Welcome to Git

Intro to Git and Git Fundamentals
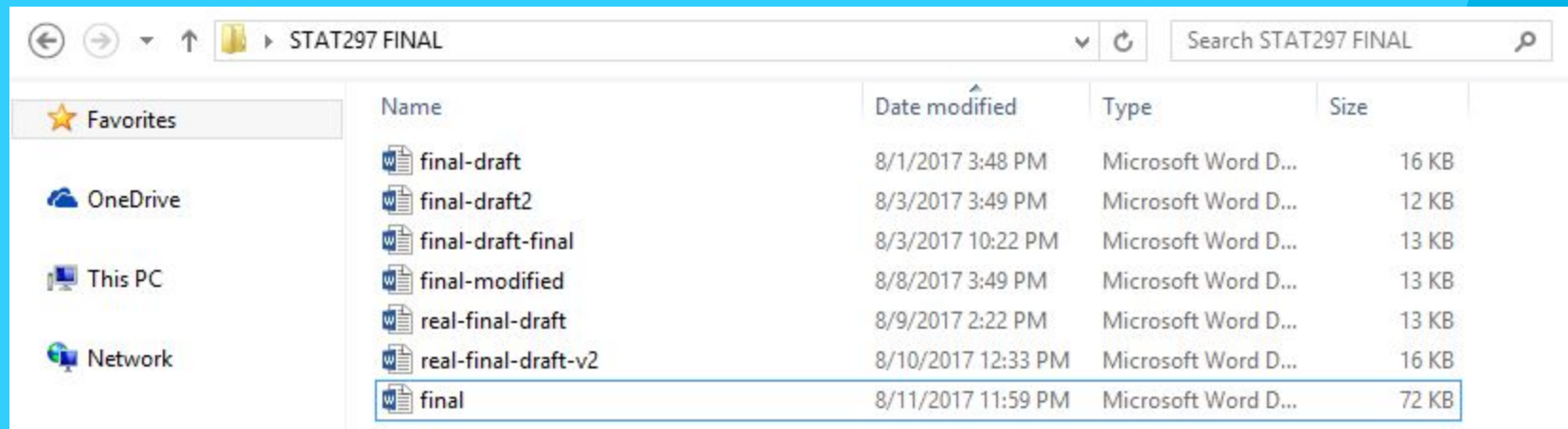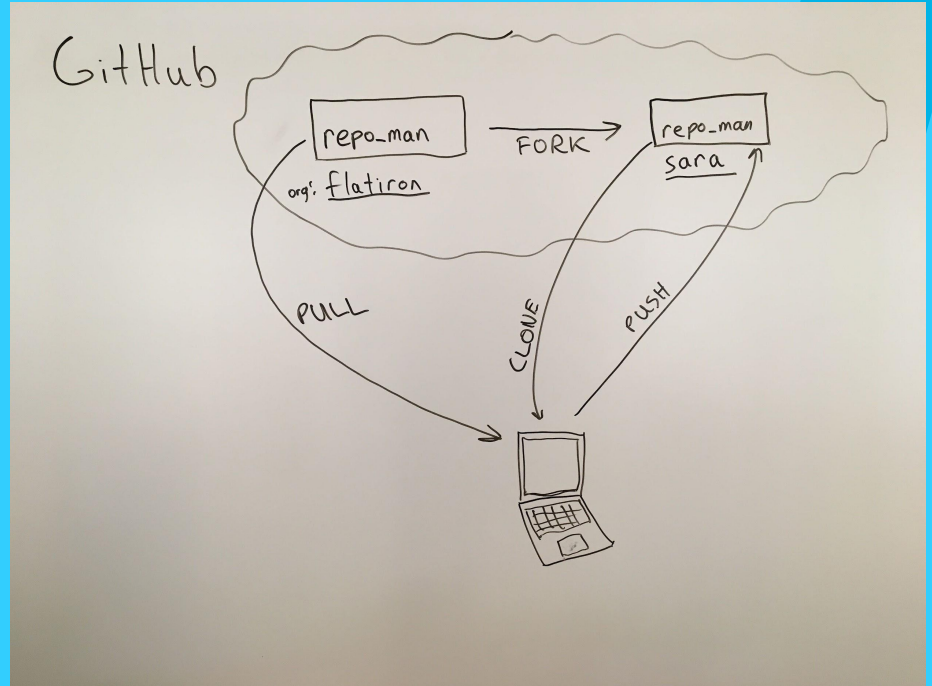
Objectives

// Fork a repo on GitHub

// Clone a repo from GitHub

// Use **git add**

// Use **git commit** (with meaningful messages)

