Creating an OpenCV Project in Visual Studio.Net

Create a new project

- Start Visual Studio.Net
- Select New Project
- Under Project Type select Visual C++ Projects->Win32
- Under Templates select Win32 Console Project
- Enter a name for your project. By default, this will also be the name of the executable file generated by build. This will also be the name of the solution
- Select a location for your project. Visual Studio will create a new directory at the location you have entered with the same name as the project.
- Click OK
- Click Finish at the next dialog.

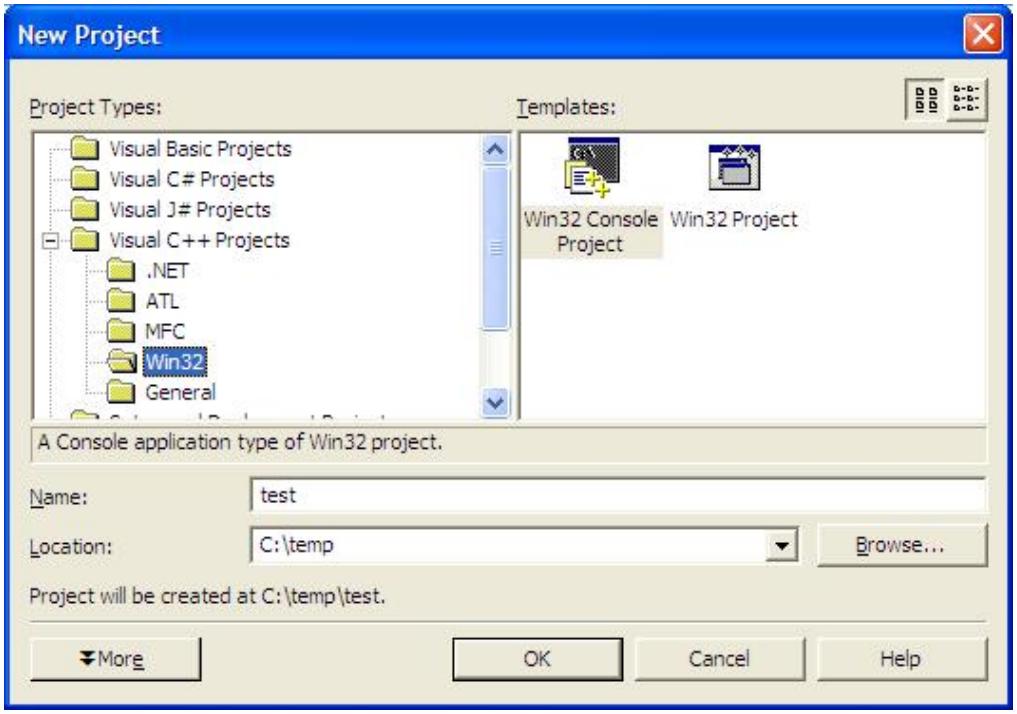

Figure 1 New Project Dialog

A Brief Introduction to the Visual Studio Interface

After creating your project you will now see the main interface of Visual Studio.Net. In the middle is the editor pane. You can switch between open files by clicking the tabs or by pressing CTRL+TAB. You can also switch the order of the tabs by dragging them to a new location.

To the right is the Solution Explorer. This shows a tree view of all the files in your solution and project. A solution can hold multiple, related projects. A project holds the code that will generate one executable. When you create a new project Visual Studio automatically generates several files. The first will be a .cpp file with the name of the project. This file contains the main function. There are also two other files; stdafx.cpp and stdafx.h. You should leave stdafx.cpp alone. The other file, stdafx.h is used to include standard header files that all your source files will need to include. Headers added to this file will be compiled into a precompiled header file, which can save you compilation time by not recompiling these files every time you build the project. For small projects this probably won't make much difference, but if you include lots of libraries it may be useful. Insert `#include "stdafx.h"` in every source file that you want to use these libraries in.

If you want to add a new cpp or header file to the project, right-click on the corresponding file in the solution explorer and select Add->Add New Item.

Configuring Project for OpenCV

- Right-click your project in the Solution Explorer. Select Properties.
- Change configuration to All Configurations.
- Select the C/C++ folder, then General.
- On the Additional Include Directories line add:
  "C:\OpenCV\cxcore\include";
  "C:\OpenCV\cv\include";
  "C:\OpenCV\cvaux\include";
  "C:\OpenCV\otherlibs\highgui";
  "C:\OpenCV\apps\HaarTraining\include";
  "C:\OpenCV\otherlibs\cvcam\include";"
  C:\Program Files\OpenCV\otherlibs_graphics\include"

Note: Remove any directories for libraries you won't be using. (HaarTraining, cvcam, _graphics probably won't be needed).

