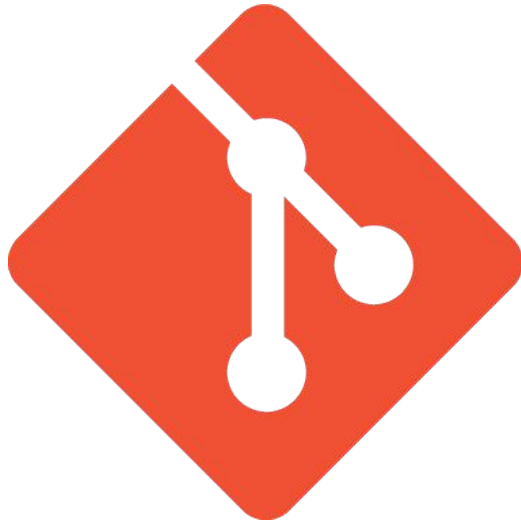


# A FEW PREREQUISITES

1. Do you have a “**sandbox**” to play in?
  - ❑ Make a new folder on your laptop
2. Do you have **git** installed?
  - ❑ Check via command line: `$ git --version`
  - ❑ <https://git-scm.com/download>
3. Do you have a **github** account?
  - ❑ <https://github.com>



# git

Eva J Herzog

[linkedin.com/in/evajherzog](https://www.linkedin.com/in/evajherzog)

# FIRST THINGS FIRST

```
$ git --version
```

```
git version 2.14.3 (Apple Git-98)
```

Is git already  
installed?

<https://git-scm.com/download>

use all the default options

Windows: Launch Git Bash

Mac: Open Terminal

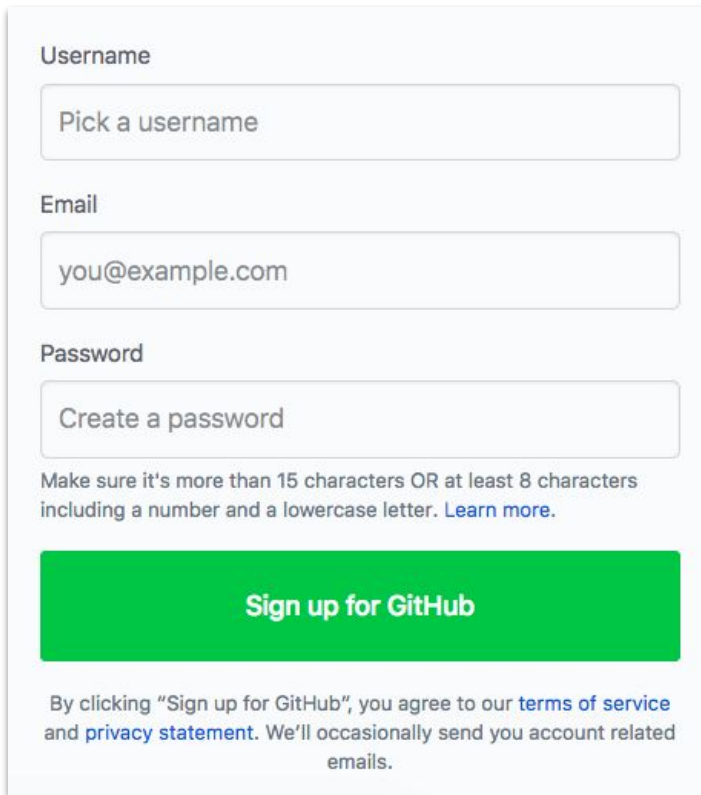
Download  
& Install

# SECOND THINGS SECOND

`https://github.com`

Create a github account in  
order to share code with  
your teammates

`https://education.github.com/pack`



A screenshot of the GitHub sign-up form. It features three input fields: 'Username' with the placeholder 'Pick a username', 'Email' with the placeholder 'you@example.com', and 'Password' with the placeholder 'Create a password'. Below the password field is a text requirement: 'Make sure it's more than 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more.](#)'. A prominent green button labeled 'Sign up for GitHub' is positioned below the text. At the bottom, a disclaimer states: 'By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy statement](#). We'll occasionally send you account related emails.'

