

Instructions for getting setup in Visual C++ Express Edition 2008

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1. Firstly, get download and install visual studio express edition 2008
<http://www.microsoft.com/express/vc/>
2. In order to develop on this platform, you will need to use the full Windows SDK. This download is quite large, so speaking to others who have already downloaded this sdk might be of help.
<http://www.microsoft.com...>
If you're desperate, you can contact MUCSA, as we have downloaded this sdk, and can give you the ISO if you ask nicely. If you do choose to download the full iso, you can use Daemon tools to load the disc image without having to burn it to a disk.
<http://www.daemon-tools.cc/downloads>
3. Next up, you'll need to download Glut. The original GLUT is closed-source, and went out of development years ago. There is, however, an open-source implementation of this called Freeglut, which should ALMOST work as a drop-in replacement. This is distributed as source code, however. For ease of installation, I have pre-compiled the source code, to allow you to install it more easily.
<http://www.indiehawk.com/freeglut.zip>
The original freeglut can be downloaded as source code, and compiled at home. This site distributes Freeglut as a gzipped tarball (.tar.gz). The popular 7zip archive extractor can open these files.
<http://freeglut.sourceforge.net/>
<http://www.7-zip.org/>
4. Now you have all the software you need! Install Visual Studio 2008 and the Windows SDK. Hopefully you won't run into any trouble installing these.

5. You will need to 'install' freeglut. We will put the freeglut files in the include directory for Visual Studio, so that you can use them as a drop-in replacement for the example code given in the workshops

Open freeglut.zip. You should see 6 files in total. You need to move these files into the appropriate location. Firstly, you need to move the four header files (freeglut.h, glut.h, freeglut_ext.h, freeglut_std.h) to the 'include/gl' directory of your windows sdk install.

For my install, which used the default settings, this directory was:

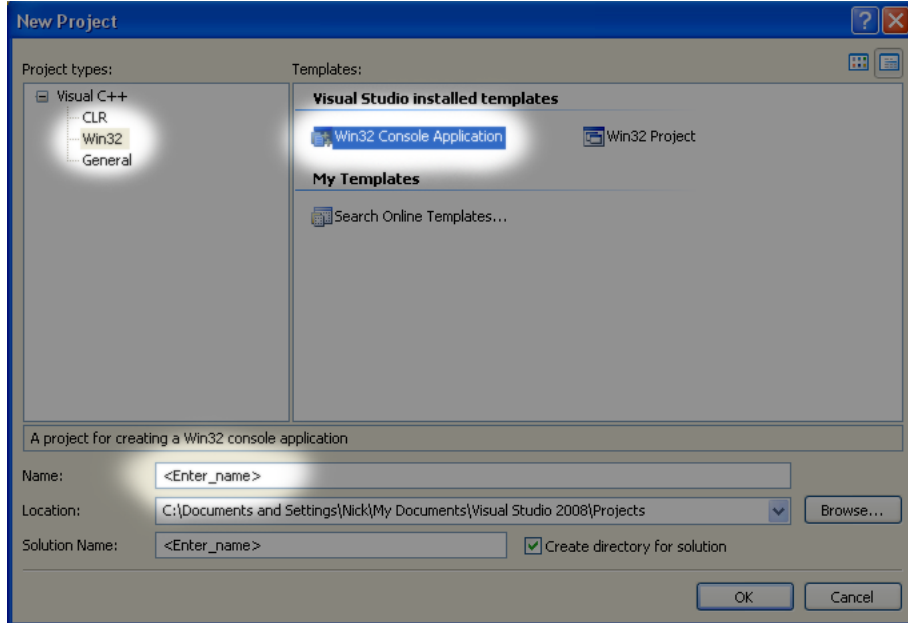
"C:\Program Files\Microsoft SDKs\Windows\v6.1\Include\gl",

although individual installs may vary. You should already see two files in here; gl.h and glu.h. Move the four new files into this directory.

