INTRO TO GIT/GITHUB

AN OXY OPEN SOURCE WORKSHOP





Welcome! Today's Agenda

What's the point?

Git vs. Github

Version Control and its terminology

Using Git/Github

Git ready ...

What's the point?

~25,000,000

People use git or github

"According to web traffic monitor Alexa, GitHub is now among the top 100 most popular sites on earth." -Wired

What's the point? (cont.)

Internships, jobs, projects (tech resume)

It is **free** for students

Have your code reviewed by the open source community

Collaborate projects with the local/global community

Track changes of code

What is Git?

Git is a version-control system that holds the entire (saved) history of your code.

Git allows you to create save points in your code to go back to later if need be.

Git gives you the freedom to pursue new features & ideas without ruining your code.

Why Use Git?

Git lets you manage your code, which makes messing up **ALMOST IMPOSSIBLE**

What is Github?

Github is a Git repository hosting system

Github is a web-based graphical interface

Note: You do not need to use Github

Command Line

Git uses command line, which can be intimidating for many people. Github makes interacting with the Git technology more easy.

Basic Command Line

```
cd [directory name] - change directory
cd .. - go one directory up
ls - list files of current directory
mkdir [dirName] - makes a new directory (file)
touch [fileName.fileType] - creates a file
rm [fileName] - removes a file
```

Review: Git vs. Github

Git

The version control technology that uses command line

```
Please enter the commit message for your changes. Lines starting

# with '#' will be ignored, and an empty message aborts the commit.

# Committer: unknown 
# Committer: unknown 
# On branch mester

# Initial commit

# Changes to be committed:

# (use "git rm --cached <file>..." to unstage)

# three drew_file: So !gitignore ked files.

# new file: .htaccess

# sers of new file: in the class.php

# new file: My_Date_class.php

# new file: My_Date_class.php

# new file: Sharp UMS/DS Score
# unatory new file: Sharp UMS/docs/controllers.html@d

# new file: Sharp UMS/docs/mesiltemplates.html

# new file: Sharp UMS/docs/mesiltemplates.html

# new file: Sharp UMS/docs/index.html

# new file: Sharp UMS/docs
```

Github Web application that uses Git and interacts with users This repository Search oxy-opensource / welcome-to-opensource Watch ▼ 0 ★ Star 0 ¥ Fork 0 ♦ Code ① Issues 0 ② Pull requests 0 □ Projects 0 □ Wiki In Insights ۞ Settings Club Description and Specifics! 1 commit 11 1 contributor Branch: master ▼ New pull request Create new file Upload files Find file Clone or download angulostephanie first commit Latest commit 691cd80 on Sep 6 README.md

Welcome to Oxy Open Source!

Outreach Officer: DeGrasse Schrader, Workspace Officer: Lijia Li

Our Mission Statement ~

Here are our club officers ~

Work Space Schedule ~

schedule TBA

Projects ~

projects TBA

President: Emily Tran, Treasurer: Stephanie Angulo

Some Git Terminology

Directory - folder

Repository ("repo") - collection, project

Commit - getting files "ready" to upload

Local vs. Remote -

Local

Refers to your computer server

Remote

Refers to an external server (e.g. Github)

Getting Started

First you will need to create a Github account (use your oxy email for the free perks!!) : https://github.com/

Getting Started

Then you will need to have Git.

MAC OS

You're good

WINDOWS

Visit
https://git-scm.com/

And download Git

Getting Started

Now you will need to connect Git to your Github account.

```
Open your terminal (MAC/Linux) or Open Git (Windows)
Type git config --global user.name "First Last" + ENTER
Type git config --global user.email [YOUR EMAIL] + ENTER
Check to see if this was done correctly!
    Type git config --list
```

- Let's say you have started on an app project. Let's create an about txt file that theoretically describes your app.
- Make a directory (aka a folder) for your project!

