

Installing OpenGL and Running the Book's Code on Ubuntu Linux 12.04 LTS

- Go to the terminal window and install `g++`, `freeglut3`, `freeglut3-dev`, `libglew-dev`, `libglew1.5` and `binutils-gold` libraries by typing the following commands one at a time:

```
sudo apt-get install g++
sudo apt-get install freeglut3
sudo apt-get install freeglut3-dev
sudo apt-get install libglew-dev
sudo apt-get install libglew1.5
sudo apt-get install binutils-gold
```

- Open a book program or write your own using your preferred editor. Let's assume the program file is `square.cpp`.
- Open the terminal window, change to the directory where the source code is located and compile the program with the command:
`g++ square.cpp -o square -lGL -lGLU -lGLEW -lglut -lm -Wno-write-strings`
- Run the program by entering the command: `./square`

Notes:

1. The `g++` compiler isn't exactly equivalent to the `MSVC++` compiler using which the book programs were developed, so there might be minor tweaks to make to the source code according to the `g++` error report, if indeed there are errors.
2. If your graphics card doesn't support OpenGL 4.3 then a book program may compile but not run as the system is unable to provide the OpenGL 4.3 rendering context asked by the command `glutInitContextVersion(4, 3)` in the main routine. What you might do in this case is replace `glutInitContextVersion(4, 3)` with `glutInitContextVersion(3, 3)`, or even `glutInitContextVersion(2, 1)`, instead. Of course, then, programs using later-generation calls will not run, but you should be fine early on in the book.