



Git for macOS & Unix

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April 29, 2018



Installing a Git client

macOS:

- Download Github Desktop from:

<https://desktop.github.com/>

- macOS users can also use terminal commands if they would like.

Linux:

- Git should come pre-installed. My advice is to jump right and use the command line.





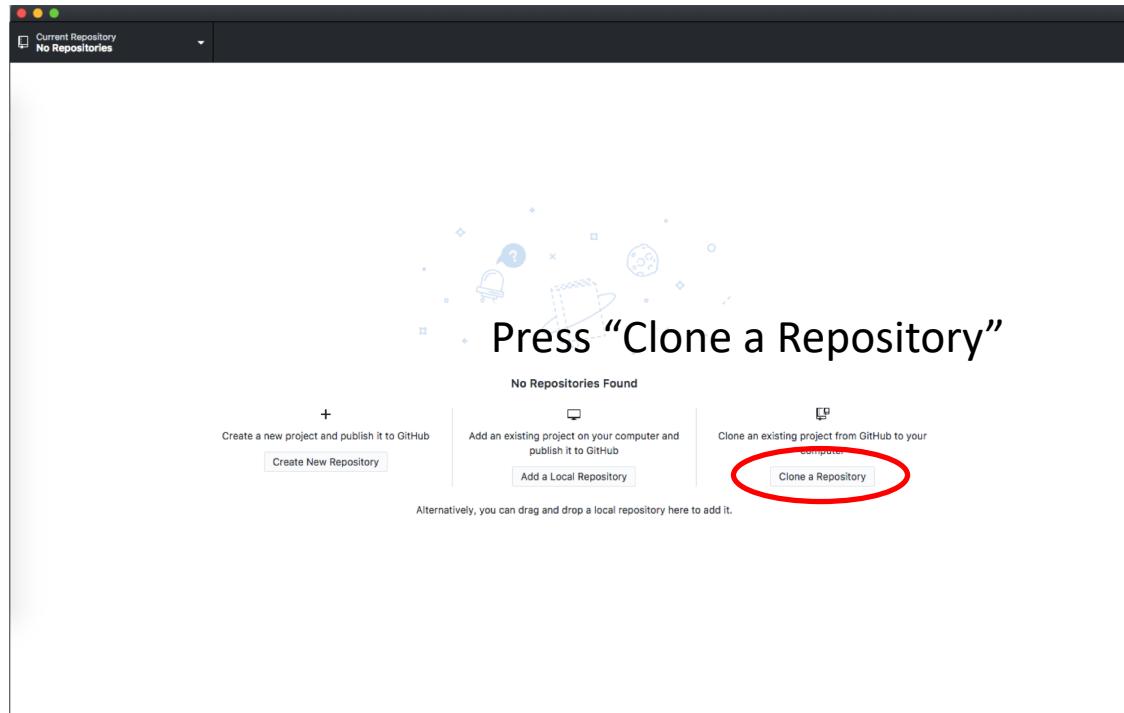
Basic Workflow



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git clone (GitHub Desktop)

