

Getting Started with git

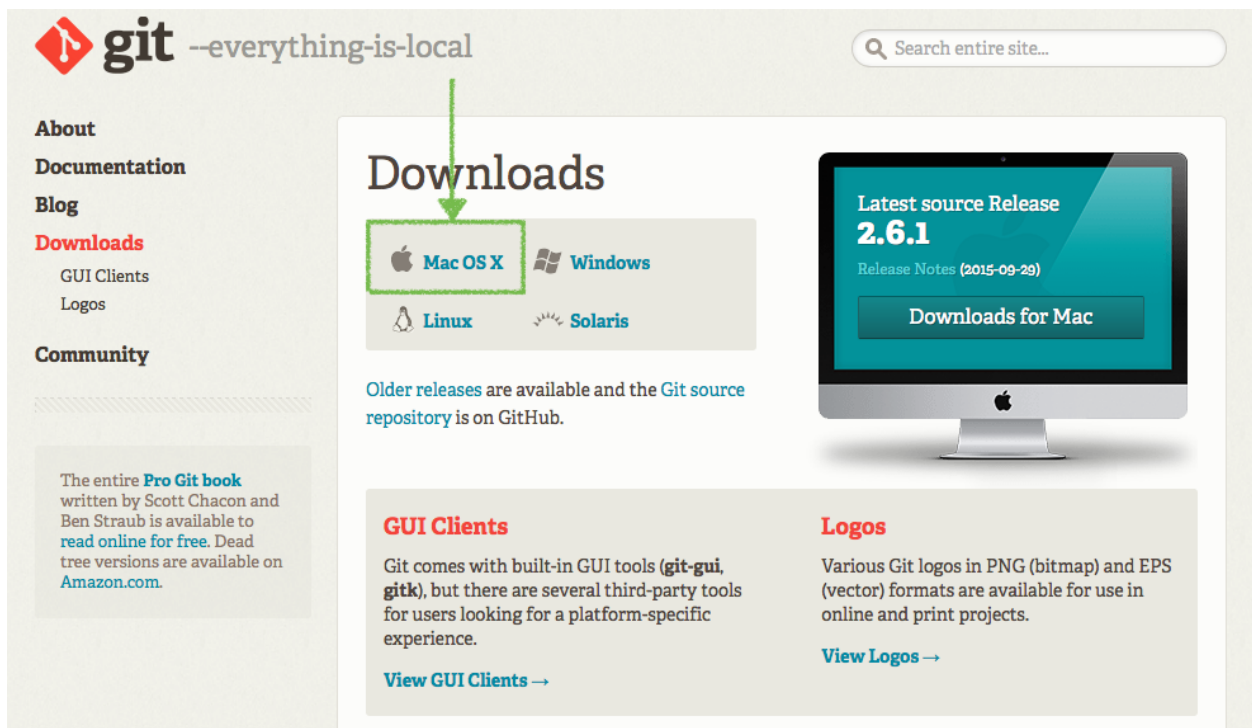
Daniel Anderson, University of Oregon - College of Education

Getting started with *git*

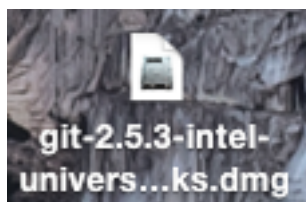
git is a version control system for collaborating on code. The largest git hosting engine is [github](#). However, github is separate from *git* itself. There are multiple git host sites. For example [Bitbucket](#) is another popular host site that has some advantages over github like free private repositories (github repositories are all public, unless you pay a monthly fee). For this course, we'll be using *git* with github. You will need to only understand the very basics of *git* for the purposes of this class, but if you are going to go on to do any serious coding, you'll want to become more familiar with it. The first two chapters of the *Pro Git* book, available [here](#) will provide you with most all the background you need. The purpose of this document is to provide you an overview of installing *git* and cloning the course repository.

