

# GITHUB TUTORIAL

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## AGENDA

- Define Git/Github
- Understand its benefits
- Terminology
- Creating a repo
- Setup your first repo
- Review

## WHAT IS GIT?

A version control program that saves the state of your project's files and folders.

Return to Zero



# WHAT IS A REPOSITORY?

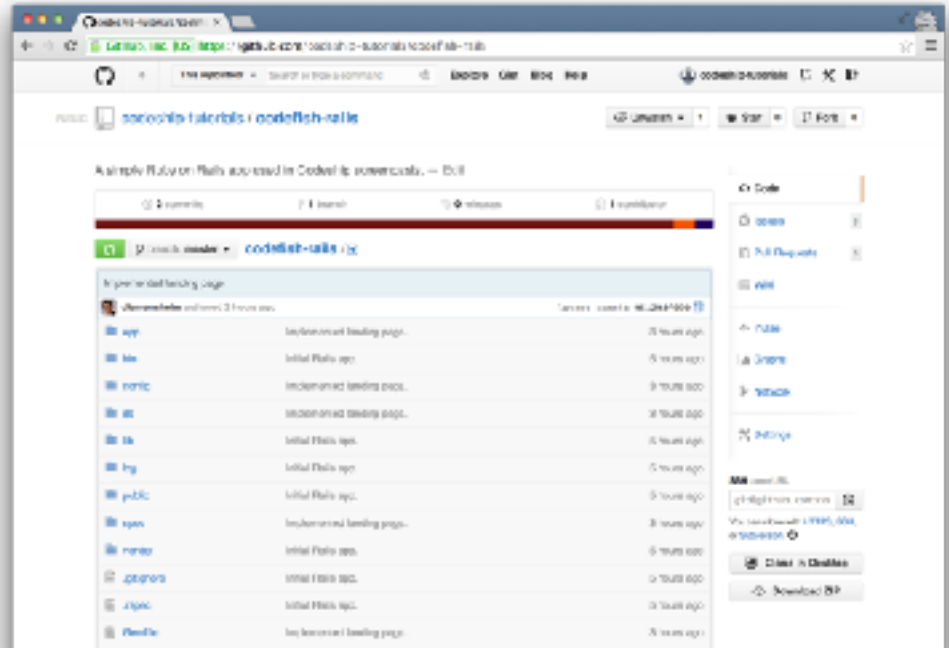
A central location in which data - your project's files and folders etc - is stored and managed.



## WHAT IS GITHUB?

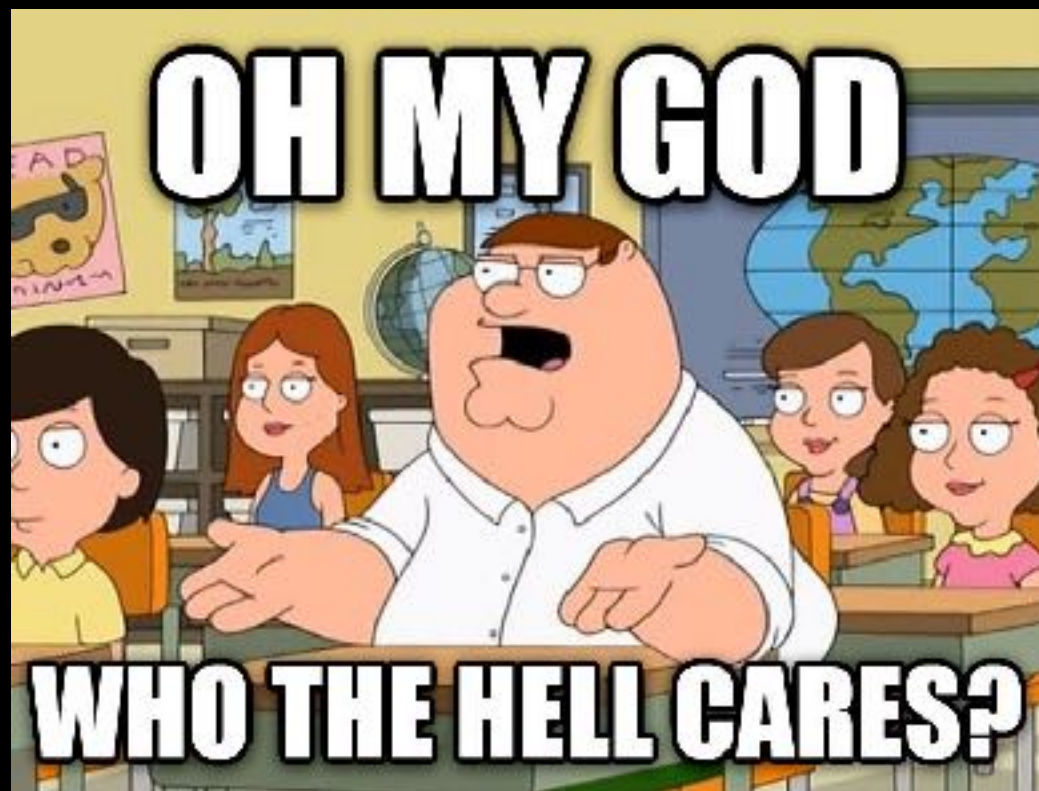
A platform that makes it easy to manage git repositories.

