



Remote Repository (GitHub)



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Recap- Git Workflow



▶ Recap-What is Git?

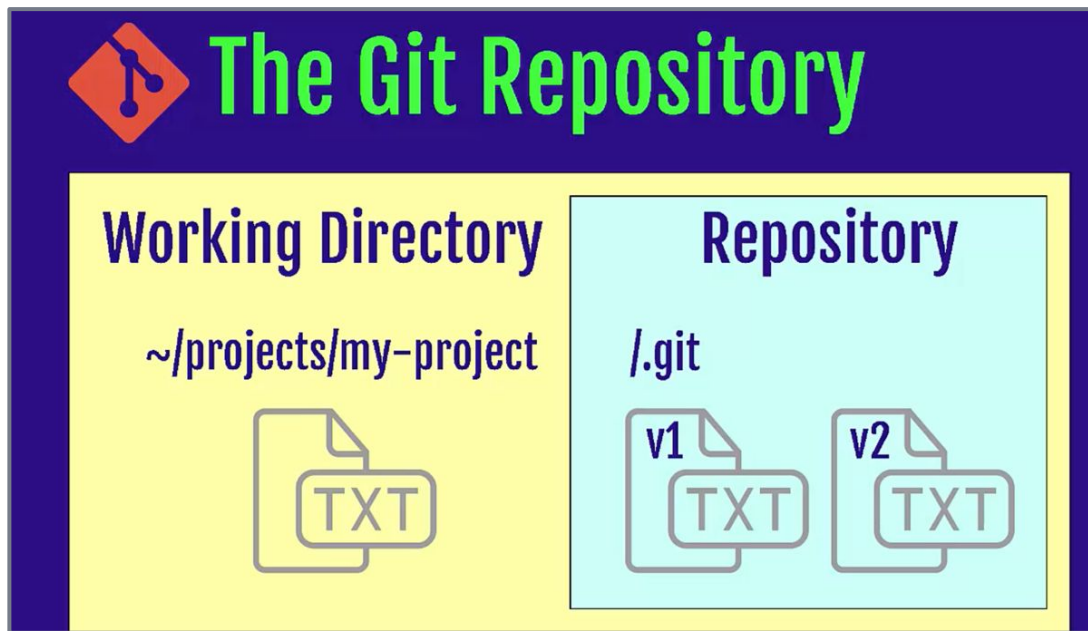
- **Git** is an **open source distributed version control system**
- **Tracks** and **records** changes to files over time (**versioning**)
- Can **retrieve** previous version of files at any time (**time travel**)
- Can be used **locally**, or **collaboratively** with others (**teamwork**)
- Contains extra information such as **date**, **author**, and **a message explaining the change**
- **Compare** and **Blame**
 - What changed
 - When it changed
 - Why it changed
 - Who changed it



Recap-Git Repository

What is a repository

- A directory or storage space where your projects can live.
- Local Repository
- Remote Repository (Central Repository)



Recap-Workflow



Working Directory

Where you work. Create new files, edit files delete files etc.



Staging Area (Index)

Before taking a snapshot, you're taking the files to a stage. Ready files to be committed.



Repository (Commit Tree)

Committed snapshots of your project will be stored here with a full version history.





Recap-Basic Commands

git init

git status

git add .