- a.k.a. downloading a repository



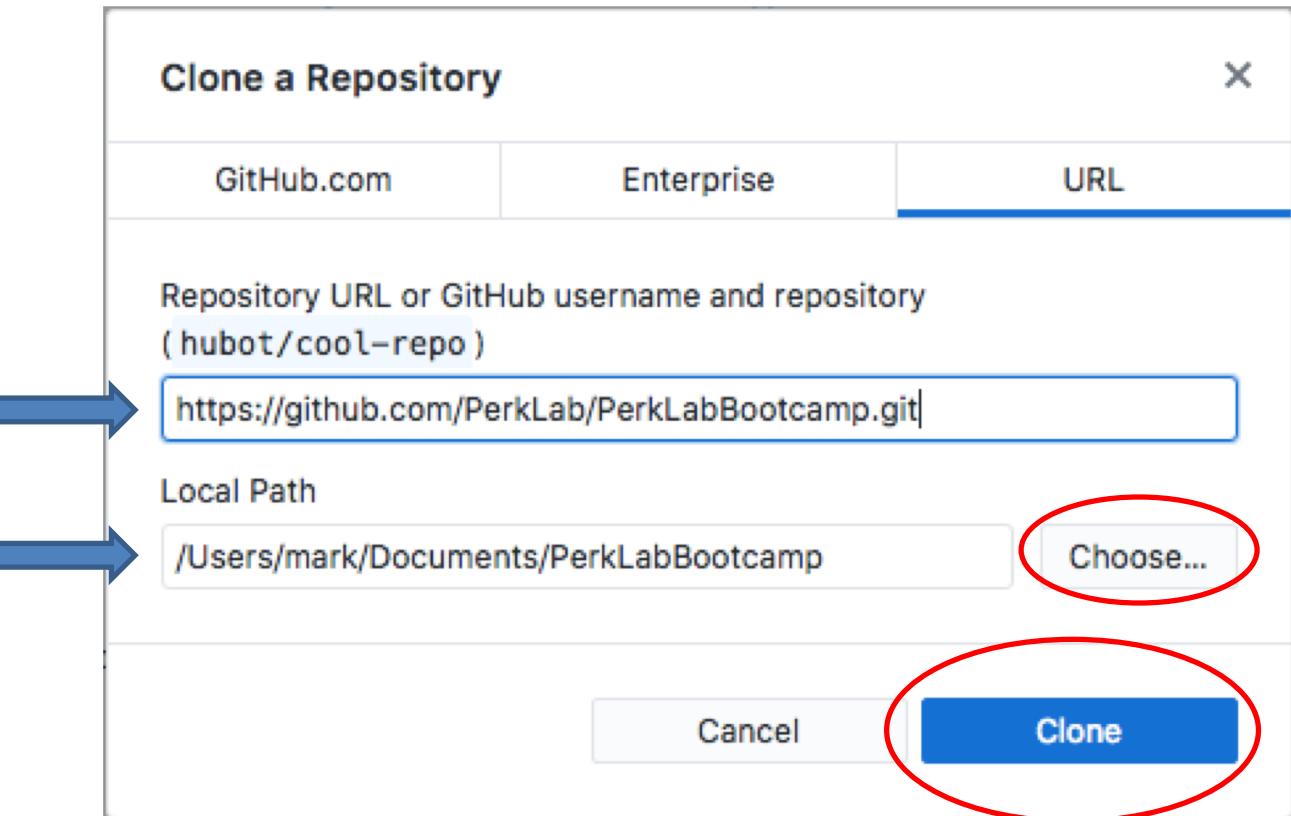
- Or, you can use File->Clone Repository



git clone (GitHub Desktop)

Input URL to clone from

Choose where on your PC to clone it to



git clone (terminal)

- Use “cd” (change directory) to navigate to where you’d like to clone the repository
- Run the command (changing the url for a different repository):

```
git clone <url> <destination>
```

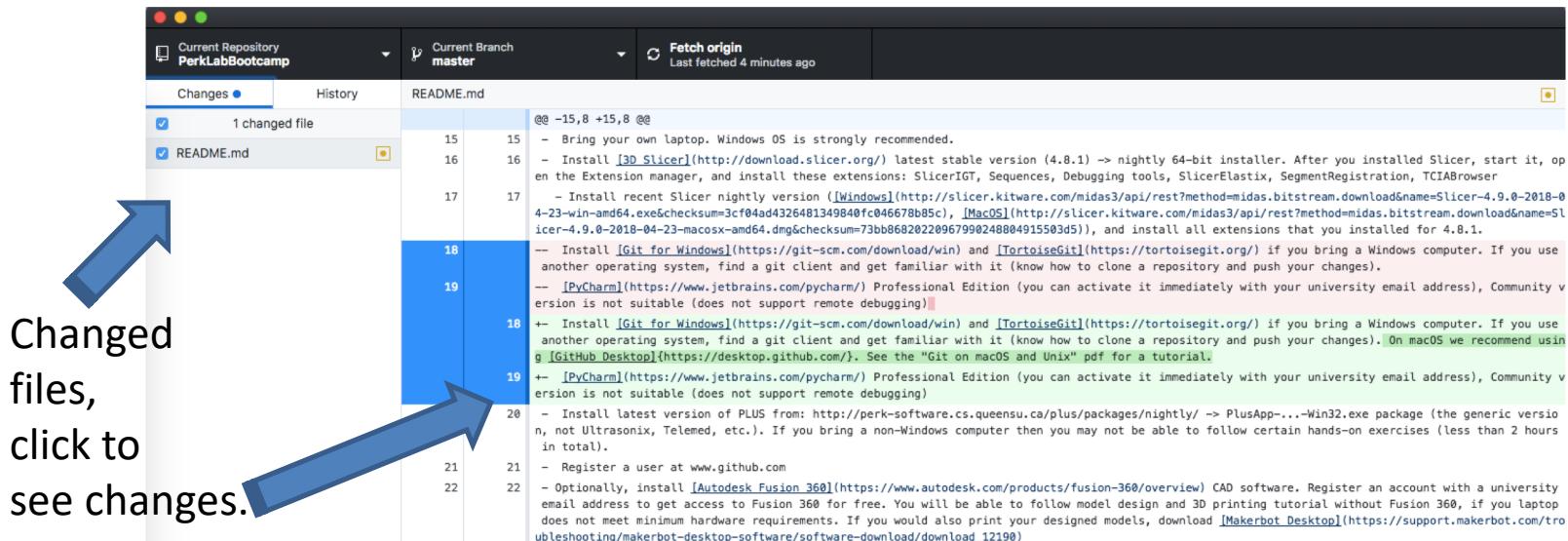
```
git clone https://github.com/PerkLab/PerkLabBootcamp .
```

