



Using OpenCV 2.3 with Microsoft Visual Studio 2005

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TUTORIAL:

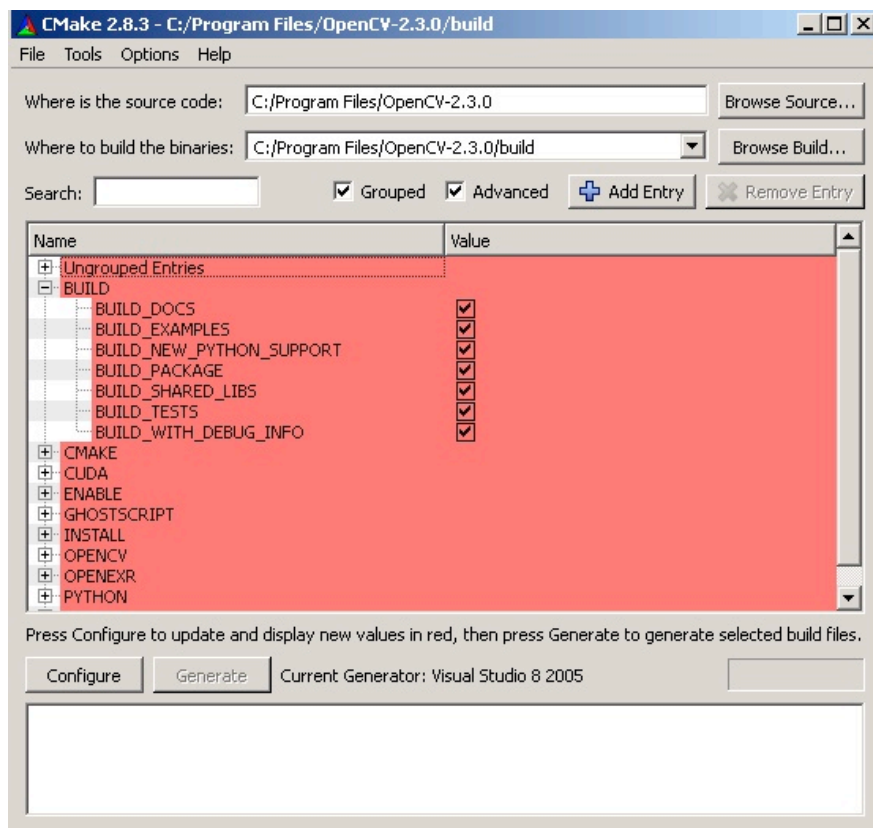
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Pre-requisites:

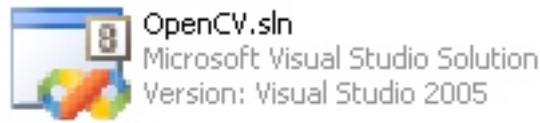
1. First of all, you have to make sure your CPU architecture and operating system. In my case, I used Windows XP Service Pack 2 on 32-bit architecture
2. Download OpenCV OpenCV-2.3.0-win-src.zip and extract to Program Files folder. Your OpenCV folder will be C:\Program Files\OpenCV-2.3.0
3. Make new directory named "build" inside your OpenCV folder. The "build" directory will be used to store all files generated using Cmake.
4. Download Cmake version 2.8 and install it to your computer
5. Microsoft Visual Studio 2005 (VS 2005). I assumed that you have installed VS 2005 successfully in your box and you know how to use VS 2005.

