

Developing Your CS123 Project Locally

a brief guide

Fall 2016

While we've taken some steps to make the project stencil as cross-platform compatible as possible, follow the following instructions to make everything run smoothly. If the following steps do not work for you, feel free to ask the TAs for additional help. For Windows: see Vivian (vmorgowi), Sam (sgondelm), or Ben (battal). For Mac: see Luke (lpriebe), Neel (nvirdy), Nick, (nmckenna), or Vijay (vn6). For Linux: see Ruiqi (rm28).

Remember to test all your projects on department machines after development, as we will grade only on those machines. Please also note that these steps may not be sufficient to run all lab code locally. Enjoy!

1 Mac OS X

1. Visit <http://www.qt.io/download-open-source/#section-2>, and download the most recent version of Qt (at least 5.2).
2. Follow the directions in the installer. On the Select Components, make sure the box next to Tools is checked.
3. Copy your files from the department machine using the terminal command:
`scp -r <your_username>@ssh.cs.brown.edu:path/to/your/project/dir
desired/destination/on/your/computer>`
4. Open up your project in QtCreator. On the Configure Project page, click Okay. Now go to Projects (in the sidebar). Under the **Build & Run** tab, click **Manage Kits**. On the right sidebar, click **Add**. Give your new kit a recognizable name. In the compiler dropdown, select **GCC** for 64 bit. Under Qt version, select **Qt clang 64bit**. Click okay, then click **Add Kit**, and select the kit you just made.
5. Clean and Rebuild your project. Now you should be good to go!

2 Windows

1. Visit <http://www.qt.io/download-open-source/#section-2>, and download the most recent version of Qt (at least 5.2) **with MinGW**.

- (a) Note that if you take the first / recommended download for Windows, you will likely get the wrong compiler! To get the download link you want, make sure you're on the "Show All Downloads" page and scroll for a bit until you get to the one labeled **Qt 5.5.0 for Windows 32-bit (MinGW 4.9.2, OpenGL, 959 MB)**.
 - (b) If you get the wrong compiler, then uninstall the Qt creator you downloaded and just install the right one.¹
- 2. Follow the directions in the installer.
- 3. Copy your files from the department machine using WinSCP. More info [here](#) and [here](#).
- 4. Clean and Rebuild your project. **Now you should be good to go!**
- 5. If it still doesn't work:
 - (a) Check the .pro file. There should be a line saying *LIBS += -lopengl32*. If this is missing, add it in.
 - (b) If your computer is over 4 years old: you may have issues with using OpenGL version 400 in your shaders. If you are getting compilation errors in your unchanged shaders, then try printing your OpenGL version (look [here](#) for help with this). If your version is < 4.0 and you have the latest graphics drivers installed on your computer, you may not be able to run the projects and labs for this course. As a last resort, you can try changing the line at the top of each shader file (the .frag and .vert files) from `#version 400` to `#version 330`.

¹To Uninstall: Go to the Qt creator folder wherever you downloaded it to (the default is your C drive) and then the version you installed. You're looking for an application labeled the MaintenanceTool with the green Qt icon. Double click it and you will get a window with three options. Choose "Remove all components" and go through the rest of the prompts.