Next, you need to put freeglut.lib in the lib directory. Once more, for me, this directory was "C:\Program Files\Microsoft SDKs\Windows\v6.1\Lib"

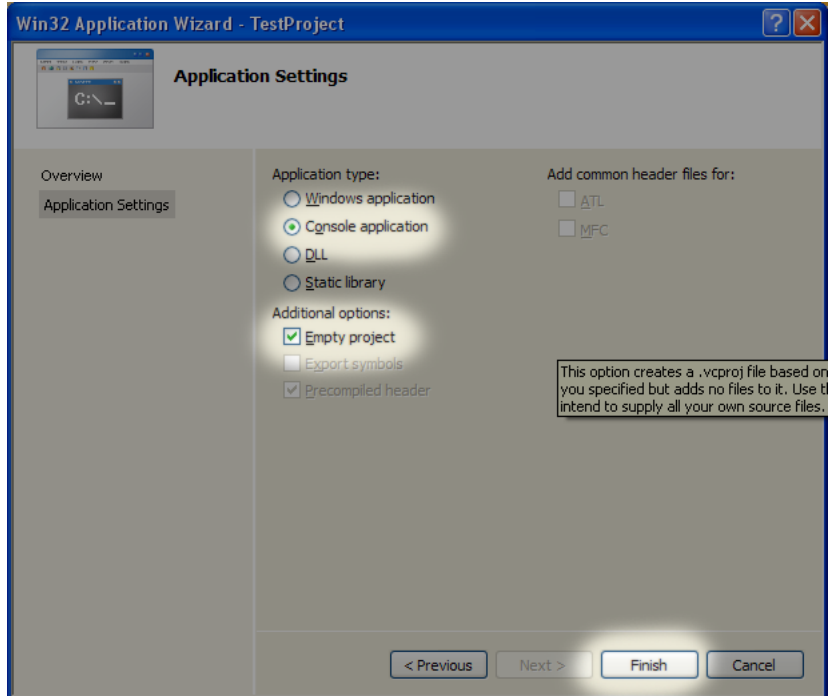
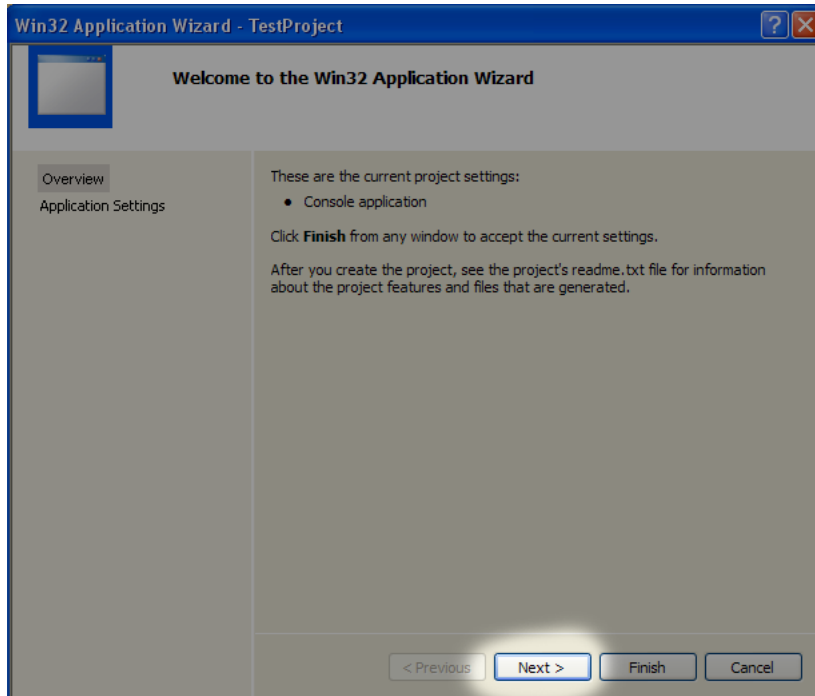
Finally, put the freeglut.dll in your Windows\system32 directory. That should be it! Now, you need to create a test project to make sure everything works.