Installation and Configuration:

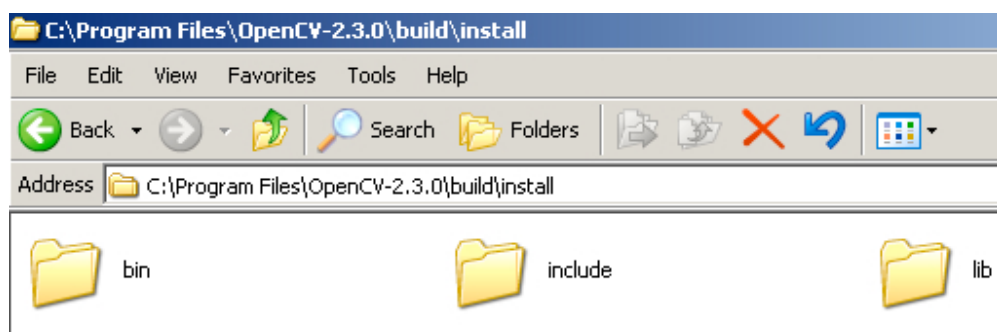
1. Open Cmake and select Source and Build directories. The Source directory will be: C:/Program Files/OpenCV-2.3.0 and the Build directory will be: C:/Program Files/OpenCV-2.3.0/build
2. Make sure that you select "Visual Studio 8 2005" for your compiler environment. If you use another IDE, you have to adjust the later.
3. Check two options : "Grouped and Advanced".
4. Next, press "Configure" to update all options in pre-compiled files. You can choose what you want, but in my case I also include BUILD_EXAMPLES option. See picture below:



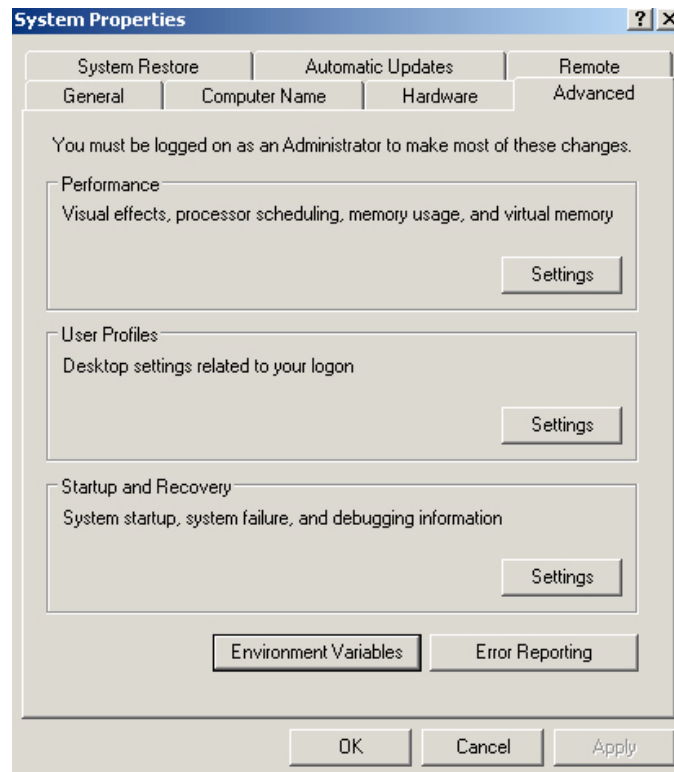
5. Next, press “Generate” to generate all built files needed to create OpenCV project. You will find all built files inside your “build” directory.
6. Open directory : C:\Program Files\OpenCV-2.3.0\build and choose OpenCV solution as shown below. Open with VS 2005.