(“.” on Unix means current directory)



git commit (GitHub Desktop)

- a.k.a “saving” your work

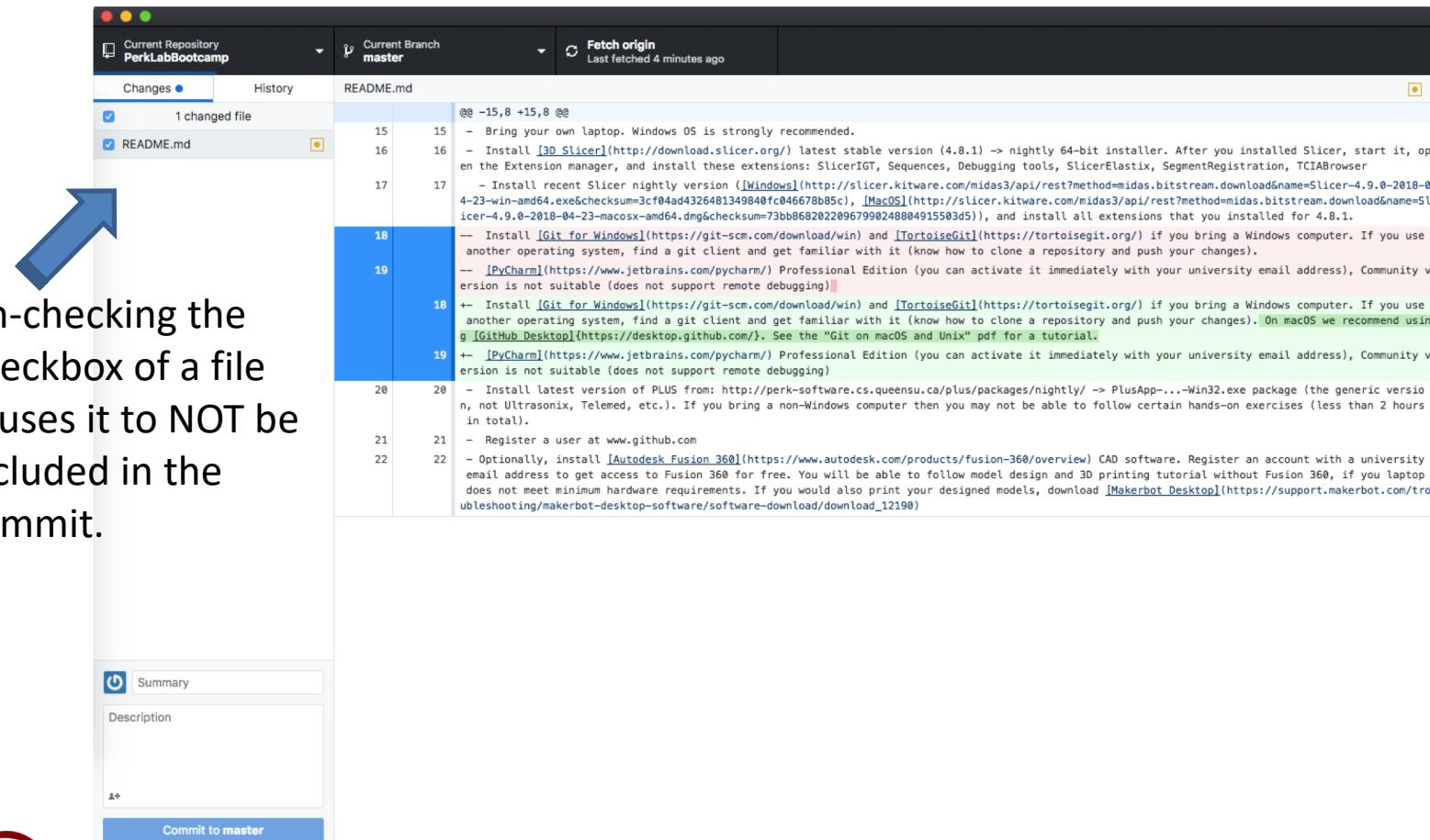


To commit, type a commit message where it says summary, and optionally add a description.
Press “Commit to master”



git commit (GitHub Desktop)