6. Fire up Visual C++ 2008 Express Edition, and create a new project. File -> New -> Project.
7. Select Win32, and then Win32 Console Application

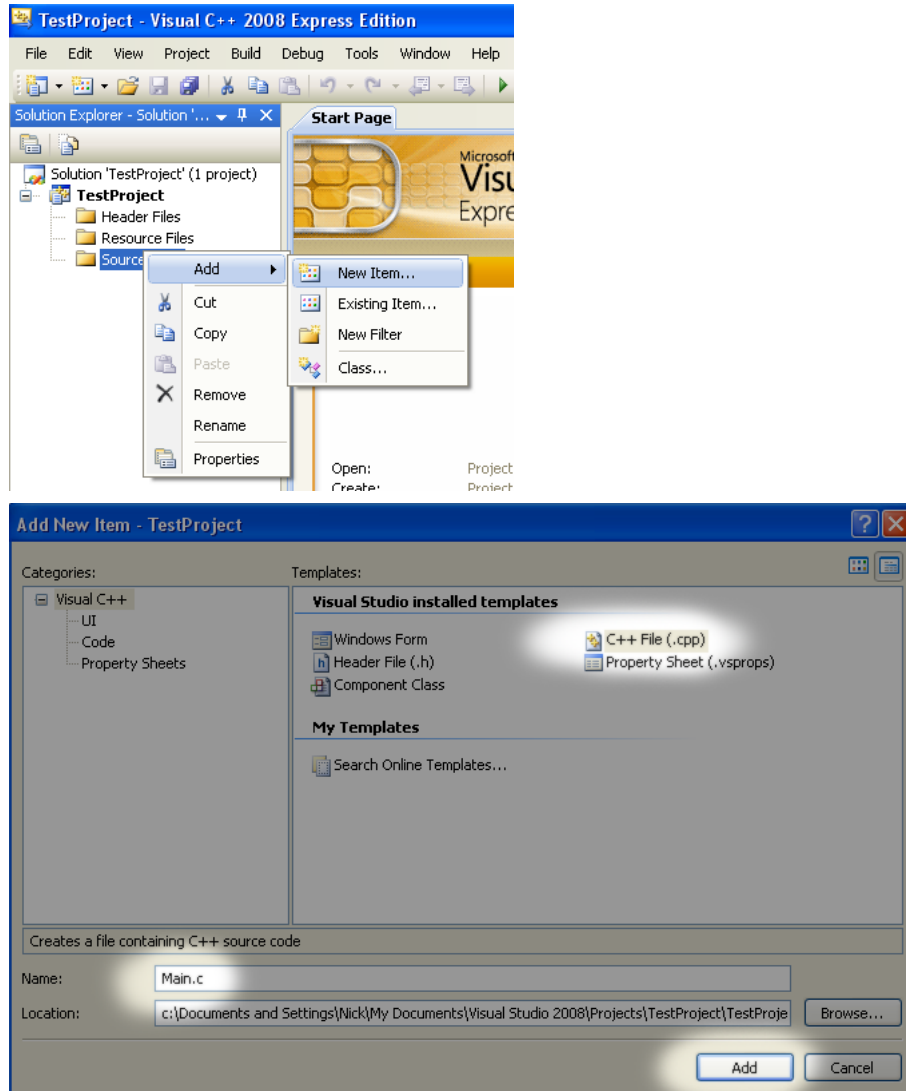


Give your new project a name, and hit okay!

8. Setup an empty project



9. Add a new, empty '.c' file for your project. Give it a name like 'Main.c'.



Then copy-paste a simple piece of test code. You could try using the first example from the 380 website, but lets start by just making sure we can include the necessary files!