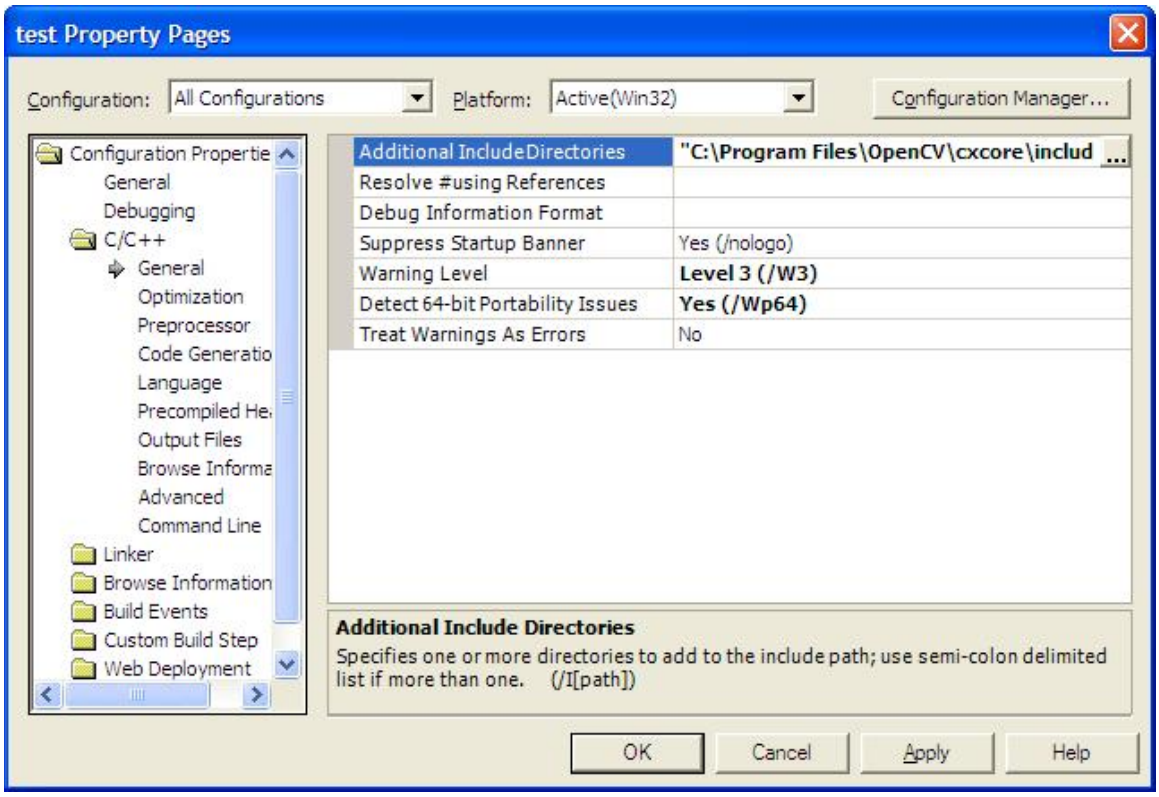

Figure 2 Additional Include Directories

- Select Precompiled Headers under C/C++.
- Change the line Create/Use Precompiled Header to Automatically Generate.