It stores and hosts files on the cloud like Dropbox or Google Drive, but stores code.



## GITHUB TUTORIAL

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# WHY DO DEVELOPERS USE GITHUB?

- You can go back in time: It stores a history of code so developers can always go back in time if something breaks.
- Collaboration: it allows multiple developers to work on the same project, much like Dropbox or Google Drive.
- Trackers: It tracks changes and updates so you can see who worked on what.
- Feedback: It allows for feedback to be given on the code, which hopefully, increases code quality



## HOW DOES GITHUB WORK IN A COLLABORATIVE ENVIRONMENT?

- Each project is called a repository(repo) and a new dev joining a team starts by “cloning” the repo.
- The main, stable version of the codebase is on the default "branch" in GitHub which is called “master”.
- As engineers are working on a project, they "add" and "commit" their changes which establishes a history of what they’re working on (so they can always revert).
- If there are multiple engineers working on a project, other engineers can review the code that is committed and provide feedback.





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# **TERMINOLOGY**

**WORDS TO KNOW**

## LOCAL

It can only be accessed via your computer.

## CLOUD

It can be accessed over the Internet instead of just your computer.

*Example: When you're working on your project, you will be working locally. Once you publish and sync your changes, it will be available via the cloud.*

PS: Cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive. The cloud is just a metaphor for the Internet.



**GIT** - a version control program that saves the state of your project's files and folders.

**REPOSITORY** - a central location in which data - your project files and folders etc - is  
(REPO) stored and managed.

**CLONE** - download a copy of a repo from the cloud to your laptop (local).

**COMMIT** - save the latest version/state of your project to git.

**PULL** - fetch the most recent version of your project from the cloud & sync with your local.

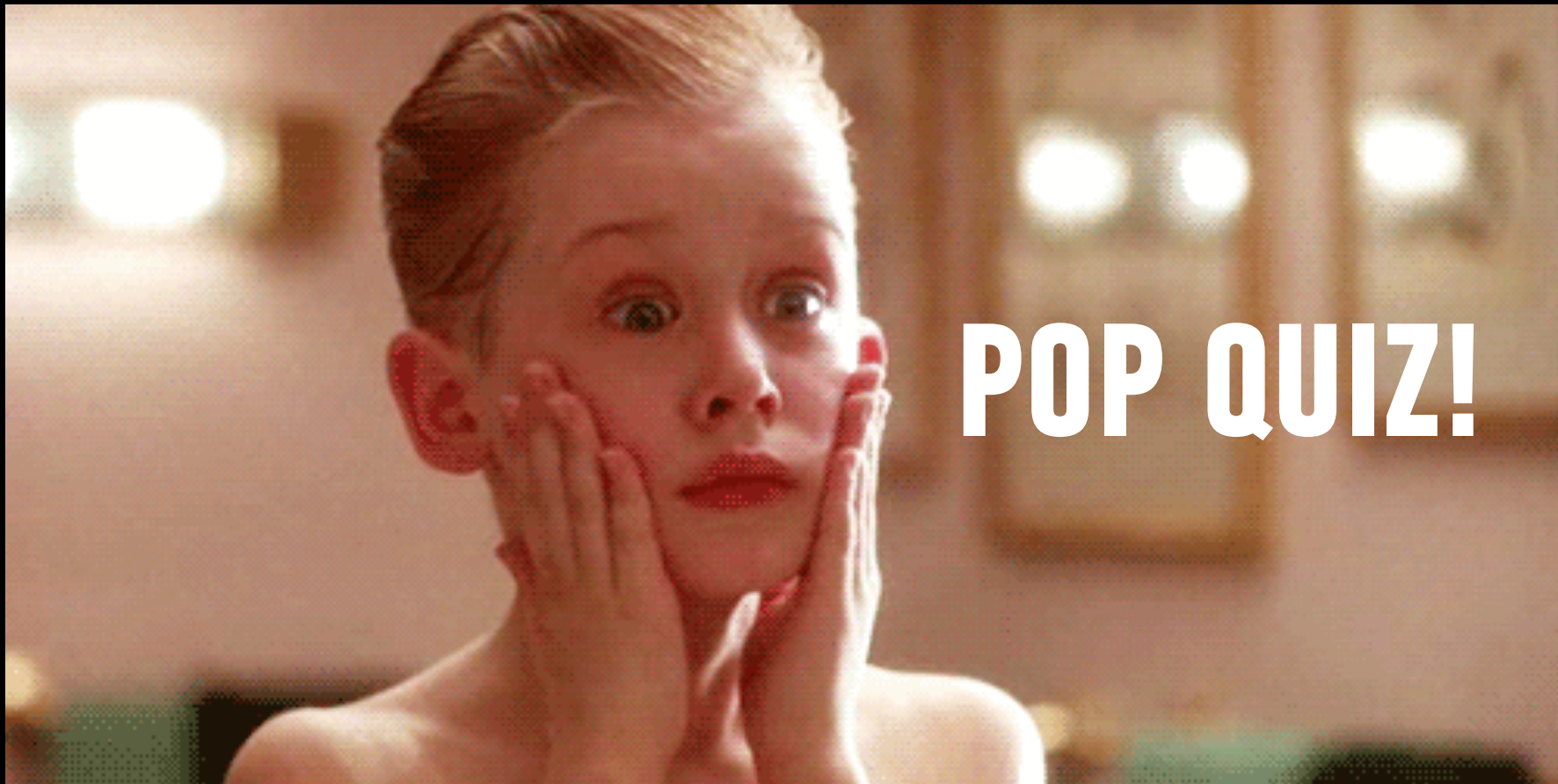
**PUSH** - update your project on the cloud with your local version.