Sample code:

```
#include <stdio.h>
#include <ctype.h>
#include <stdlib.h>

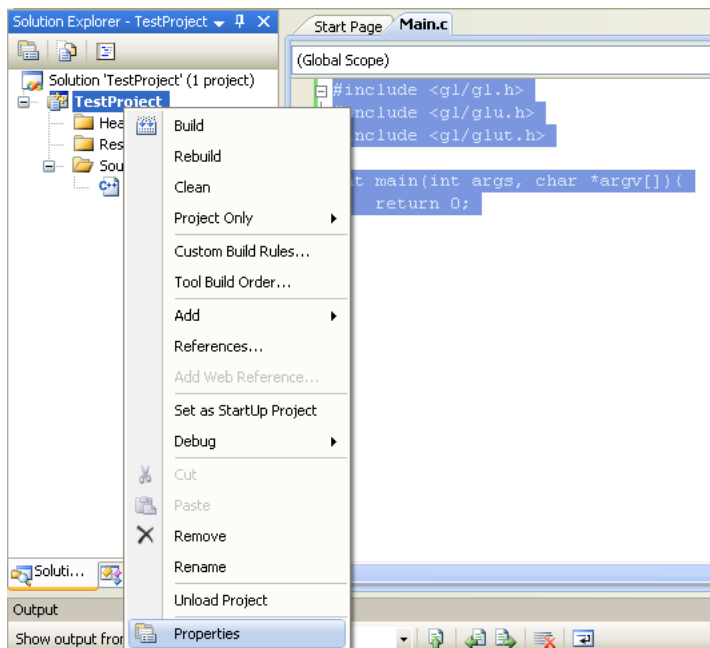
#include <gl/glut.h>

#include <math.h>

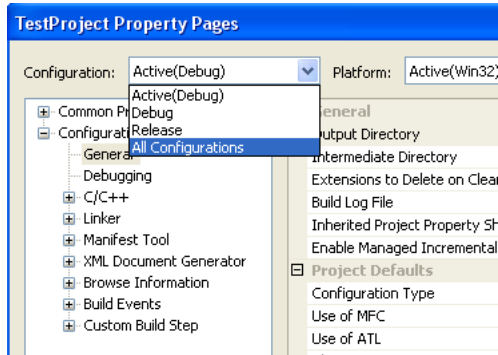
int main(int args, char *argv[]) {
    return 0;
}
```

These just happen to be the header files for the first example given in the 380 notes. Once you can run this, you can probably run the first example!

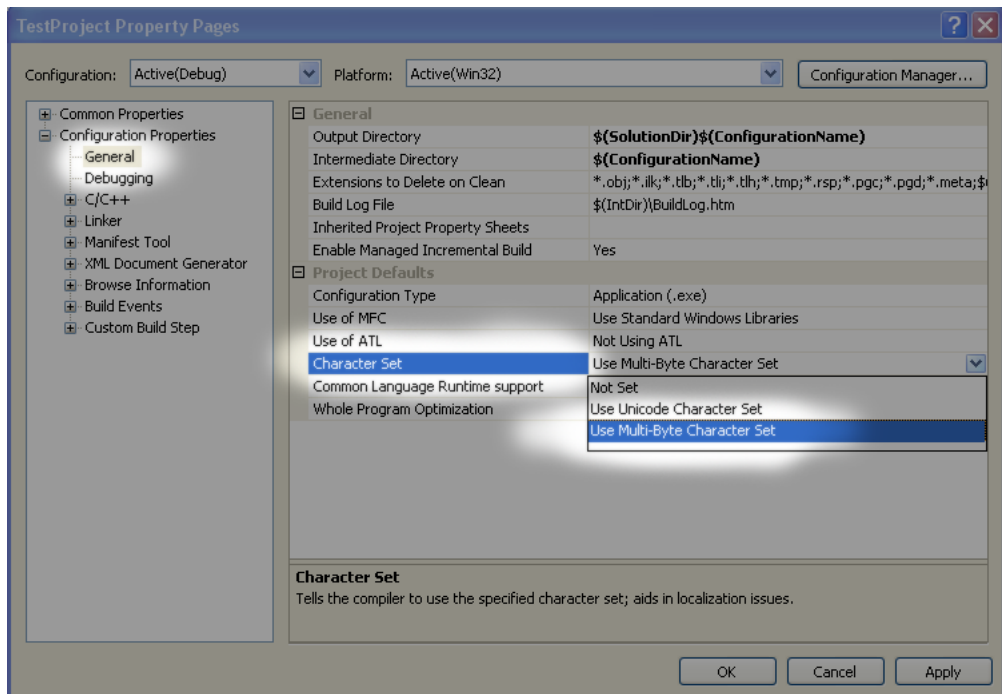
10. When I run this, I get an error because of some weird settings. Now is a good time to go through add link in the appropriate libraries. Firstly, right-click on Project-Properties.