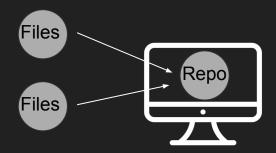
 Type mkdir appProject
- Go into your newly created directory
 Type cd appProject
- Check to see if you successfully change directories
 Type pwd

This should return the full path name, with your new directory at the end. Example: /Users/stephanieangulo/Desktop/appProject

- Create a txt file in your repo/project folder
 Type touch about.txt
- Check to see if file was successfully created Type ls
- Now add your git object to your directory

 Type git init
- Check to see if the git object was successfully created Type ls -a

You will want to upload ("commit") your file(s) to your local git object



Add the file(s) for preparation

Type git add about.txt

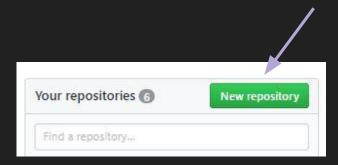
Check to see if git successfully added the file for preparation Type git status

Commit the added files and include information about this upload Type git commit -m "[information about this commit]"

Now, you will need to create a repo for your app project. We will create it remotely using Github.



Login to your Github and create a "New Repository"



Since the repo is remotely on Github, you will need to connect the remote repo to your local server (aka your computer)



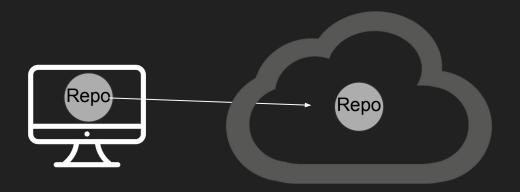
Go on Github and copy the HTTPS URL for your repo

Connect the remote repo to your local repo

Type git remote add origin [HTTPS URL] + ENTER

Check if connection was successful Type git remote -v

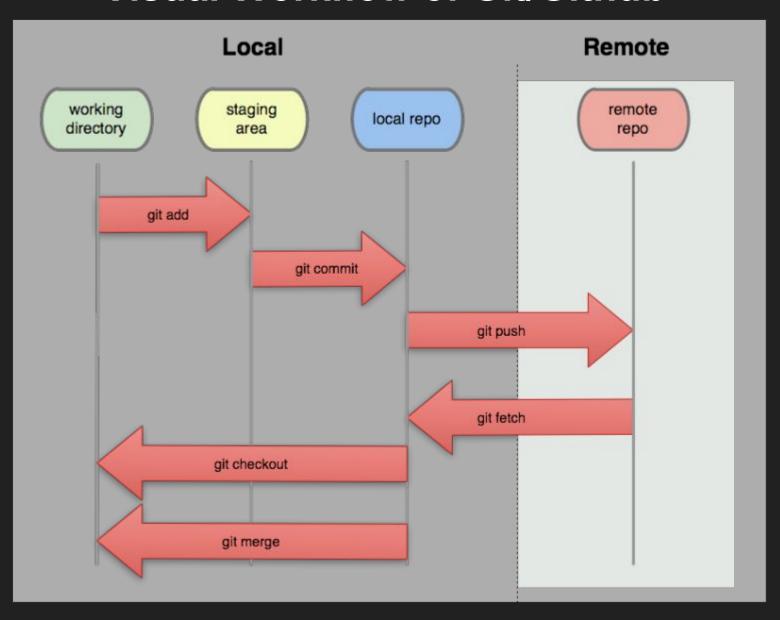
You can continue committing with other files (e.g. actual code, more txt, images). Every commit is local. In order to update your repo remotely on Github so that the public can see your repo, you will need to push your commits.



Push when your repo is ready for other people to use/see
Type git push -u origin master

Now you can see your updated repo on your Github as well as all the commit messages. You can track your changes every time you push

Visual Workflow of Git/Github



Helpful Links

<u>Setting up Git user.name</u>

Setting up Git user.email

Understanding Git: Repos

<u>Learn the Command Line (codecademy)</u>

And of course, Google is your best friend! Most of this stuff is online <3

Thank you!

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- oxyopensource
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