Installing *git*

Installing *git* is straight forward. Simply go to the downloads portion of the *git* [website](#) and click on the Mac OS X logo.



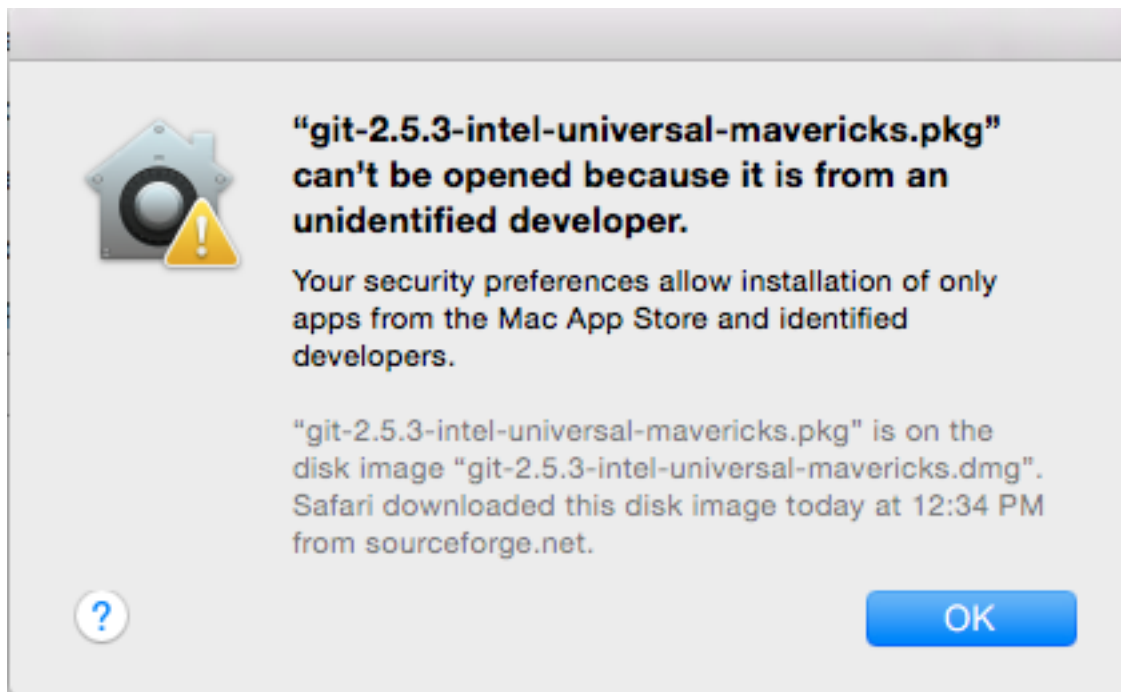
You should then get a .dmg file named something close to (or exactly) git-2.5.3-intel-universal-mavericks.dmg



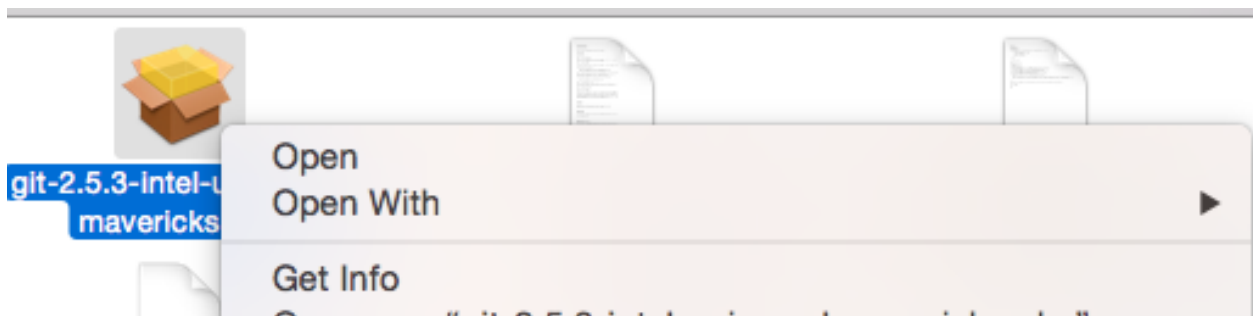
Double click the dmg file and you should see a .pkg installer



If you just double click the pkg installer you will likely be told it cannot open because it's from an unidentified developer.



