

Resources: Programming in C++

Installing g++

Windows

Use the [“Windows Subsystem for Linux”](#) selecting the “Ubuntu” option for installation. After installation, from within the `bash` prompt, follow the instructions below for Ubuntu-like Linux. (Fall 2020) I recommend using Ubuntu 20.04 LTS for the Linux version, only because it will be the same version that I am using.

Install an Xserver application in Windows. Here are a couple of choices. As of Spring 2021, VcXsrv appears to be more current.

- Install [VcXsrv](#) in Windows for displaying graphical applications. Be sure to configure “no access control”.
- Install [Xming](#) in Windows for displaying graphical applications. (Download the “Public Domain” version for free.) Be sure to configure “no access control” in the XLauncher.

Inside of a bash prompt edit your `.profile` and add lines like this at the bottom:

```
export DISPLAY=$(awk '/nameserver / {print $2; exit}' /etc/resolv.conf 2>/dev/null):0
export LIBGL_ALWAYS_INDIRECT=1
```

[Irfanview PPM image viewer.](#)

Mac OS X

Install the command line developer tools. See the first part of [these instructions](#).

Ubuntu-like Linux

Use `apt` to install the correct packages

```
sudo apt update
sudo apt install g++ freeglut3-dev libglu1-mesa-dev libgl1-mesa-dev valgrind libgtest-dev
```

No-Install Option

Use the computers in the Smith building. You can do this physically in the lab, or you can remotely connect to the systems to create and run your programs.