Introduction to Git

Table of Contents

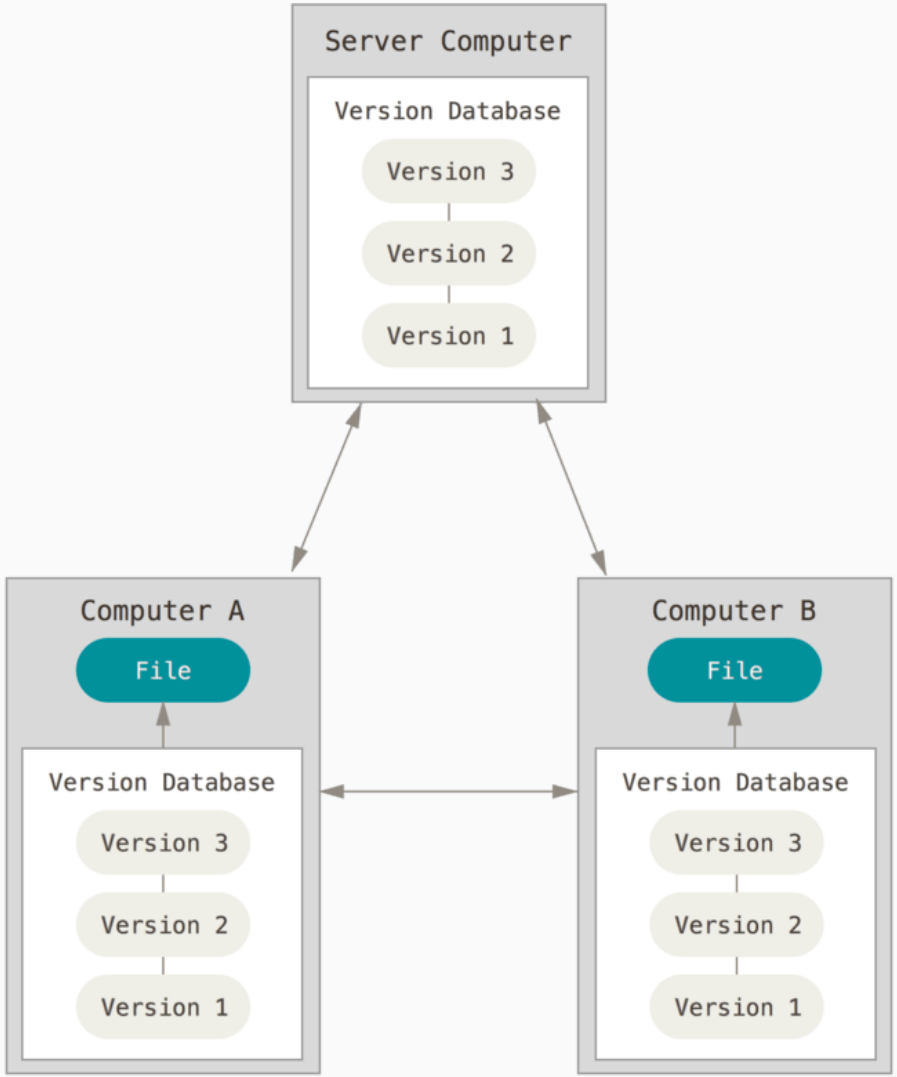
1. Why Git?

2. Example 1

3. Example 2

Why Git?

Free Version Control



Example 1

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

Stage

- git add README LICENSE hello_world
- git status

Stage

- git commit
- make some comments
- there are some options (git commit -a *skips add command*)
- git commit -m *insert comments here to skip commenting in 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'

Merge

- 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

Push to Github

- 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
- git push -u origin master
- Similar method can be used to push to team repo

Example 2

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