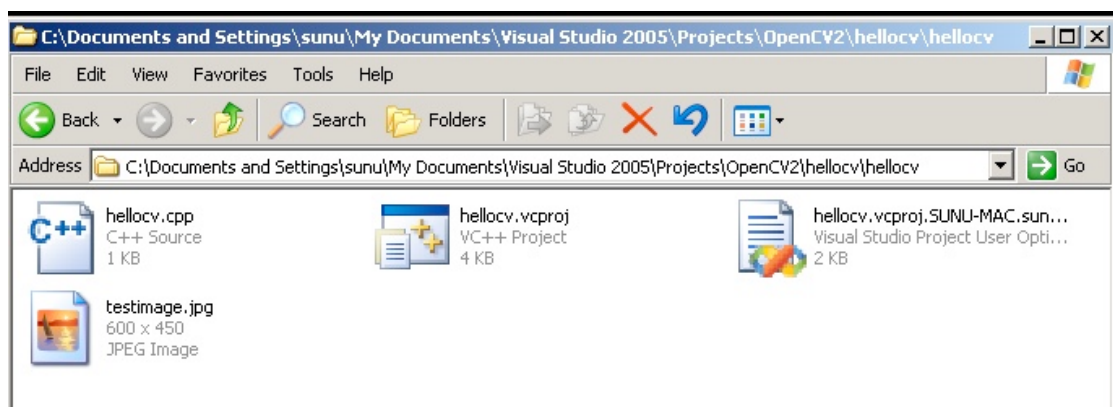
7. Next, we have to build OpenCV.sln. To do so, select from menu bar: Build > Build Solution (F7). Wait a few minutes until VS 2005 finishes the job. Here, I used “Debug” version. If you also want to generate “Release” version for your program, you have to build OpenCV.sln in “Release” mode.
8. Next, open C:\Program Files\OpenCV-2.3.0\build\include and open INSTALL.vcproj file using VS 2005. Build INSTALL.vcproj using VS 2005 and save INSTALL.sln file (generated by VS 2005) in the same directory with INSTALL.vcproj. I used “Debug” mode for this step.
9. Next, open C:\Program Files\OpenCV-2.3.0\build\modules and open INSTALL.vcproj file using VS 2005. Do the same thing as 8th step above, and don’t forget to save INSTALL.sln file in the same “modules” directory with the built INSTALL.vcproj file.
10. Now, go back to directory C:\Program Files\OpenCV-2.3.0\build. You have new directory named “install”. If your installation goes well, you will see three directories inside “install” directory, which are: “bin”, “include”, and “lib”, as shown below.



11. Now it’s time to configure your PATH from System Properties. To do so, select for Start Menu:
Start > My Computer > [Right Click] > Properties > Advanced
Press “Environment Variables”.



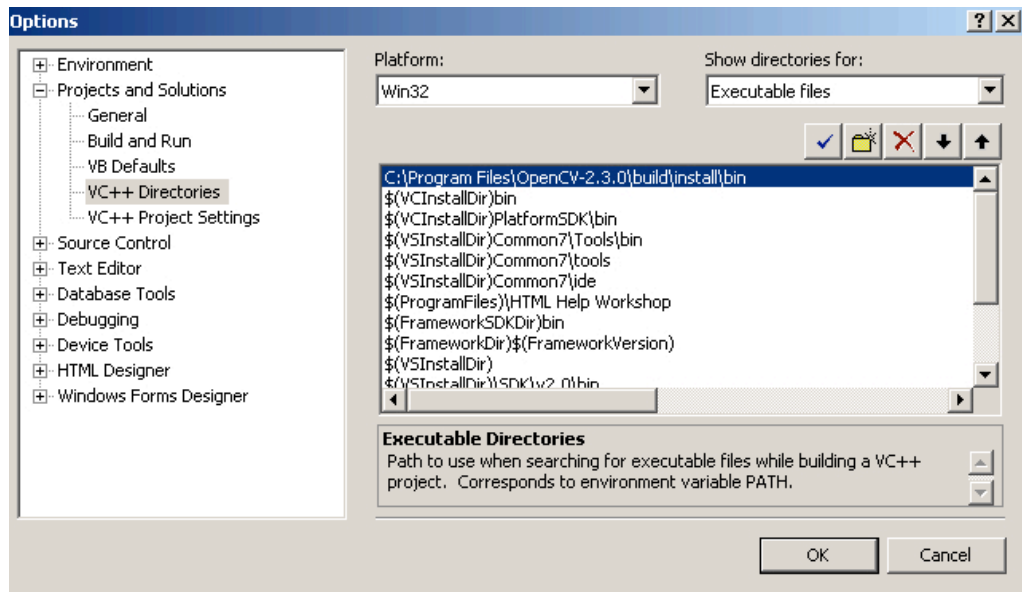
12. Now, you have to edit your Windows XP PATH. In System Variables, Edit and add two paths below:
 C:\Program Files\OpenCV-2.3.0\build\install\bin;
 C:\Program Files\OpenCV-2.3.0\build\install\lib
 (Don't forget to add semicolon mark ";" between two paths)
13. Create New Project in VS 2005. Our testing project will be empty console application. Name it with "hellocv".
14. Add a c++ file, name it with "hellocv.cpp"
15. Copy a testimage to the same location with "hellocv.cpp"



