

OpenGL guide for Windows System

If you are using windows system, please follow the guideline to install the OpenGL library.(cite Feng Zhengyang, my TA when I was studying VG101)

1. check `g++ -v` in cmd to find your gcc directory. If you have installed MinGW, it should be\\MinGW.
2. [download binary FreeGLUT](#) for MinGW (Links to an external site.) and unzip.
3. put *.dll (all file with extension .dll) in C:\\Windows\\System32 (32bit environment) or C:\\Windows\\SysWOW64 (64bit environment)
4. put *.h in\\MinGW\\include\\GL
5. put *.a in\\MinGW\\lib (according to bits as well)
6. (**For Code::Blocks users**)Open Code::Blocks, Find Settings-Compilers-Global Compiler Settings-Linker Settings, hit Add at the bottom, change the folder to\\MinGW\\lib, add library files libopengl32.a, libglu32.a, libfreeglut.a, and hit Save.
7. (**For Atom users**)When you open Ctrl+F6 tab, add "-lopengl32 -lglu32 -lfreeglut" to "link library"
8. (**For those who directly use g++ command to compile**)use the following command in your terminal(`xxx1.cpp xxx2.cpp ...` means all cpp files in your project, and `abc` means the name of the output file, which you can name freely)

```
g++ xxx1.cpp xxx2.cpp ... -lfreeglut -lopengl32 -lglu32 -o abc
./abc
```

7. test with some good examples available [here](#) (Links to an external site.). (you may use freeglut.h instead of glut.h)
8. If your program keeps itself compilation error, you may to try to `#include` in your codes at the very beginning. (But if still no working, double check the previous steps! Especially 32/64-bit thing!) I have to say, after I have installed (Free)GLUT on several Windows systems, some of them need this header but some not, despite of their identical version in gcc and opengl. Honestly, I have no idea how to solve this problem. But, as none of your TAs are working in Windows when grading your submissions, you should not have `#include` in any of your submissions. Of course, you may add `#include` every time you write programs in opengl and then delete it before submitting, but a better suggestion is to modify glut.h/freeglut.h you have just put in ...\\include\\GL by adding `#include` at the very beginning, and your programs shall not have such errors any more.