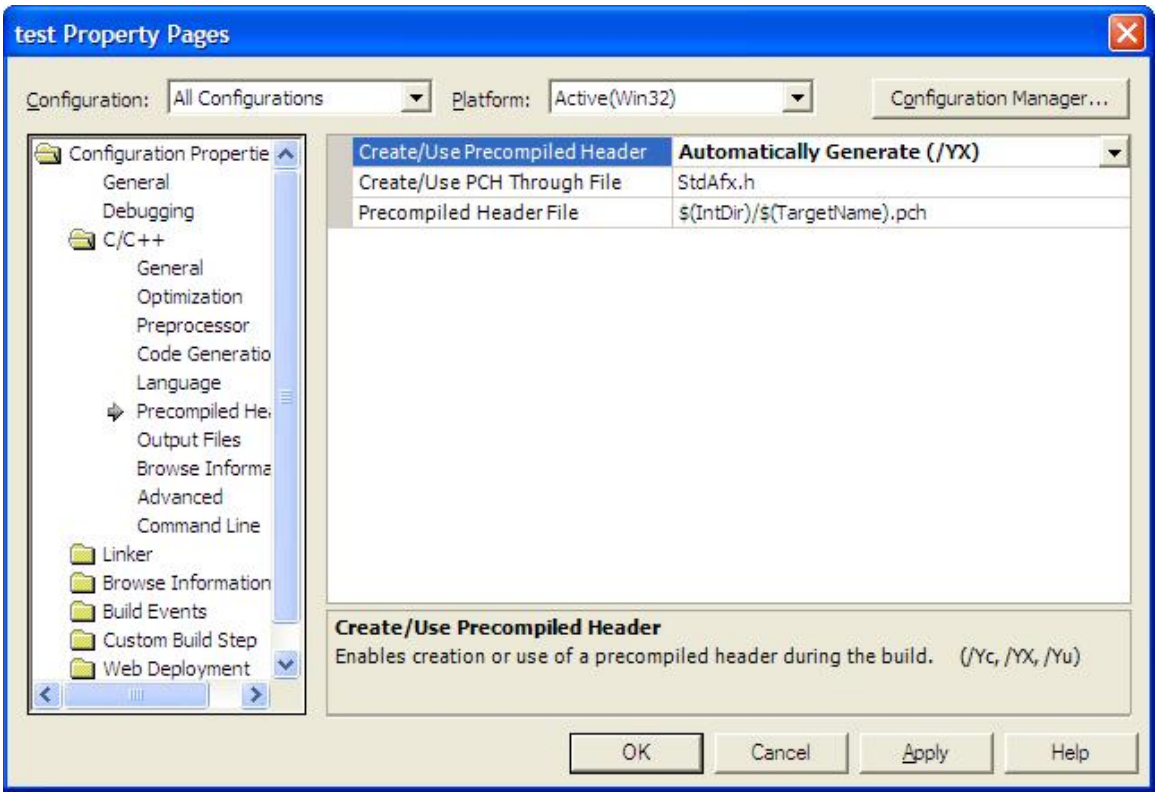

Figure 3 Precompiled Headers

- Select the Linker folder.
- On the Additional Library Directories line add:
  "C:\Program Files\OpenCV\lib"

