

# Introduction to Git

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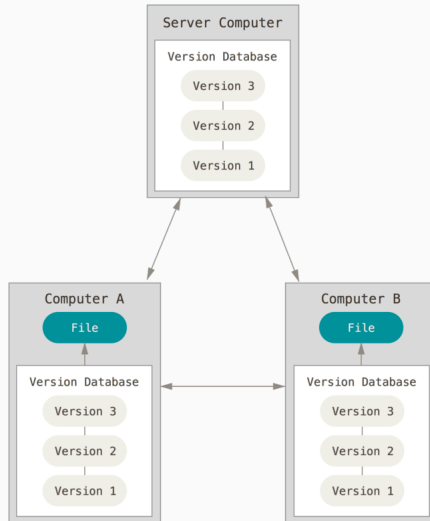
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## Why Git?

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# Free Version Control



## Example 1

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# Identify yourself!

- `git config --global user.name "John Doe"`
- `git config --global user.email johndoe@example.com`

# Create a Repo

- Lets create 3 files a LICENSE, README and a hello\_world
- git init
- git status

- `git add README LICENSE hello_world`
- `git status`



- `git commit`
- make some comments
- there are some options (`git commit -a` \*skips add command\*)
- `git commit -m` \*insert comments here to skip commenting n file\*

# Modifications

- Make a change to hello world program
- `git status`
- Lets rename it using `git mv`
- `git status`
- `git add <new_name>`
- `git commit`
- `git status`

# Check Out Your Awesome Work

- `git log`

# Lets Branch Out!

- `git branch test`
- where are we? `git log --oneline --decorate`
- lets checkout test! `git checkout test`
- where are we? `git log --oneline --decorate`

# Lets modify in Test

- make a change
- `git commit -a -m 'made some change'`
- go back to master! `git checkout master`, no changes!
- take a look at the graph! `git log --online --decorate --graph --all`

# Lets make a change to master

- git branch fix
- modify file
- git commit -a -m 'added exclamation points'

- `git checkout master`
- `git merge fix`
- take a look with `git log --online --decorate --graph --all`
- delete fix cause no longer needed `git branch -d fix`

- log in to github and click new repository
- go to repository, git remote add origin  
git@github.com:<user>/<project\_name> or  
https://github.com/<user>/<project\_name> if you use https
- Similar method can be used to push to team repo



## Example 2

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# General Github Flow

- Fork the project
- Create a topic branch from master.
- Make some commits to improve the project.
- Push this branch to your GitHub project.
- Open a Pull Request on GitHub.
- Discuss, and optionally continue committing.
- The project owner merges or closes the Pull Request.
- Sync the updated master back to your fork

# Team Example

- Go to <https://github.com/Layton-Lab/gitpres> and click fork
- cd to your directory
- `git clone git@github.com:<user>/gitpres`
- Create a topic branch
- make your changes
- commit the changes
- pull request to make the changes
- I will accept or deny your commits :)
- Stay up to date!
  - `git checkout master`
  - `git pull https://github.com/Layton-Lab/gitpres`
  - `git push origin master`