16. Now, we have to configure our Include, Executable, and Library directories for VC++. To do so, from VS 2005 menu bar select:
 Tools > Options > Projects and Solutions > VC++ Directories

17. First, we have to add Executable directory for several Executable files required by VS 2005. Add this line:

C:\Program Files\OpenCV-2.3.0\build\install\bin



18. Next, select "Include files" from "Show directories for:" option on the top right of Options window. Add these lines:

C:\Program Files\OpenCV-2.3.0\include

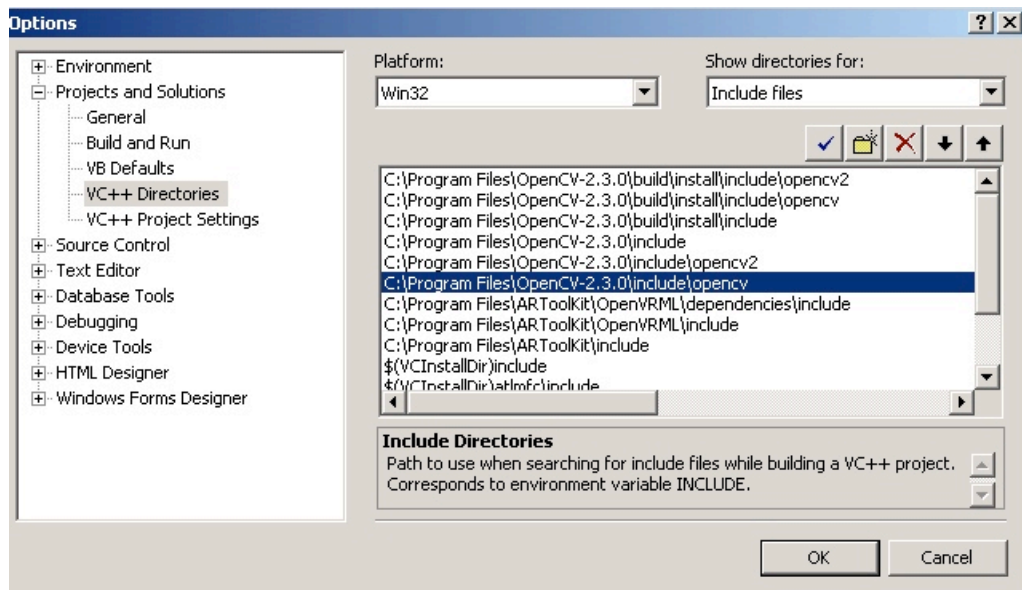
C:\Program Files\OpenCV-2.3.0\include\opencv

