Notes from Thomas's Tutorial
Saturday 3rd March, 2018
website: https://github.com/lightwave-lab/modern-lab-workshop

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- Git: version control
- Github: website
- repository: add files to here
- commit: changes to the file, browse history
- hash: identifier for each commit
- fork: you can start your own thing from someone else's stuff
  - only a Github feature
  - then you could pull request to the original project
- cloning: copying the history of git
- remote: Github's copy. vs local: your copy
- stage: put all the modified files on a stage, and you encapsulate that into a commit
- Before you commit, you have to add something to a stage.
- Don't commit a binary file. (it has hex code). Don't need to commit thesis.pdf.
- download remote copy to local one: git fetch
- pull: a fetch plus merge
- push: put master to origin/master, then put it to the GitHub master

Github: has a master who can create branches, accept pull requests. The owner can delete the entire thing

- Computer:
  - repository
    - **origin/master** (remote copy). first time: use 'clone' then all subsequent times, it is 'fetch'
    - **master**. Might be behind by 5 commits
- Pull:
  - pull these changes to put them into your master file.
  - it equals fetch follows by 'merge'
- git init, etc- see the 15 minute exercise
  - https://try.github.io/levels/1/challenges/1

Terminalogy

- Path: the journey of folders that the computer goes through to check where your thing is
  - this is important because Python sometimes comes in two places- one before the other
- Brew:
  - a package manager
  - install a bunch of open source projects, git, latex too
- shell: an interactive program that is created at login and survives during the entire session
- use bash to execute scripts in a new subshell and use 'source' to eecute sripts in the same shell
  - bash opens a new shell- loads script and execute
  - source: read file and copy paste to current shell
  - if you want to learn more, type "man bash" into terminal

Other Terminal stuff

- ls: list things
- ls - l:
  - list things like this:
  - mode:
    - permission classes:
    - file type: d (directiory) - (file)
    - rwx
      - read, write, execute for user
    - rwx
      - read, write, execute for group
    - rwx
      - other people who use it can do this
    - execute: execute the file with permissions of the owner
  - owner: heidimiller
  - group attached to the file: staff
  - size: in bytes
  - last modification date: March 3
- cd Documents
- open .
- (open the docs)
- git clone https://github.com/lightwave-lab/modern-lab-workshop.git
- create new folder: moder-lab-workshop inside documents:
- git –version
  - 2.14.3
- compile tex file, produces thesis.pdf:

  - latexmk -cd -f -pdf -interaction=nonstopmode -synctex=1 thesis.tex
  - or use: latexmk -pdf thesis.tex
- pwd:
  - check what working directory you are in
- git status:
  - check your changes
- nano.gitignore
  - type: thesis.pdf
  - then control x
  - say y
  - enter
  - then it ignores adding the thesis.pdf
- git rm thesis.pdf
  - removes thesis.pdf from the repository
- git rm f thesis.pdf
  - force removal regardless
- git fetch
- rm
  - remove these files from files you will push. In our case, we removed the "untracked files" because they are added files that we created and we don't want to add them.
- recover:
  - git checkout –(your file)
  - if you accidentally deleted it.
- git add acknowledgements.tex
  - the stage now has that change.
  - use reset HEAD blah to take it out of the stage
- git commit -m "acknowledging Thomas!!"
- git pull, then save the file that shows up in the editor then exit
- type :q to go away from the merge message
- git push
- enter username and password
- groups heidim
  - the groups I belong to
- sudo touch this-file
  - touch creates a file and updates the modified date

  - requires password because doing sudo
- check the above by typing ls -l
- then you can remove it by typing rm this-file, then type y
- just cd: home
- cd ..
  - shortcut for parent folder
- ls -la
  - a is for all
- if you want to write something and your access is denied, write "sudo"
- check your permissions:
  - -rw-r–r–@
  - this is a binary representation
  - it is 644 I think
  - happens when you install stuff
  - you know you don't have acess when it is not a 755 directory I think
- Thomas sent a book to read
- Ask Thomas about how to get subl
- look at the manual for a command: man chmod
- rm -r Envs/
  - to remove the file Evns/

Python

- display.display: live plotting