Username

Pick a username

Email

you@example.com

Password

Create a password

Make sure it's more than 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more.](#)

**Sign up for GitHub**

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy statement](#). We'll occasionally send you account related emails.

# VERSION CONTROL?

Management  
of changes

Documents and  
collections of  
information

Ability to revert  
mistakes

## Seven Sisters (colleges): Difference between revisions

From Wikipedia, the free encyclopedia

Browse history interactively

Revision as of 15:24, 26 May 2017 (edit)

TimothyHorrigan (talk | contribs)

← Previous edit

Latest revision as of 21:40, 11 February 2019 (edit)

(undo)

BarrelProof (talk | contribs)

(MOS:INOROUT, MOS:DATEFORMAT, MOS:ALLCAPS,  
MOS:APOSTROPHE, MOS:QUOTEMARKS)

(48 intermediate revisions by 29 users not shown)

Line 1:

The "'Seven Sisters'" is a **loose association** of seven [[Liberal arts colleges in the United States|liberal arts colleges]] in the [[Northeastern United States]] that are historically [[Women's colleges in the United States|women's colleges]]. **Only five** of the seven institutions continue to offer all-female undergraduate programs: **i.e.,** [[Barnard College]], [[Bryn Mawr College]], [[Mount Holyoke College]], [[Smith College]], and [[Wellesley College]]. [[Vassar College]] has been co-educational since 1969. [[Radcliffe College]] and its **all-male coordinate school** [[Harvard College]] **(both of which were part of [[Harvard University]])** effectively merged in 1977, **although Radcliffe did not take its current form as the [[Radcliffe Institute for Advanced Study]] until 1999.** [[Barnard College]] was [[Columbia University]]'s women's liberal arts undergraduate college until its all-male coordinate school [[Columbia College,

Line 1:

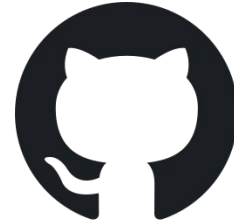
The "'Seven Sisters'" is a **name given to** seven [[Liberal arts colleges in the United States|liberal arts colleges]] in the [[Northeastern United States]] that are historically [[Women's colleges in the United States|women's colleges]]. **Five** of the seven institutions continue to offer all-female undergraduate programs: [[Barnard College]], [[Bryn Mawr College]], [[Mount Holyoke College]], [[Smith College]], and [[Wellesley College]]. [[Vassar College]] has been co-educational since 1969. [[Radcliffe College]] **shared common and overlapping history with [[Harvard College]] from the time it was founded as "the Harvard Annex" in 1879.** **Harvard and Radcliffe** effectively merged in 1977, **but Radcliffe continued to be the sponsoring college for women at Harvard until its dissolution in 1999.** [[Barnard College]] was [[Columbia University]]'s women's liberal arts undergraduate college until

## WHAT IS GIT?



- Distributed version control system
- Designed for contributors to collaborate
- Free command line tool

## WHAT IS GITHUB?



- Web-based hosting service
- Basics for collaboration, plus more
- Some features for free; education account