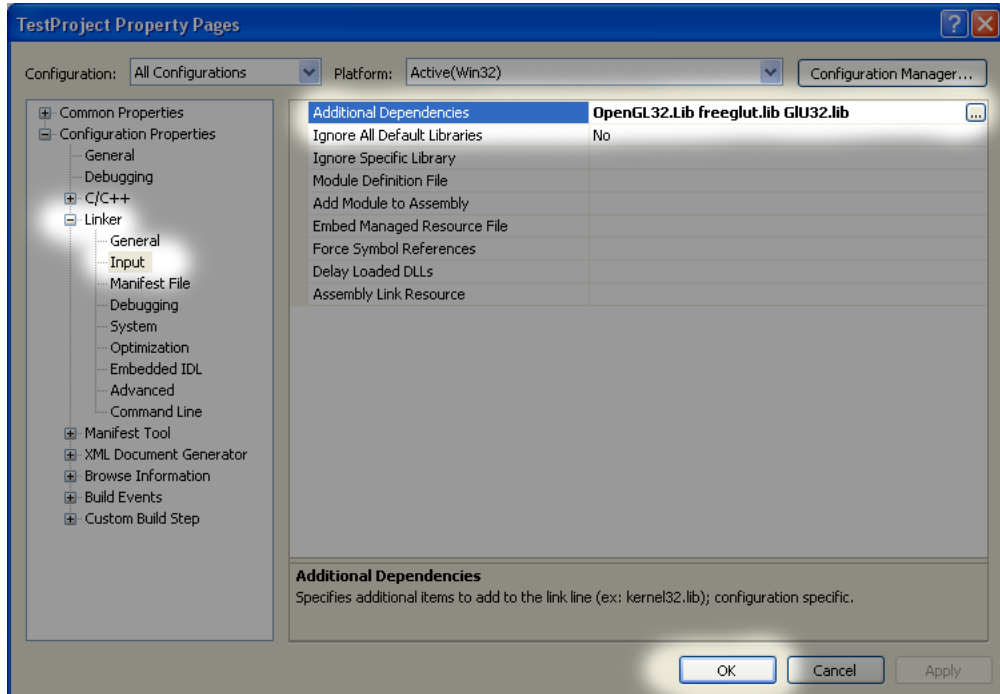
11. In the Property Pages Window, first change configuration to 'All Configurations'.



12. For some reason, OpenGL doesn't seem to like Unicode. So change the character encoding.



13. Link in the appropriate libraries. These libraries are "GIU.lib OpenGL32.Lib freeglut.lib". Click the linker option on the left, and then select the 'Input' option. Add these 3 files to the 'Additional Dependencies' field. They are simply a space-separated list.



14. Hit F7 to compile your code, and then F5 to actually run it! If all goes well, you should see a few success messages appear in Visual C++.
15. Thats it!