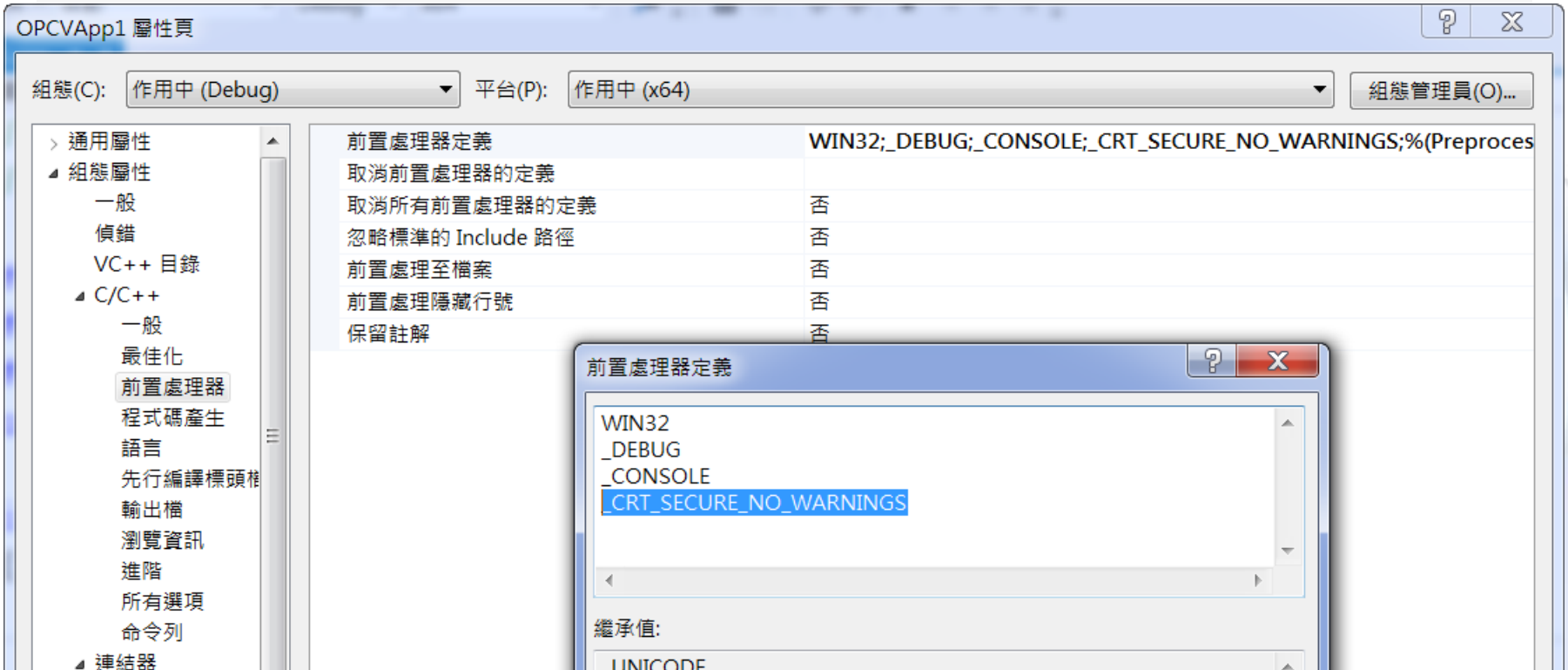




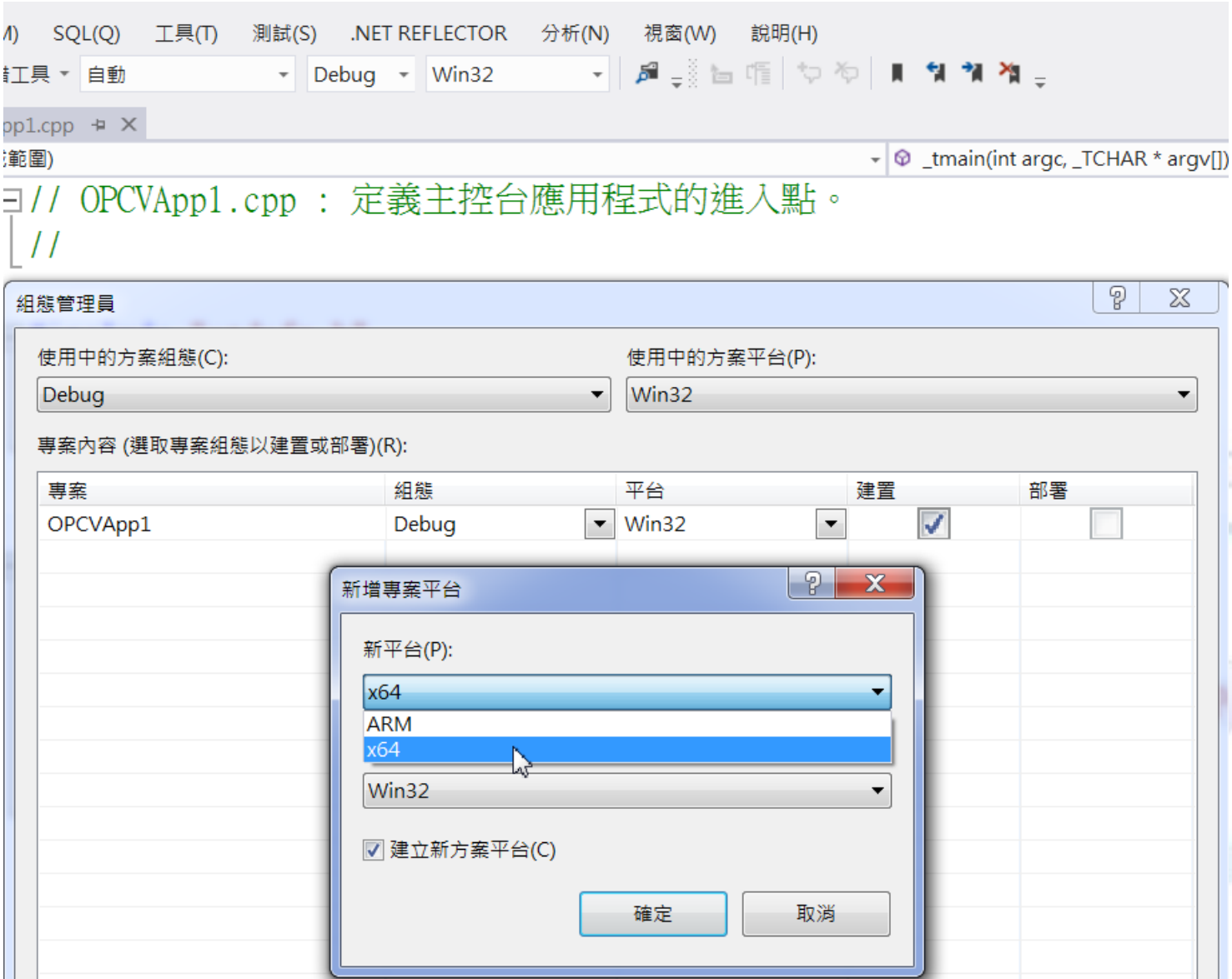
unsafe問題

- _CRT_SECURE_NO_WARNINGS

	描述	檔案	行
5	error C4996: 'fopen': This function or variable may be unsafe. Consider using fopen_s instead. To disable deprecation, use _CRT_SECURE_NO_WARNINGS. See online help for details.	logger.h	66



將project 用64位元編譯



讀取檔案

```
#include "stdafx.h"
#include <opencv2/core/core.hpp>
#include <opencv2/highgui/highgui.hpp>
using namespace cv;

int _tmain(int argc, _TCHAR* argv[])
{

    Mat img = imread("C:/Users/Public/Pictures/Sample Pictures/Penguins.jpg",1);
    imshow( "Gray image", img );
    waitKey(0);
    return 0;
}
```

讀寫每個pixel

```
Mat img = imread("C:/Users/Public/Pictures/Sample
Pictures/Penguins.jpg",0);
imshow( "Gray image", img );
waitKey(0);

int ch = img.channels();
int h = img.rows;
int w = img.cols * ch;
int nStep = img.step;
uchar* srcData = img.data;

for (int j = 0; j < h; j++) {
  for (int i = 0; i < w; i++) {
    srcData[i] = 255;
  }
  srcData += nStep;
}

imshow( "Gray image", img );
waitKey(0);
```