# GETTING STARTED

List *all* files in current folder

```
$ ls -a
```

Change directory (move to a folder)

```
$ cd <subfolder>
```

What's the status of the git project?

```
$ git status
```

Initialize a new project

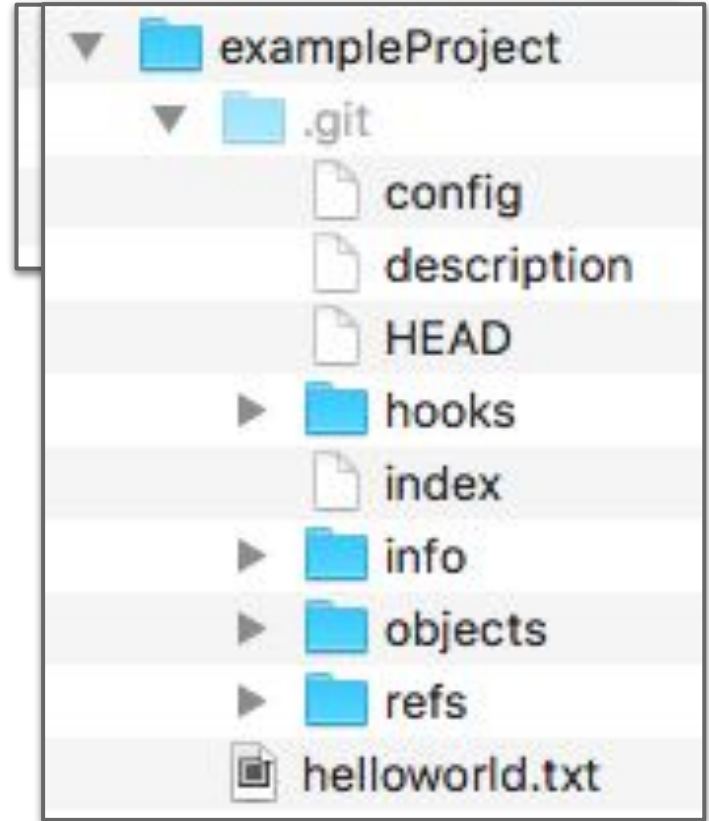
```
$ git init <project>
```

Download project and version history

```
$ git clone <url>
```

# WHAT JUST HAPPENED?!

- Initialized a project
- Created a file
- Edited the file
- Saved the file
- *Staged* the file
- “On branch master”?





# WHAT'S NEXT?

Look through history of the project

Take a snapshot of the current work

What's changed since last commit?

```
$ git log
```

```
$ git commit -m <msg>
```

```
$ git diff (--staged)
```

## QUICK DETOUR!

Mac:

```
$ git config --global core.editor "open -W -n"
```

Windows:

```
$ git config --global core.editor notepad
```

Changing the default git editor will allow us to avoid editing text files with things like vi, vim, emacs.

# WHAT'S NEXT?

Look through history of the project

Take a snapshot of the current work

What's changed since last commit?

Creates a new commit, records in log

Undoes later commits, keeps changes

```
$ git log
```

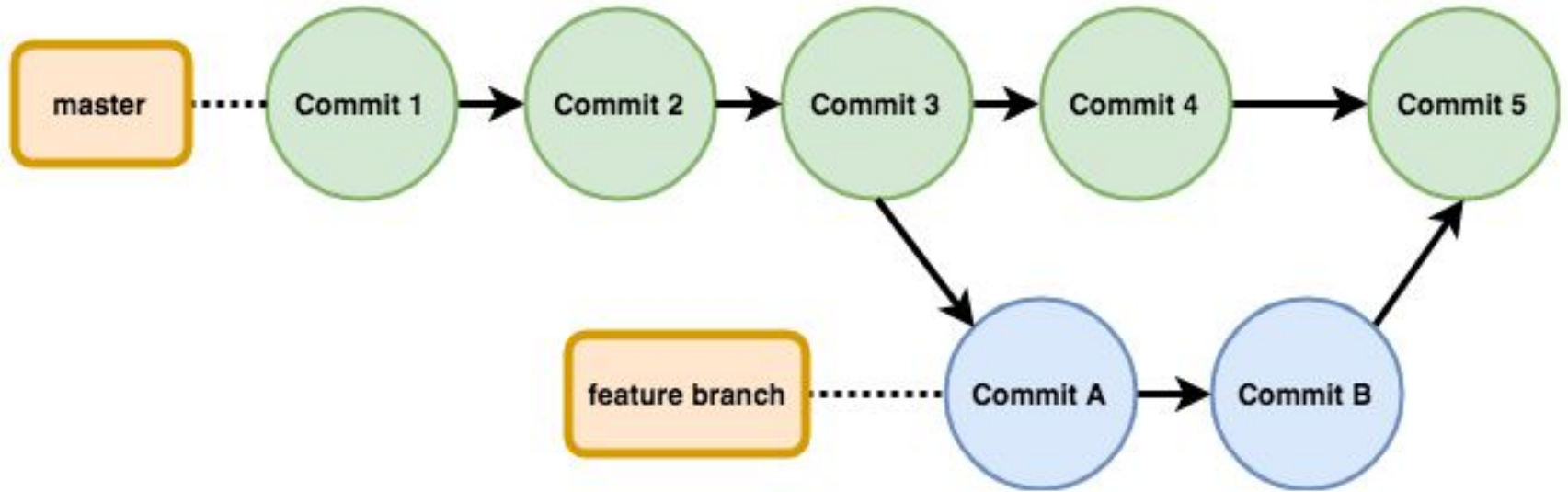
```
$ git commit -m <msg>
```

```
$ git diff (--staged)
```

```
$ git revert <commit>
```

```
$ git reset <commit>
```