To get around this you'll need to "right" click on the pkg installer (by either placing two fingers on the trackpad and clicking or holding control while clicking), and then selecting "open".



You will still be prompted by the unidentified developer warning. Just select "Open". You'll then be guided through the installer.

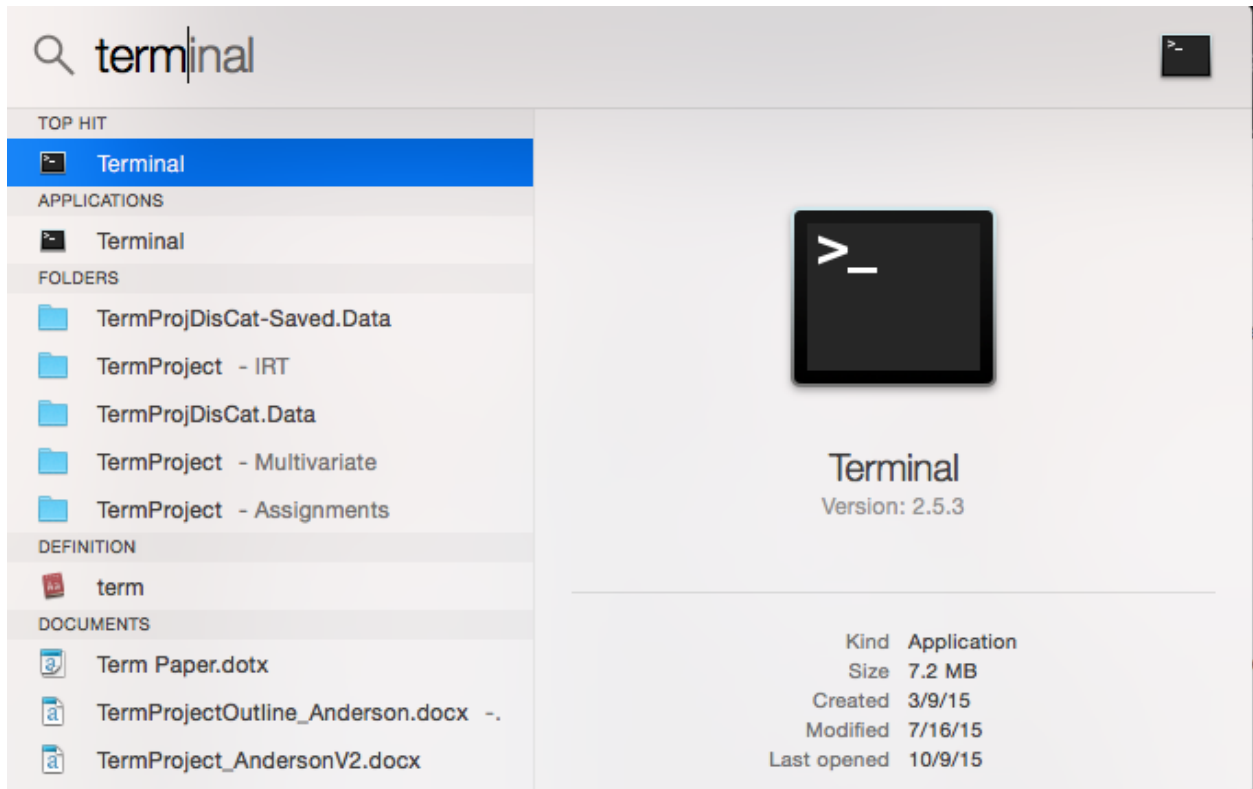
Note. After running the installer, *git* will be installed on your computer. However, you will not see it in your applications or anywhere else. Rather, it is installed as part of the command line tools, and you'll access *git* via terminal.