// Use **git push**

// Use **git pull** to incorporate remote changes
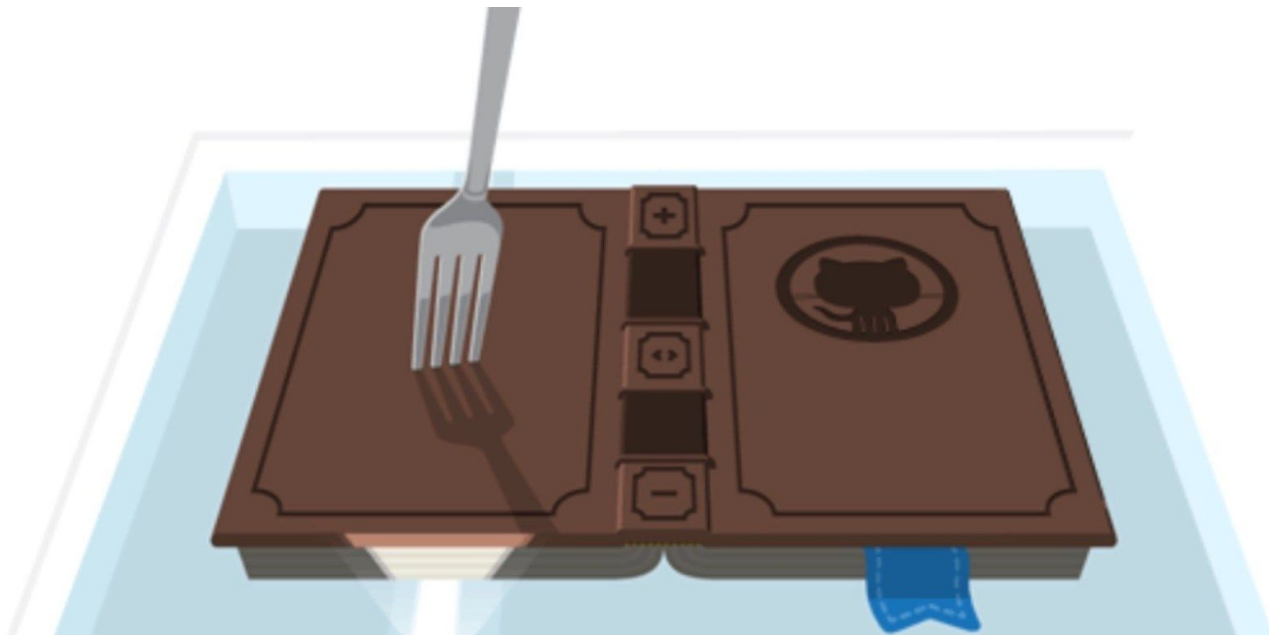
How many of you have seen a folder like this?

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later

Fork a repository

Forking a repository allows you to freely experiment with changes without affecting the original project

https://github.com/trending

Clone a repository

You can clone your repository to create a *local* copy on your computer. Then you can set up a sync between the remote version on GitHub and your newly created version on your local machine

```
$ git clone <URL>
```
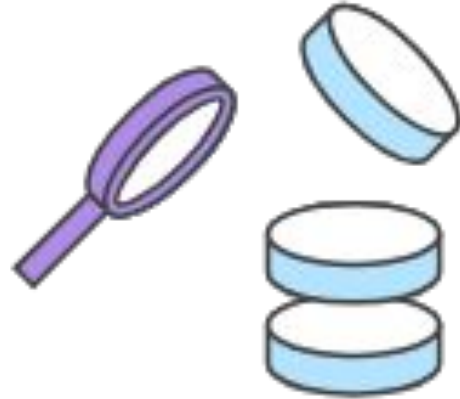
Make local changes

Modifying files on your fork of the project will not affect the original line of the project!

git status

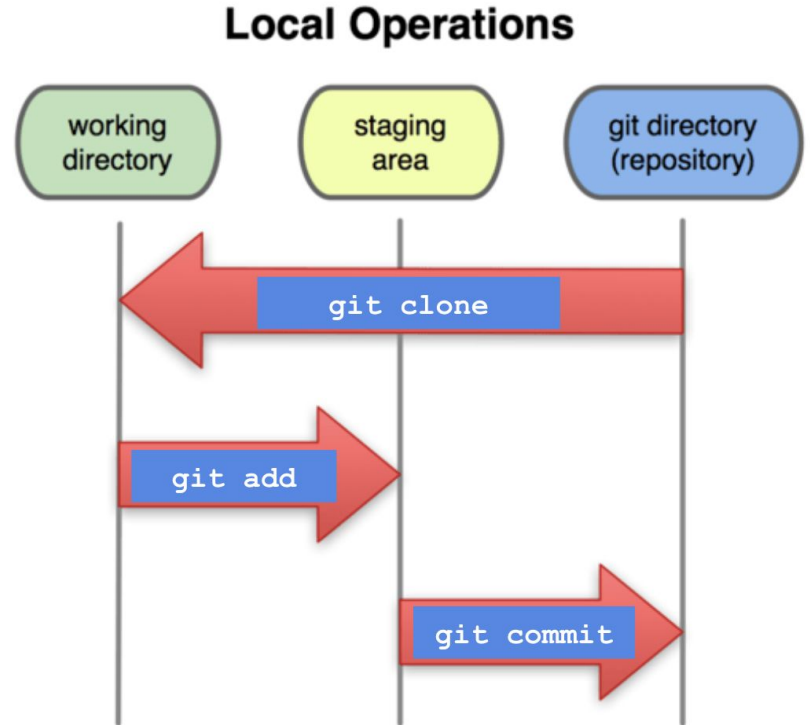You want to obsessively use it to track your files and make sure things worked