# BRANCHES



# BRANCHES

`git branch`

List out all the branches

`git checkout (-b) <name>`

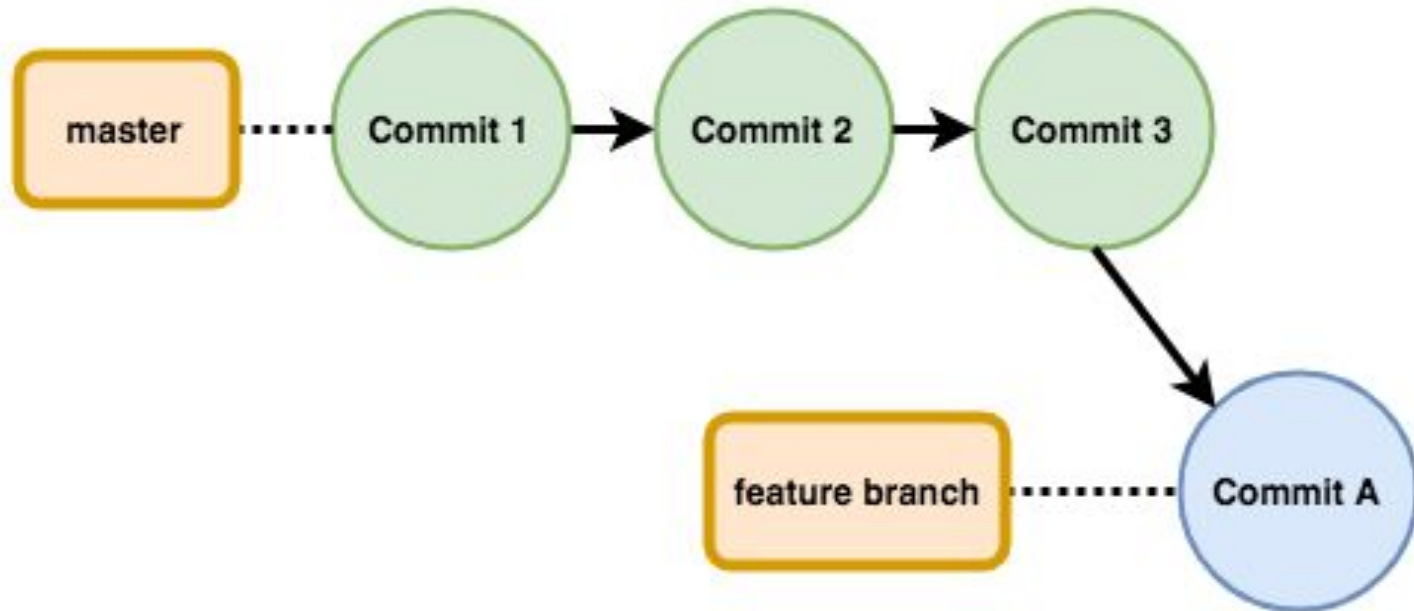
Switch to the specified branch  
(with -b, create new branch)