- a.k.a “saving” your work



git commit (terminal)

- First we need to see our changes - use:

```
git diff
```

- Now we want to stage our changes to be committed. To add everything use:

```
git add -A
```

- Or, to add only specific files, use:

```
git add <filename>
```

- Lastly, we do our commit

```
git commit -m "<commit-message-here>"
```



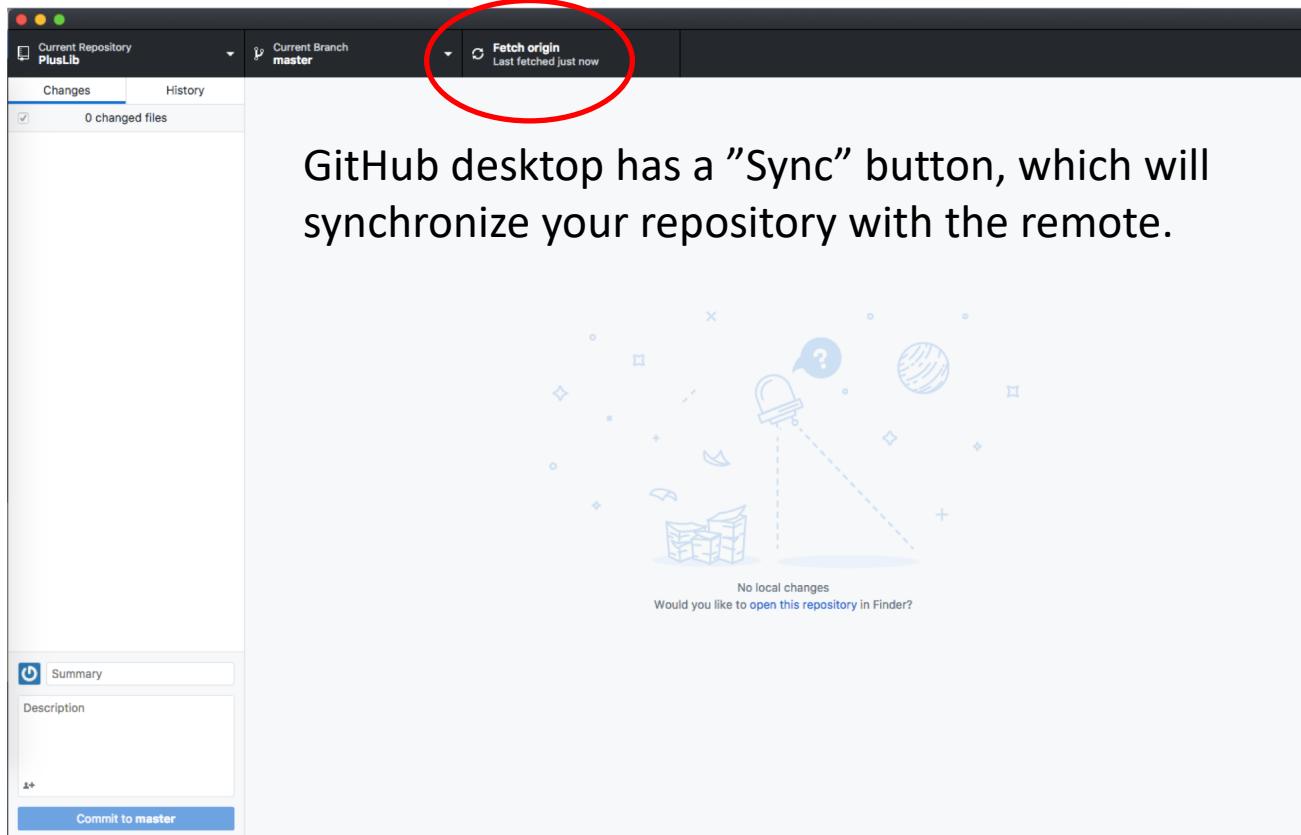
Writing good commit messages

- If there is an issue number related to your commit, start the commit with “re #27:” replacing 27 with your issue number.
- Be descriptive – what did you fix, change, add, remove?
- Be brief, if your commit message is getting long (i.e. >> 100 chars) you probably should have made 2 commits



git fetch && git rebase (GitHub Desktop)