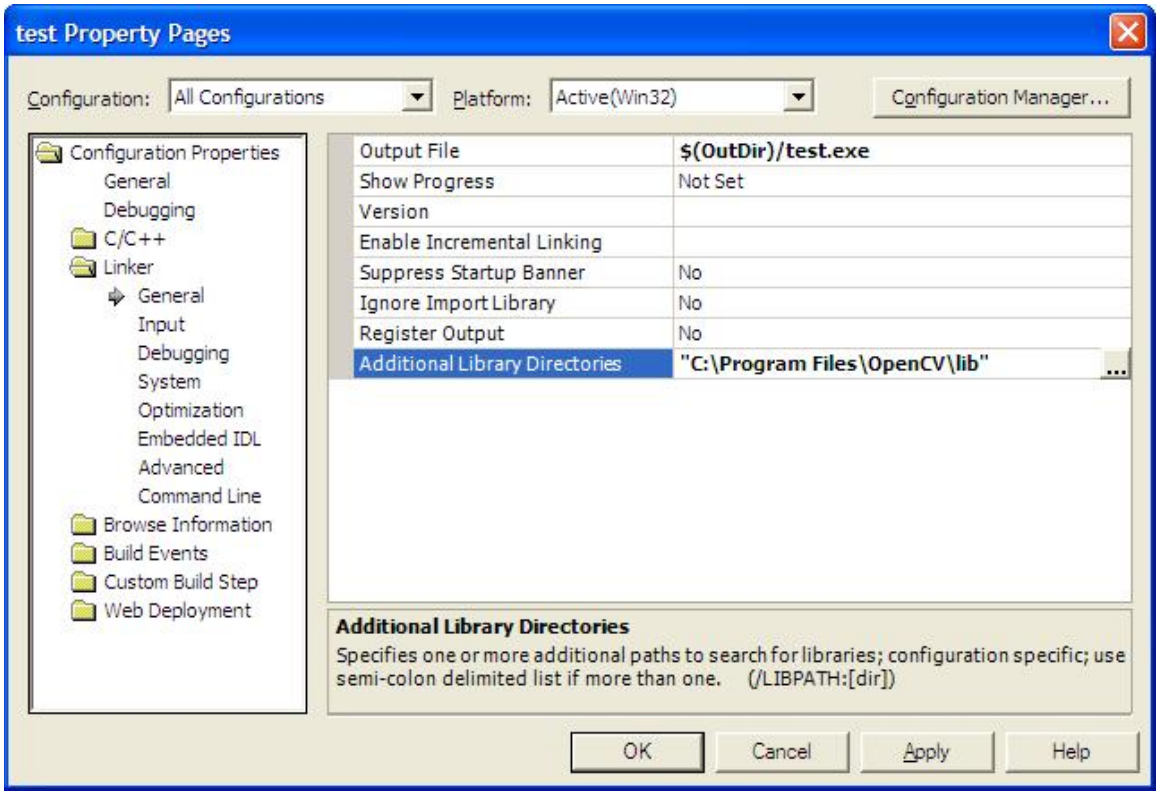

Figure 4 Additional Library Directories

- Select Input under Linker.
- On the Additional Dependencies line add:
  cxcore.lib cv.lib cvaux.lib cvcam.lib cvhaartraining.lib cxcore.lib cxts.lib highgui.lib trs.lib

Note: You can remove any libraries you know you aren't using from this list.
(cvhaartraining.lib, cvcam.lib, cxts.lib, trs.lib probably won't be needed)

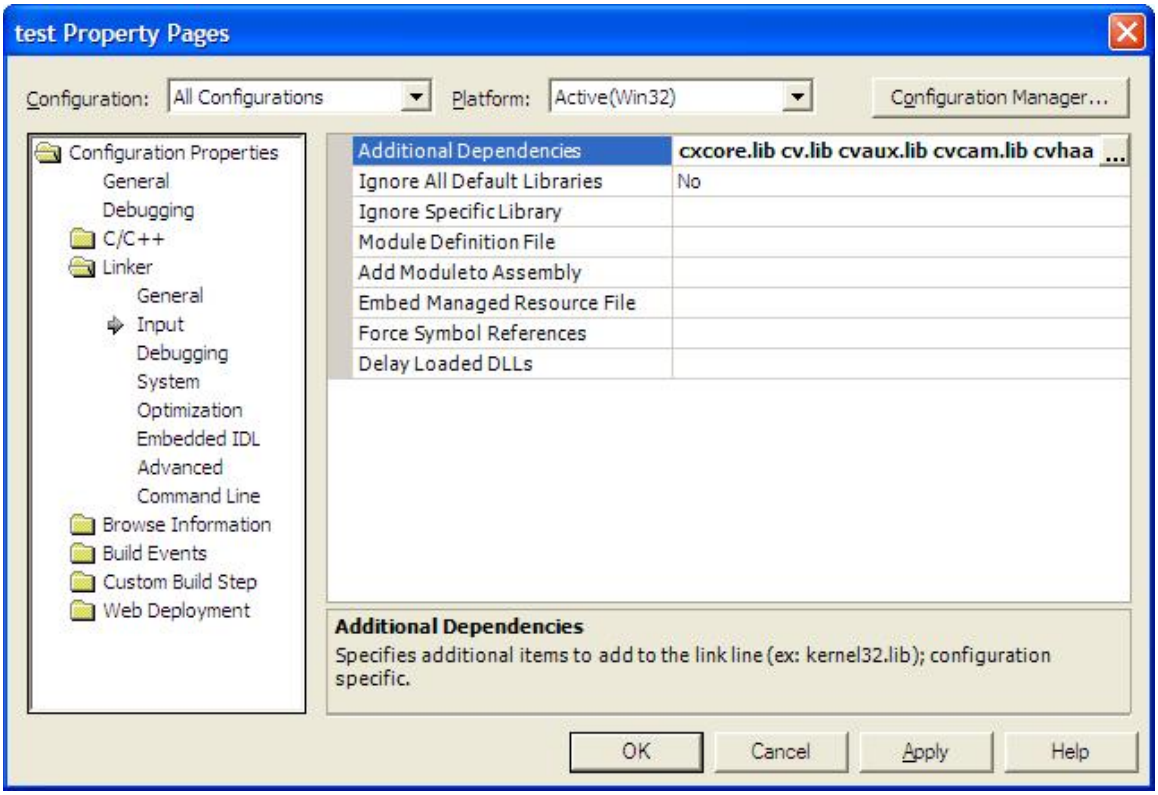

Figure 5 Additional Dependencies

- Click OK
- Your project is now configured for OpenCV.

Note: When including OpenCV header files use angle brackets, not quotes.
Ex: `#include <cv.h>`