`git merge <name>`

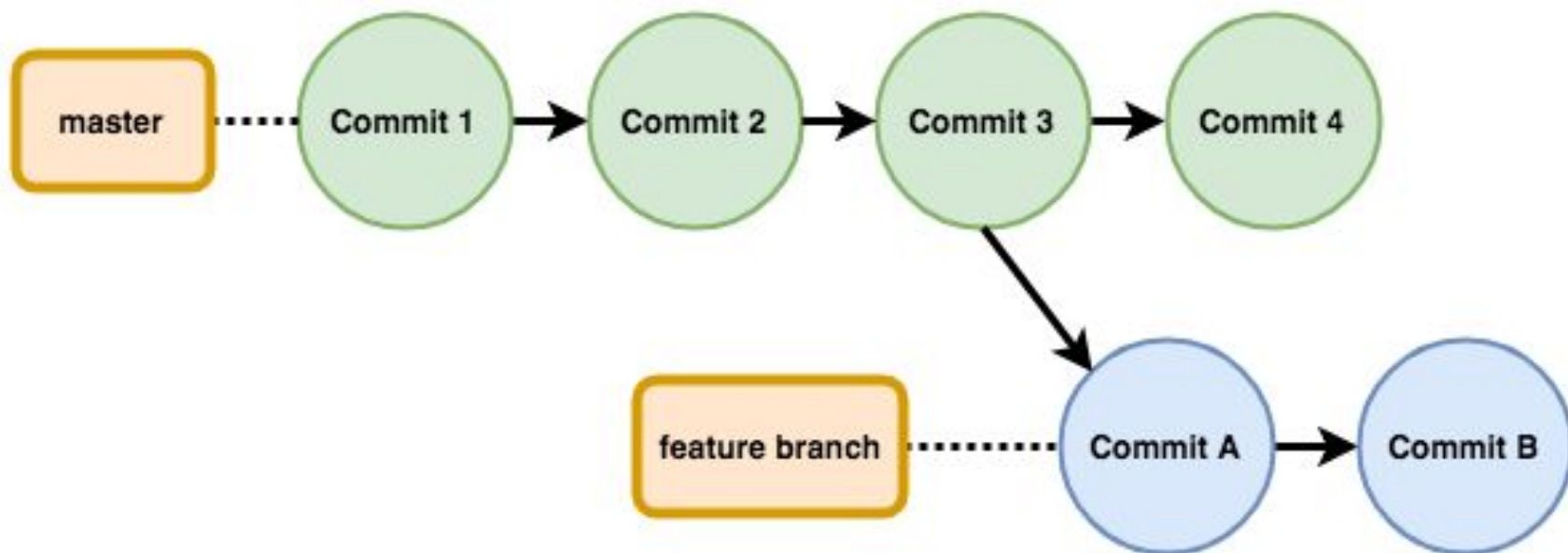
Merge *name*'s changes into the  
current branch