- a.k.a. updating a previously downloaded repository



git fetch && git rebase (terminal)

- If all your changes are committed, run the fetch command followed by rebase

```
git fetch -all && git rebase <branch-to-rebase-onto>
```



git push (GitHub Desktop)

- a.k.a. uploading local changes to the repository
- Done using the same button as sync – nice and easy!



git push (terminal)

- Straightforward command:

```
git push
```

- If the repository is private, git will ask for your login credentials.





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More Advanced Topics



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Creating a new repository (GitHub Desktop)

Give your repository a name, a description and a local location.

You can then choose to initialize the repository with a README which uses GitHub's markdown – this is highly recommended.

Other available options are to include a gitignore (see 2 slides forward) and a license.

Create a New Repository

Name

Description

Local Path

Initialize this repository with a README

Git Ignore

License



Creating a new repository (terminal)

- Navigate to the folder which you want to be the root of the repo using “cd”.
- Use the command:

```
git init
```



.gitignore files

- .gitignore is a file which tells git which files it shouldn't commit.
- This is useful to avoid committing temporary files or build files.



GitHub has a ton of pre-cooked .gitignore files

Available at:

<https://github.com/github/gitignore>

(These are the same gitignore files you get the option of choosing in GitHub desktop when creating a repository.)

If working on the command line, just download one of these into your repository and rename it as “.gitignore”.

Lua.gitignore	Added a .gitignore template for Lua based projects.	3 years ago
Magento.gitignore	Fixes issue excluding sub directories	a year ago
Maven.gitignore	Reword comment	a year ago
Mercury.gitignore	Mercury.gitignore: Add Mercury.modules	3 years ago
MetaProgrammingSystem.gitign...	Grammar/formatting tweak to comments	4 years ago
Nanoc.gitignore	Nanoc: Ignore tmp/nanoc/, not tmp/	8 months ago
Nim.gitignore	Create Nim.gitignore	3 years ago
Node.gitignore	Update Node.gitignore	a month ago
OCaml.gitignore	Update OCaml.gitignore	8 months ago
Objective-C.gitignore	[Fastlane] Specify screenshot files only, rather than whole folder (l...	13 days ago
Opa.gitignore	Added Opa.gitignore	6 years ago
OpenCart.gitignore	excluding vqmod cache files and logs	2 years ago
OracleForms.gitignore	added gitignore for Oracle Forms development	6 years ago
Packer.gitignore	Add a support for packer	4 years ago
Perl.gitignore	spelling: utils	6 months ago
Phalcon.gitignore	Remove trailing asterisks in Phalcon rules	4 years ago
PlayFramework.gitignore	Added /project/project to PlayFramework.gitignore	a year ago
Pmone.gitignore	Covered by global vim template	5 years ago
Prestashop.gitignore	Update Prestashop.gitignore	a year ago
Processing.gitignore	Added the processing project	5 years ago
PureScript.gitignore	Added .gitignore for PureScript	3 years ago
Python.gitignore	Merge pull request #2612 from jtogrul/master	2 months ago
Qoocodo.gitignore	Add gitignore for qoocodo apps	7 years ago
Qt.gitignore	Qt: Correct typo "QtCreator" to "QtCreator"	3 months ago
R.gitignore	Exclude secret deployment key in rsconnect/	3 months ago
README.md	Fix the anchor to ignore section	24 days ago
ROS.gitignore	Added ignore for files created by `catkin_make_isolated`	3 months ago
Rails.gitignore	Add exclude credential master key of Rails 5.2	a month ago
RhodesRhomobile.gitignore	Add Rhodes mobile application framework gitignore	8 years ago
Ruby.gitignore	Add a brief explanation.	2 years ago
Rust.gitignore	Update documentation link cargo.toml vs cargo.lock	2 months ago
SCons.gitignore	Added SCons.gitignore	a year ago



Excellent Git Resource

This git book is EXCELLENT
(and free!).

There's a PDF and a web version -
the web version is super helpful for
looking up anything git related.

Get it here:

<https://git-scm.com/book/en/v2>