Green represents files that are staged for commit

Red represents unstaged files

git add [FILE]

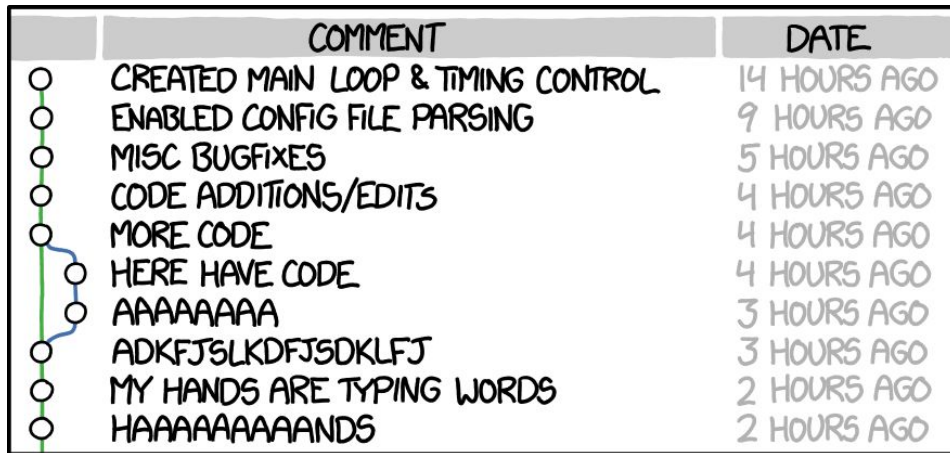Tells git to track (pay attention to) [FILE]

git commit -m "put meaningful stuff here or else"

Saves the tracked changes

Commit messages should…:

- Start with a verb in the present tense, imperative mood
- First line is the most important line, high-level summary
- If I apply this commit, it will X
  - "Add spell check feature"
  - "Fix super awful bug written by Cristian"
  - "Refactor for loop logic to be more efficient"
  - "Add my personal information"
  - "Update URLS in README.md"

	COMMENT	DATE
O	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
O	ENABLED CONFIG FILE PARSING	9 HOURS AGO
O	MISC BUGFIXES	5 HOURS AGO
O	CODE ADDITIONS/EDITS	4 HOURS AGO
O	MORE CODE	4 HOURS AGO
O	HERE HAVE CODE	4 HOURS AGO
O	AAAAAAAA	3 HOURS AGO
O	ADKFJSLKDFJSDKLFJ	3 HOURS AGO
O	MY HANDS ARE TYPING WORDS	2 HOURS AGO
O	HAAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT MESSAGES GET LESS AND LESS INFORMATIVE.

git push [origin main]

Publishes the changes in your local repository to a remote repository (on GitHub) that you specify

In case of fire
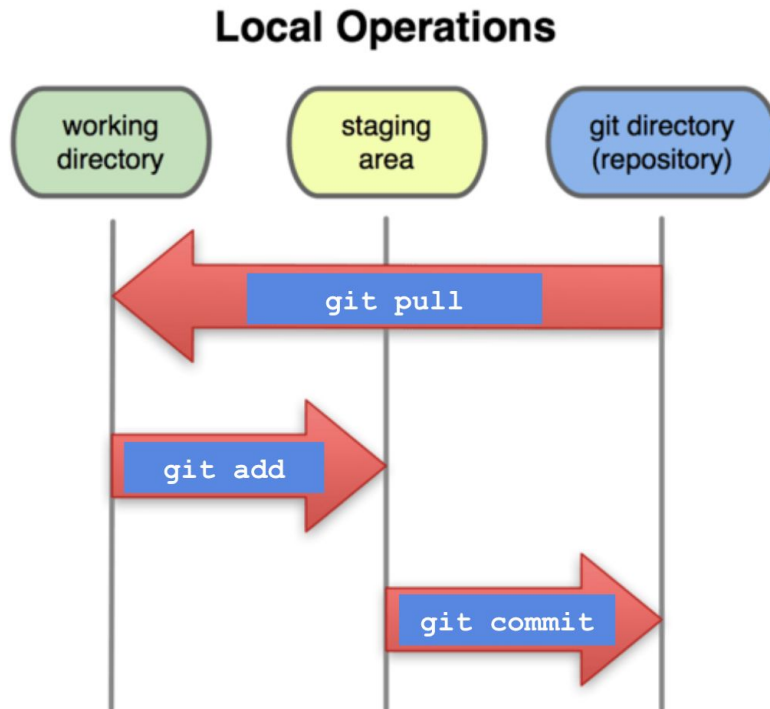
1. git commit

2. git push

3. leave building

Programmers protocol

git pull [origin main]

- Grabs online updates and merges them with your local work
- Combination of `git fetch` and `git merge`

Local Operations

Objectives

// Fork a repo on GitHub

// Clone a repo from GitHub

// Use **git add**

// Use **git commit** (with meaningful messages)

// Use **git push**

// Use **git pull** to incorporate remote changes