# BRANCHES

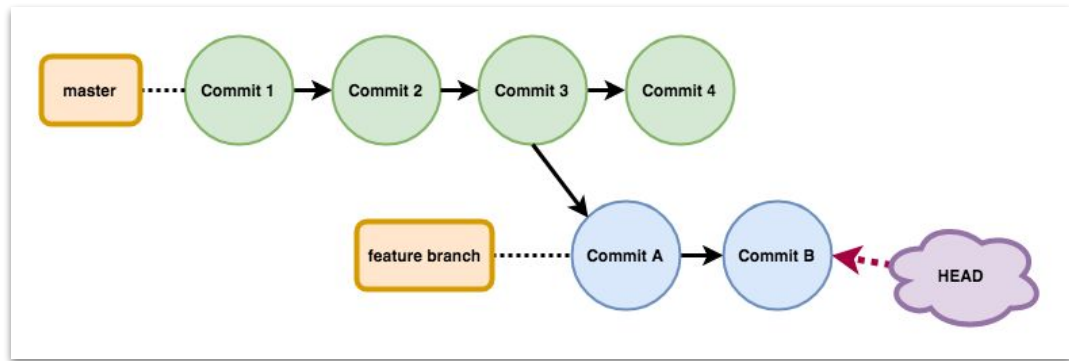
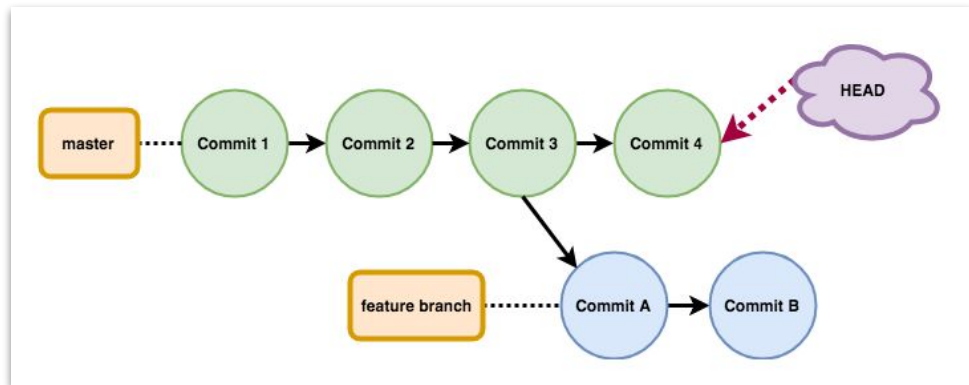


# BRANCHES



# TERMINOLOGY: HEAD

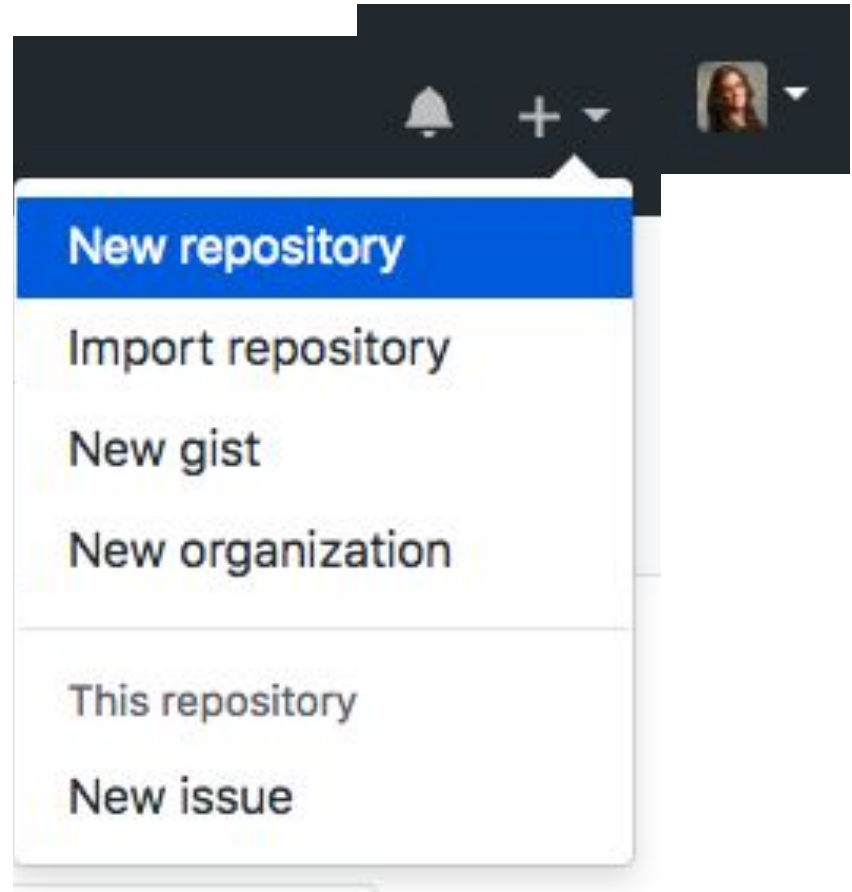
- Symbolic reference
- Last known state of working directory
- Parent of your next commit





# LET'S COLLABORATE!

- Go to [github.com](https://github.com)
- Choose 1 team member (ONLY 1) who will create a new repository
- Use the + in the upper right corner



# LET'S COLLABORATE!

## Create a new repository

A repository contains all project files, including the revision history.

