Getting to know the Terminal & Git

Goals

- Be able to navigate through folders from the command line.
- Exposure to common bash commands.
- Git and the most popular commands.
- Clone first repository.
- Push to first repository.

Command Line

Command-Line Interface(CLI) - processes commands to a computer program in the form of lines of text. The program which handles the interface is called a **command-line interpreter**

- Runs Commands
- Outputs Results

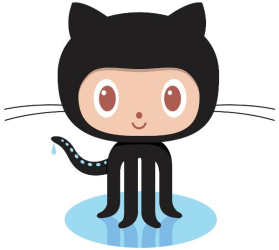
Shells - A *shell* is a computer program that presents a command line interface which allows you to control your computer using commands entered with a keyboard instead of controlling graphical user interfaces (GUIs) with a mouse/keyboard combination.

- sh (Bourne shell)
- csh (C shell)
- zsh (Z shell - popular with web developers)
- bash (Bourne-again shell) - allows windows users to run Linux software

Frequently used Commands

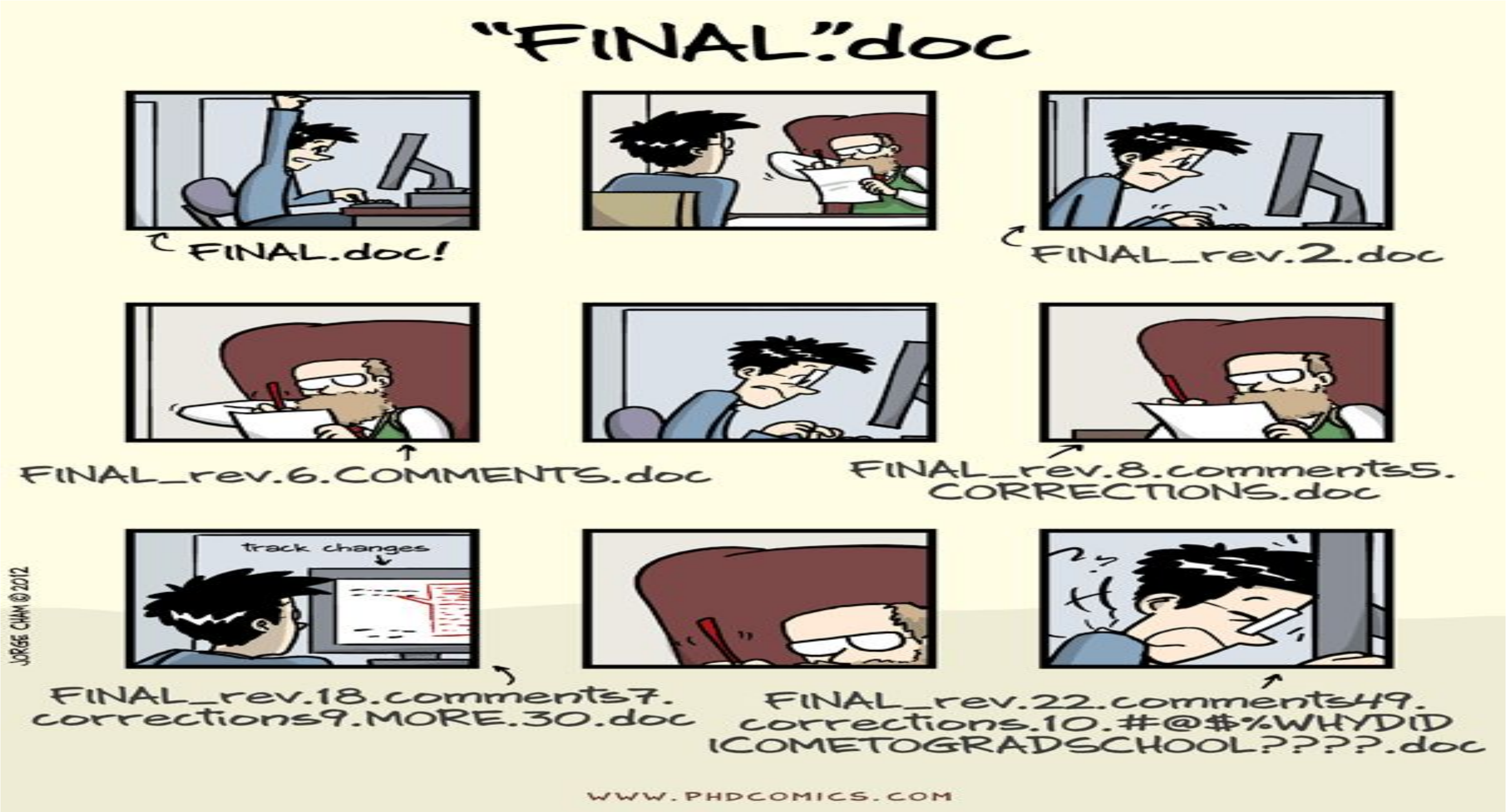
- **mkdir** = create new folder.
    - mkdir example_folder.
- **rm -r <foldername>** = delete folder.
- **ls <foldername>** = list files in folder.
- **ls** = list files in folder.
- https://annawilliford.github.io/2016-04-02-UTA/workshop/Linux/bash_cheat_sheet.pdf

- **cd <foldername>** = change directory
- **cd /** = go to root
- **cd ..** = go up one folder
- **cd ~**=home directory
- **pwd** = print working directory



What is Git/GITHUB?