**PUBLISH** - similar to push except it's this is only done when creating a new repo or branch.

**SYNC** - (pull & push) fetch the most recent version and sync with your local (pull) and  
update your project on the cloud (push).



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**GIT**

**CLONE**

**REPO**

**PUSH**

**PULL**

**COMMIT**

**PUBLISH**

**CLOUD**

**SYNC**

**WHY IS GIT IMPORTANT?**

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# **GITHUB TOUR**

**APP + WEBSITE**

# CREATING, UPDATING AND DELETING A REPO

# CREATING VIA THE GITHUB APP

### 1. Via the Github app

- Using the + icon on the top left corner, select “Create”
- Give the repo a name (using all lowercase letters, dashes are allowed)
- Choose (or create) the folder that you want the repo to live in
- Hit “Create Repository”

### 2. Hit “Publish” in the top right corner to push your new repo to the cloud.





# UPDATING VIA THE GITHUB APP

*Changes to you repo will only exist on your laptop (local) if you do not “Publish” and “Sync” your changes continuously.*

1. Find you project in the left sidebar
2. If there are any changes to commit, Add a summary and description before hitting “Commit to Master”
3. Once the files are committed, hit “Sync” to publish the changes to your repo.



# DELETING VIA GITHUB.COM & THE APP

1. On the homepage scroll down till you see “Your Repositories” on the right or find them via “Your Profile” in the header.
2. Select the repository you want to delete.
3. Select “Settings” in the nav of that repository.
4. Scroll to the bottom and hit “Delete this repository”.
5. Open your github app (only do this after you’ve deleted it on the website)
  - Find the repo on the left side bar
  - Right click and hit “remove” (removes it from the app only)
  - Find the folder in Finder and delete (remove from your computer, optional)



# YOUR TURN: SETUP A REPO

NAME IT “first-fewd-repo”

# USING GITHUB TO SUBMIT ASSIGNMENTS

# STEPS TO SUBMIT HOMEWORK

1. Depending on the assignment, you will either create a new repository with the project name or update an existing repo.
2. Commit and sync all of their files when they are ready for the instructional team's review.
3. All changes should be submitted to the master branch.
4. After publishing changes, submit a link via the google form.



# CODE REVIEW AND GRADING

1. Code reviews can be accessed via inline comments on the commits.
2. Full reviews can be accessed via issues. You should receive an email when a new issue is opened and that will contain my overall comments.

Example: Someone send me a link to the repo they just created!



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**REVIEW**

**BREAK**

**10 MINS**

**ENGAGE**

**COFFEE**

**BREAK!!!**