

CS151 Setup

1. Account

You will need an account on our Linux server: `goldengate.cs.brynmawr.edu`. Students who pre-registered for 151 should have received an email (your BMC or HC email) with a username/passwd from our system administrator David Diaz. If you have not, or were not on the class list, you need to email David (ddiaz1@brynmawr.edu) to request an account. If you have an account but can't remember your password or have other problems, you need to email David also.

2. Sever/remote access

`goldengate.cs.brynmawr.edu` is our main gateway server. If you are sitting in our labs (230 or 231), you are not programming on `goldengate`, but one of the lab machines. If you are connecting from elsewhere, you can ssh to `goldengate` directly.

3. More details on ssh (skip if you have seen this before from other classes)

Software

- Terminal (mac)
- OpenSSH (windows 10)
- from either above, ssh to connect to `goldengate.cs.brynmawr.edu`

Note that this is only necessary if you choose to not come to the labs to do your assignments. In that case you **MUST** make sure that you have a functional remote connection to our server that will allow you to complete your work. All examples below are given with `goldengate` as the target.

Here are a few options that you can choose from. Make sure one of them is working for you.

1. **`ssh username@goldengate.cs.brynmawr.edu`** – simply execute this command from a shell. This limits you to working in a terminal window, which is restrictive. The advantage is you are directly on the server, with access to all your files and there is no need to copy anything back and forth (as opposed to 3 below), and there is no set up on the local machine (as opposed to 2). If you are comfortable with vim, this is definitely the option to go with, because vim is fully functional with just a terminal window.
2. **`ssh -X username@goldengate.cs.brynmawr.edu`** – the additional flag “-X” sets up X-forwarding, which means you should be able to get all the windows as you normally would sitting in front of a lab machine. However, in order for this to work properly, an X server must also be installed on your local machine, which might require more set up (I tested for macs, installing XQuartz is all that is required. You are on your own with a Windows machine). If everything is working correctly, after login, you should be able to type commands into the server terminal as if you are sitting in front of a lab machine, but anything that pops a new window will show it on your local machine. For example, “**`xterm&`**” will start new server terminal windows on your local machine and “**`emacs&`**” will start a new emacs window similarly. “**`code&`**” to start VS code remotely.

3. Use “**scp**” (or some other ftp client) to copy all the files from the server to your own machine, program there and then copy them back – if you go this way, you must compile and run all your work on goldengate before you submit to make sure that they will execute properly on our server. Of course, you must also install a Java compiler (Java JDK) on your local machine as well, along with your editor of choice.

In principal, **scp** works exactly like **cp**, except for the prefix **username@goldengate.cs.brynmawr.edu:** and the fact that you have to quote the path with " " if you have wildcard matching (*). The quoting is needed on macs, whose default shell has changed to zsh. It's not necessary if you are running bash or tcsh, but it doesn't hurt either. Consult the manual pages for more information on **scp**.