Why Github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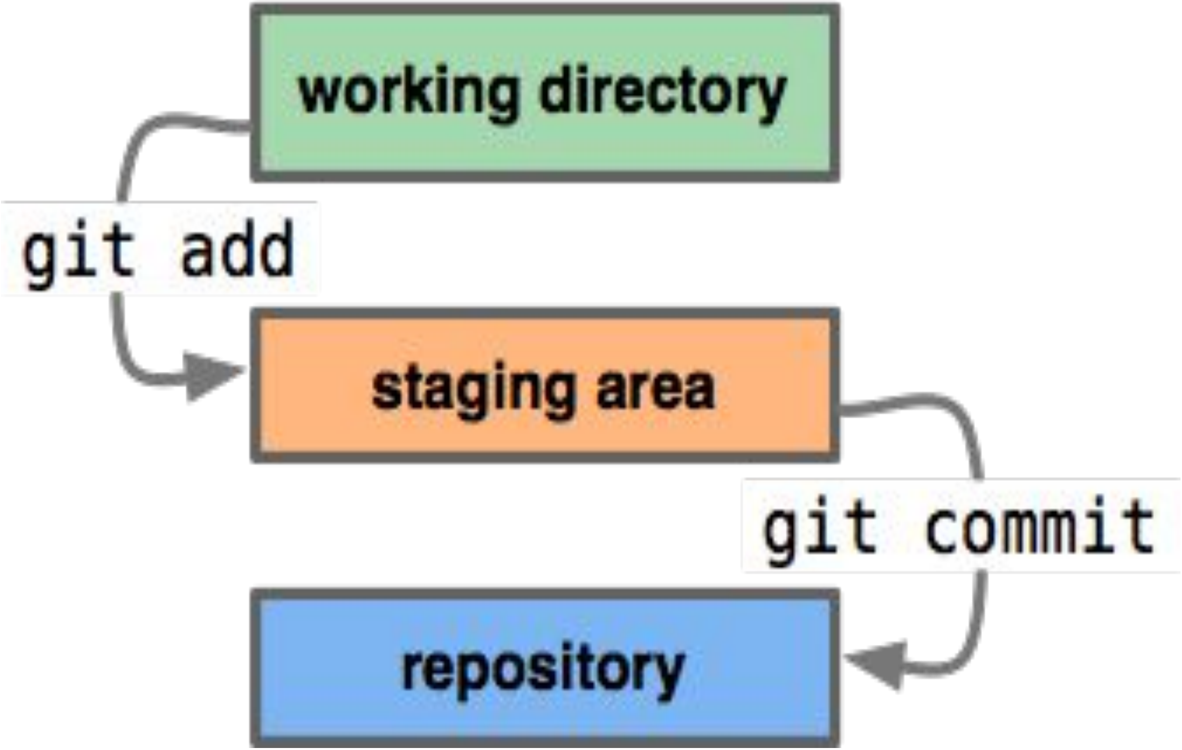
Git Terminology

- **Repository (repo):** A directory that contains your project work, as well as a few files used to communicate with Git. Either local or remote
- **Working Directory:** The files that you see in your computer's file system. When you open your project files up on a code editor, you're working with files in the Working Directory.
- **Staging Area:** A file in the Git directory that stores information about what will go into your next commit. You can think of the staging area as a prep table where Git will take the next commit.
- **Fork:** a repository from GitHub to create your own local copy.

Workflow


working directory
git add
staging area
git commit
repository

Git Commands

- Use **git clone** to clone a repository to your local computer.
- Use **git status** to see the status of your locally cloned git repository.
- Use **git add .** to add your local changes to be committed.
- Use **git commit -m "Commit Message"** to commit changes that have been added with a message.
- Use **git push** to upload your local changes to GitHub.

Everyday Work Flow

1. **Open terminal**

2. **Type “source activate learn-env”**

3. **Cd into your module folder**

4. **Click on Git icon at the top right of the lesson you wish to clone**

5. **Click the fork button, on redirected github repo**

6. **Copy the URL and type “git clone *Paste URL*” in your terminal**

7. **Now cd into newly repo and type jupyter notebook**

Setting Upstream Remote:

1. In your terminal go to the folder that contains the local repository
2. Type **git remote add upstream** and paste the main repository link (https://github.com/Amberlynnyandow/study-group-content) **NOTE**: You only need to do this step the first time
3. Type **git pull** to sync your local repo with the main GitHub repo.
4. Type **git pull upstream master**
5. This might take you into a VIM text editor requesting you to type a commit message. If this is the case, type **:q.** This should take you back to the normal terminal.
6. Type **git status**
7. Type **git commit -m "your commit message here"**
8. Type **git push origin master**
9. Your local and remote repositories should now be aligned with the main github repository

Cheat Sheets

- https://annawilliford.github.io/2016-04-02-UTA/workshop/Linux/bash_cheat_sheet.pdf
- http://try.github.io/
- https://github.github.com/training-kit/downloads/github-git-cheat-sheet.pdf