C:\Program Files\OpenCV-2.3.0\include\opencv2

C:\Program Files\OpenCV-2.3.0\build\install\include

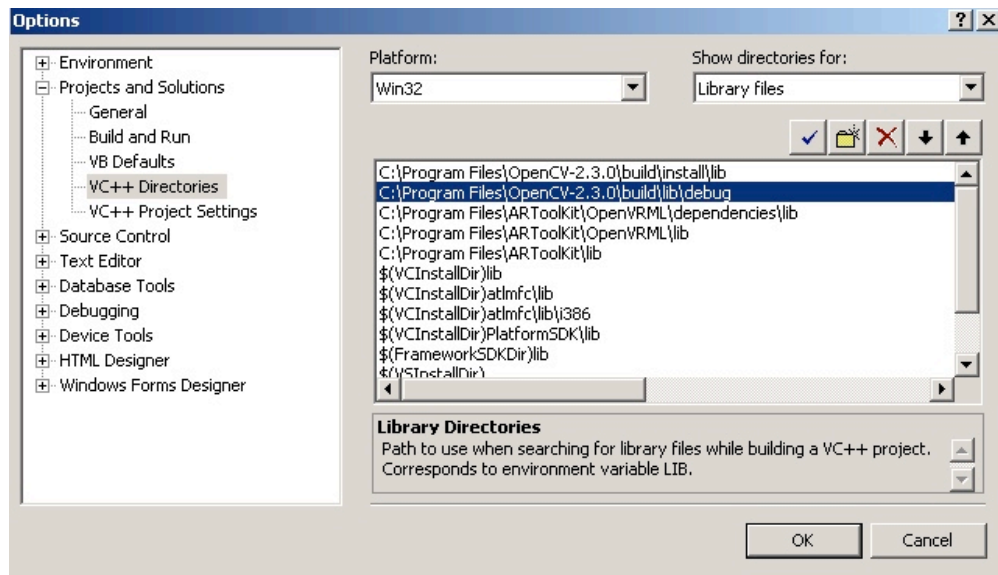
C:\Program Files\OpenCV-2.3.0\build\install\include\opencv

C:\Program Files\OpenCV-2.3.0\build\install\include\opencv2



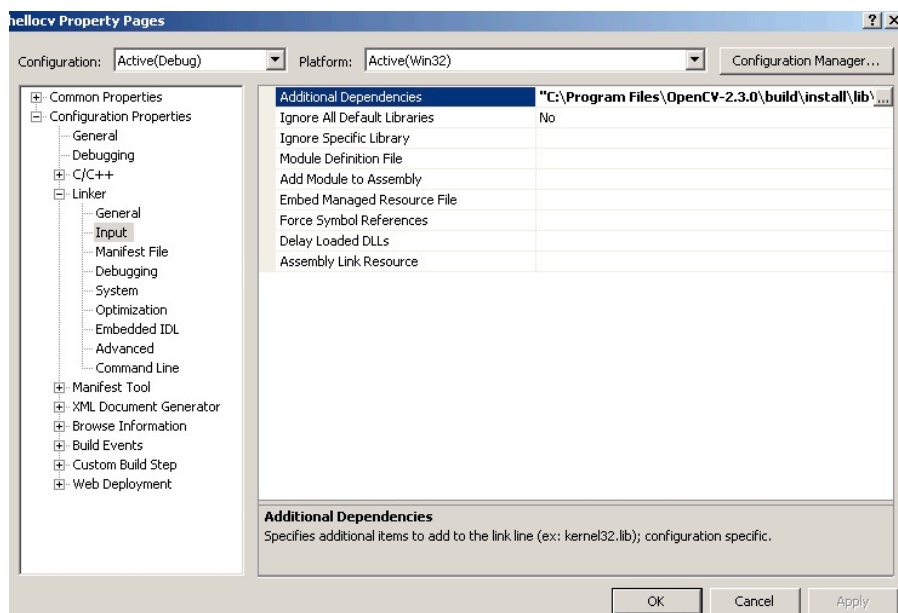
19. Next, select “Library files” from “Show directories for:” option on the top right of Options window. Add these lines:

```
C:\Program Files\OpenCV-2.3.0\build\lib\debug
C:\Program Files\OpenCV-2.3.0\build\install\lib
```