Cloning the course repository

This tutorial describes how to clone the course repository through terminal. There are many free *git* graphic user interfaces (GUIs) that many people use. I don't know them, and prefer to just work with the code, but you can feel free to explore them.

Launch terminal

Terminal is a mac application available at /Applications/Utilities/Terminal. Alternatively, you can use Mac's spotlight feature by pressing command and space bar. Then, type terminal, and the application will come up.



Next, change your directory, via `cd` to where you would like all the course materials saved. One of the easiest ways to do this is to type `cd` and then a space, and then just drag the folder to terminal where you want the materials saved. The path will then be automatically copied into terminal.

```
Daniel — bash — 80x24
Last login: Tue Oct 13 11:40:25 on ttys000
d26-92:~ Daniel$ cd /Users/Daniel/Dropbox/School
```

Finally, go to the [course github repository](#) and copy the link to clone the repository.

DJAnderson07 / CourseR

Unwatch 1 Star 0 Fork 0

R course — Edit

5 commits 1 branch 0 releases 1 contributor

Branch: master CourseR / +

File	Commit	Time
Presentations	Week 1	an hour ago
Syllabus	Week 1	an hour ago
Week1 @ 8246e9d	Added Week 1 as a submodule	17 minutes ago
data	Week 1	an hour ago
hw1	Week 1	an hour ago
.gitignore	Added .DS_Store	29 minutes ago
.gitmodules	Added Week 1 as a submodule	17 minutes ago
LICENSE	Initial commit	an hour ago
README.md	Week 1	an hour ago

HTTPS clone URL

<https://github.com/DJAnderson07/CourseR.git>

You can clone with [HTTPS](#), [SSH](#), or [Subversion](#).

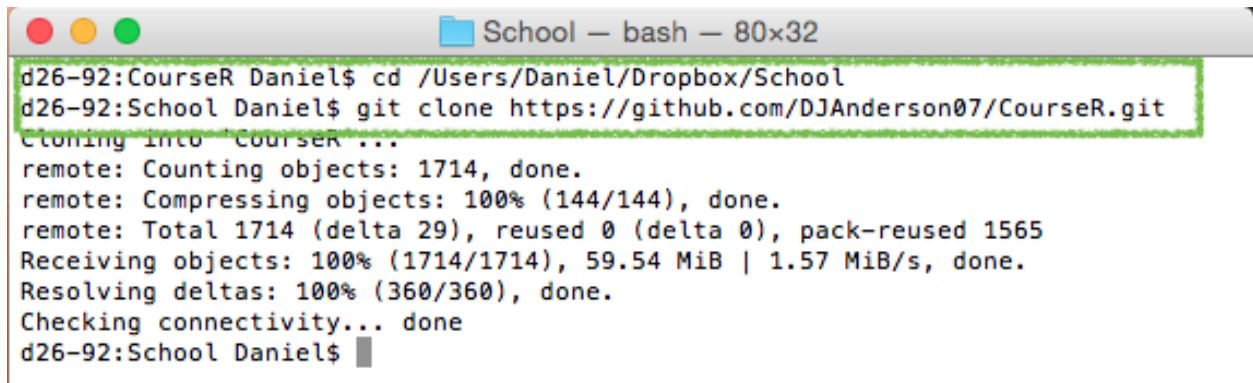
Clone in Desktop

Download ZIP

and type `git clone` into terminal, followed by the link (i.e., paste the link). It should look like this

```
git clone https://github.com/DJAnderson07/CourseR.git
```

After you hit enter, the course materials should all be cloned (copied) into your directory.