Owner



ejherzog ▾

/

Repository name \*

sister\_hacks



Great repository names are short and memorable. Need inspiration? How about **fantastic-train**?

Description (optional)

Sample Project



**Public**

Anyone can see this repository. You choose who can commit.



**Private**

You choose who can see and commit to this repository.

# LET'S COLLABORATE!



**Public**

Anyone can see this repository. You choose who can commit.



**Private**

You choose who can see and commit to this repository.



**Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▼

Add a license: **None** ▼



**Create repository**

# LET'S COLLABORATE!

 ejherzog / sisterHacks


 Watch ▾ 0

 Star 0

 Fork 0

 Code

 Issues 0

 Pull requests 0

 Projects 0

 Wiki

 Insights

 Settings

Options

**Collaborators**

Branches

Webhooks

Notifications

Integrations & services

Deploy keys

## Collaborators

Push access to the repository

This repository doesn't have any collaborators yet. Use the form below to add a collaborator.

### Search by username, full name or email address

You'll only be able to find a GitHub user by their email address if they've chosen to list it publicly. Otherwise, use their username instead.

Add collaborator

# LET'S COLLABORATE!

- Go to `github.com/<username>/<repositoryName>`
- Click green 'Clone or Download' button
- Copy URL to clipboard
- **`$ git clone <URL>`**
- **`$ cd <repositoryName>`**

# DO SOME BRANCH WORK

- `$ git pull`
- `$ git status`
- `$ git checkout -b <yourname>`
- Create at least one new file (.txt, .csv, .md, .py)
- `$ git add .`
- `$ git commit -m "<meaningful message>"`

# WHERE ARE YOUR CHANGES?

- `$ git status`
- Look at the github page for your repo: no branches??
- `$ git pull`
- `$ git push`
- `$ git push --set-upstream origin <branch>`
- Look back at the github page for your repo

# PUSHING AND PULLING

Get remote updates to local machine

```
git fetch
```

git fetch + incorporate those changes

```
git pull
```

Upload all local branches to Github

```
git push
```

```
git push --set-upstream origin <branch name>
```

Push a local branch to the remote repo for the first time



# OPEN A PULL REQUEST

## Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).



base: master ▾



compare: caturday ▾

✓ **Able to merge.** These branches can be automatically merged.



added caturday drawing to README.md

Write

Preview

AA B i



Leave a comment

Reviewers



No reviews

Assignees



Assign up to 10 people to this pull request

Filter people



**ejherzog** Eva J Herzog

Projects



# LAST WORDS OF WISDOM

- ❖ About to push changes? Pull first.
- ❖ Trying out an idea? Create a new branch.
- ❖ Avoid erasing history. Leave the evidence.
- ❖ “Take chances, make mistakes, & get messy!”

-Ms. Frizzle

# SOURCES

1. Git Logos: Jason Long [CC BY 3.0 (<https://creativecommons.org/licenses/by/3.0>)]
2. Seven Sisters Page History: [https://en.wikipedia.org/wiki/Seven\\_Sisters\\_\(colleges\)](https://en.wikipedia.org/wiki/Seven_Sisters_(colleges))
3. Computer ClipArt: AJ from [openclipart.org](https://openclipart.org) [CC0]
4. Server Icon: The Oxygen Team, KDE; [LGPL (<https://www.gnu.org/copyleft/lgpl.html>)]
5. Github Logo: GitHub [MIT (<http://opensource.org/licenses/mit-license.php>)]
6. Branch diagrams: Eva Herzog using [draw.io](https://draw.io)