20. Next, we have to set Properties for our project. We will include some libraries to be built with our project. To do so, select “hellocv” project. From menu bar, select: View > Property Pages > Linker > Input > Additional Dependencies. Paste these lines inside “Additional Dependencies”:

```
"C:\Program Files\OpenCV 2.3.0\build\install\lib\opencv_core230d.lib"
"C:\Program Files\OpenCV-2.3.0\build\install\lib\opencv_highgui230d.lib"
"C:\Program Files\OpenCV-2.3.0\build\install\lib\opencv_video230d.lib"
"C:\Program Files\OpenCV-2.3.0\build\install\lib\opencv_ml230d.lib"
"C:\Program Files\OpenCV-2.3.0\build\install\lib\opencv_legacy230d.lib"
"C:\Program Files\OpenCV-2.3.0\build\lib\debug\opencv_imgproc230d.lib"
```



21. Next, paste this code to your "hellocv.cpp" file

```
// Testing programme for OpenCV 2.3
// Re-written by: Sunu Wibirama

#include <cv.h>
#include <highgui.h>

int main ( int argc, char **argv ) {

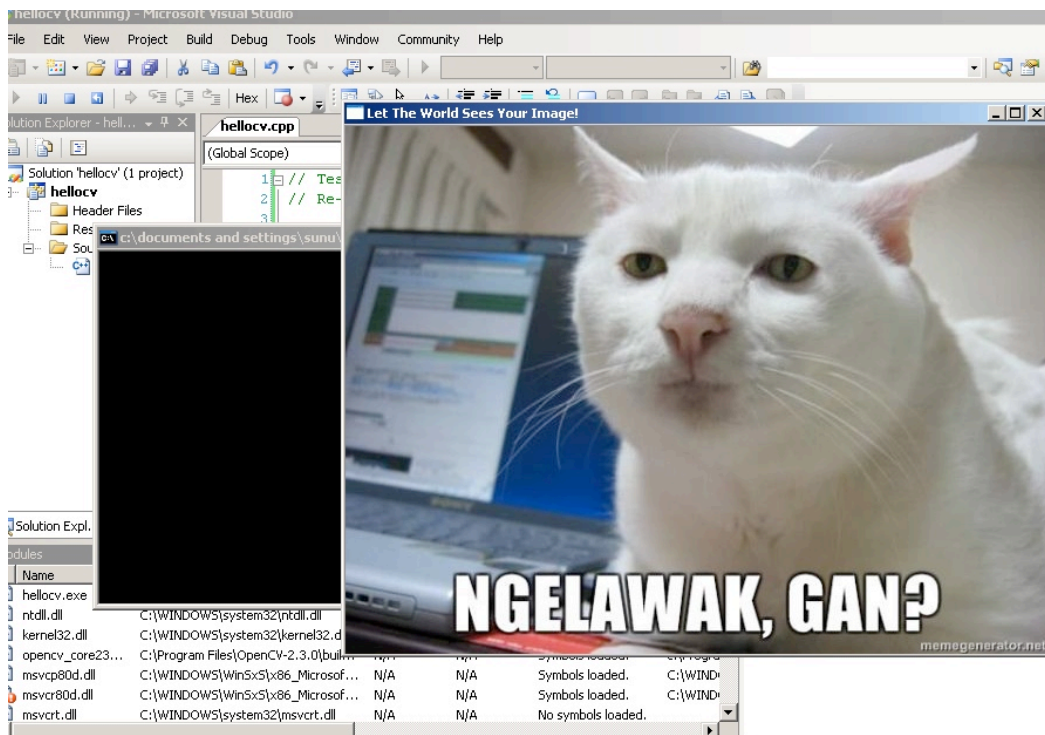
    IplImage *img = cvLoadImage("testimage.jpg");
    cvNamedWindow("Let The World Sees Your Image!",1);
    cvShowImage("Let The World Sees Your Image!",img);

    cvWaitKey();
    cvDestroyWindow("Let The World Sees Your Image!");
    cvReleaseImage(&img);

    return 0;

}
```

22. Build and run your program. Rock the world with your computer vision application. Good luck!



For more information and documentation, please visit:

<http://opencv.itseez.com/index.html>