A screenshot of a macOS terminal window titled "School — bash — 80x32". The terminal shows a user named Daniel at a machine named d26-92. The user navigates to the directory /Users/Daniel/Dropbox/School and then clones a repository from GitHub. The output shows the progress of cloning, including counting and compressing objects, and receiving the repository data. The final prompt is d26-92:School Daniel\$.

```
d26-92:CourseR Daniel$ cd /Users/Daniel/Dropbox/School
d26-92:School Daniel$ git clone https://github.com/DJAnderson07/CourseR.git
Cloning into 'CourseR'...
remote: Counting objects: 1714, done.
remote: Compressing objects: 100% (144/144), done.
remote: Total 1714 (delta 29), reused 0 (delta 0), pack-reused 1565
Receiving objects: 100% (1714/1714), 59.54 MiB | 1.57 MiB/s, done.
Resolving deltas: 100% (360/360), done.
Checking connectivity... done
d26-92:School Daniel$
```

Note. If you do not have command line tools installed, you will be prompted to do so. You will need to install the command line tools to work with *git* via terminal.

Updating the repository

As mentioned in the opening, if you're planning on doing any serious coding, you should really dig into *git* a bit more. However, for the purposes of this class, you should only need one command: **git pull**. The process is pretty easy. Just follow the following steps

1. Launch terminal
2. type **cd** followed by a space, then drag the course folder (CourseR) into terminal to get the path. Hit enter.
3. Type **git pull** and hit enter. Assuming the repository has been updated, terminal should print some messages about some files.

```
CourseR — bash — 80x32
Last login: Tue Oct 13 16:08:02 on ttys000
d26-92:~ Daniel$ cd /Users/Daniel/Dropbox/School/CourseR
d26-92:CourseR Daniel$ git pull
remote: Counting objects: 12, done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 12 (delta 2), reused 12 (delta 2), pack-reused 0
Unpacking objects: 100% (12/12), done.
From https://github.com/DJAnderson07/CourseR
   eb835d5..4ad2bfd  master    -> origin/master
Updating eb835d5..4ad2bfd
Fast-forward
 git_Tutorials/gettingStarted_Windows.Rmd | 108 ++++++
 git_Tutorials/img/commandPromptCD.png    | Bin 0 -> 15729 bytes
 git_Tutorials/img/commandPromptLoc.png   | Bin 0 -> 56875 bytes
 git_Tutorials/img/macGitDownload.png     | Bin 268042 -> 276465 bytes
 git_Tutorials/img/winAdjustingPath.png    | Bin 0 -> 37254 bytes
 git_Tutorials/img/winEXE.png             | Bin 0 -> 26674 bytes
 git_Tutorials/img/winGitDownload.png     | Bin 0 -> 273922 bytes
 git_Tutorials/img/winGitSetup.png        | Bin 0 -> 23126 bytes
 git_Tutorials/img/winUserAccountControl.png | Bin 0 -> 44015 bytes
9 files changed, 108 insertions(+)
create mode 100644 git_Tutorials/gettingStarted_Windows.Rmd
create mode 100644 git_Tutorials/img/commandPromptCD.png
create mode 100644 git_Tutorials/img/commandPromptLoc.png
create mode 100644 git_Tutorials/img/winAdjustingPath.png
create mode 100644 git_Tutorials/img/winEXE.png
create mode 100644 git_Tutorials/img/winGitDownload.png
create mode 100644 git_Tutorials/img/winGitSetup.png
create mode 100644 git_Tutorials/img/winUserAccountControl.png
d26-92:CourseR Daniel$
```

4. Type `git status`. If you see the following message, you should be good to go. If you see something like “master ahead of branch by X commits”, or some other message, you are not up to date. Make sure you’re in the right directory and try `git pull` again. Otherwise, contact me and I can try to help you diagnose the problem.

```
# On branch master
nothing to commit, working directory clean
```