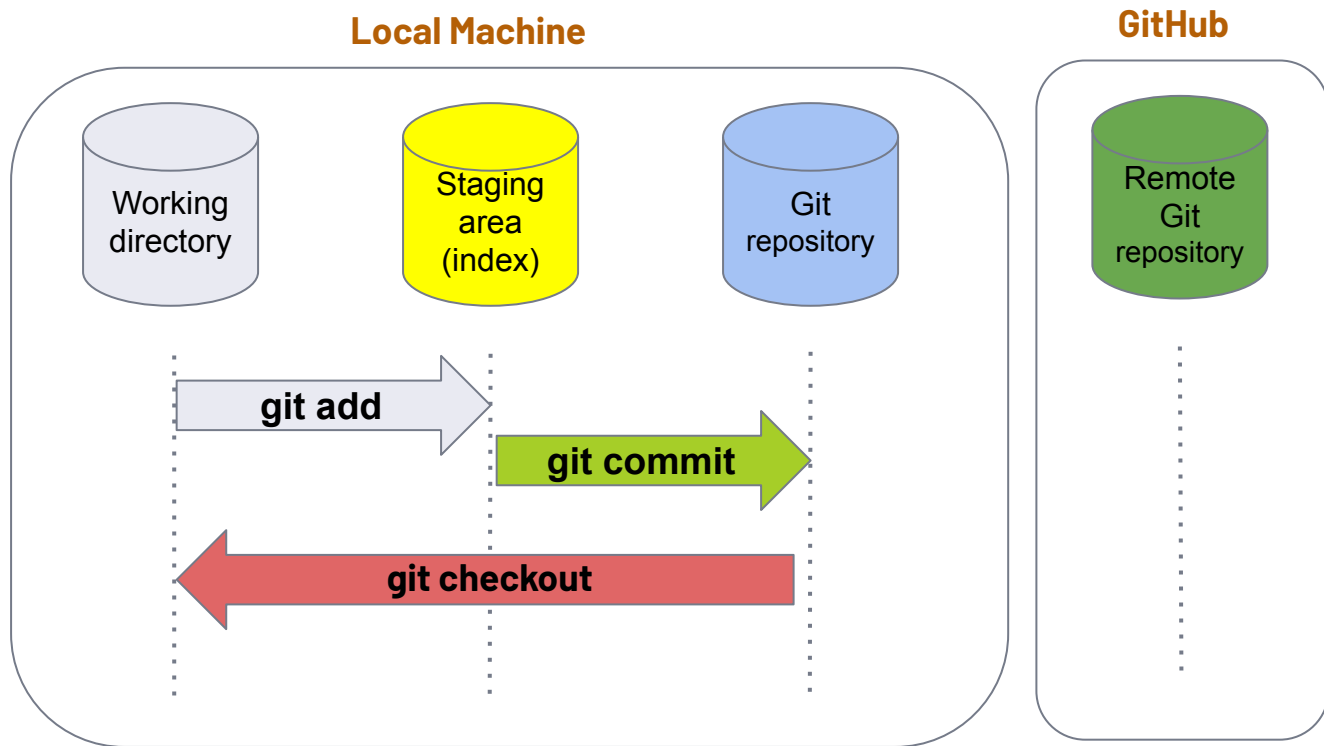
git rm --cached

git commit -m "abc"

git log

git checkout **commitID**

git diff <id> vs <id>





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Remote Repository (GitHub)

Github - Remote Repository



Git

&

GitHub



Distributed
version-control system

Repository hosting service



Github - Remote Repository



Bitbucket

+ Follow

+ I use this

Stacks	Followers	Votes
25.8K	19.2K	2.8K



GitHub

+ Follow

+ I use this

Stacks	Followers	Votes
132.1K	99.8K	10.1K



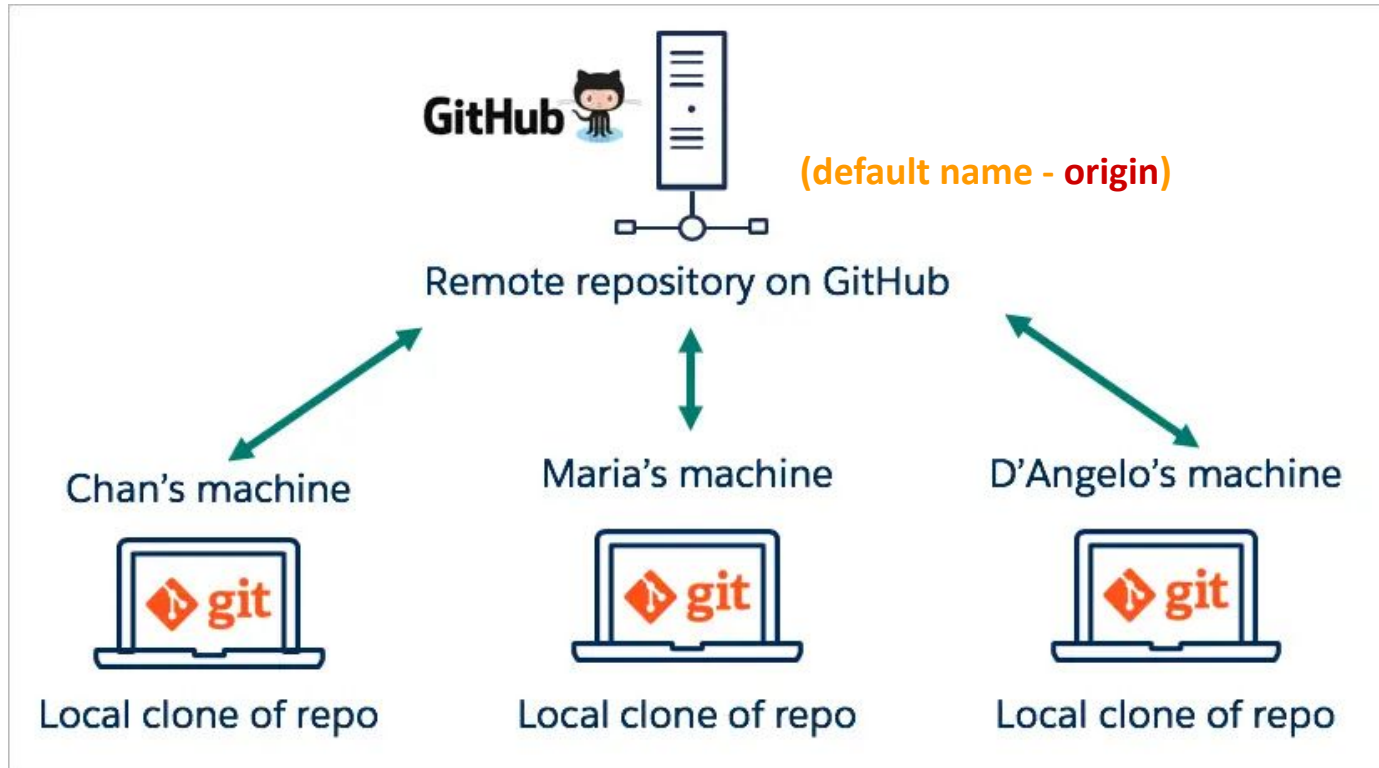
GitLab

+ Follow

+ I use this

Stacks	Followers	Votes
30.5K	23.4K	2.3K

Github - Remote Repository





Github - Remote Repository

- Act of copying a repository from remote server to your local machine is called **cloning**
- Cloning allows team to work together
- Downloading commits from others : **fetch, merge**
- Downloading commits from others : **pull (fetch + merge)**
- Uploading your commits (local changes) to remote : **push**

Connecting your local with remote

→ connect to remote repo

```
git remote add origin Repo address
```

```
git remote -v
```

origin = alias for your repo address

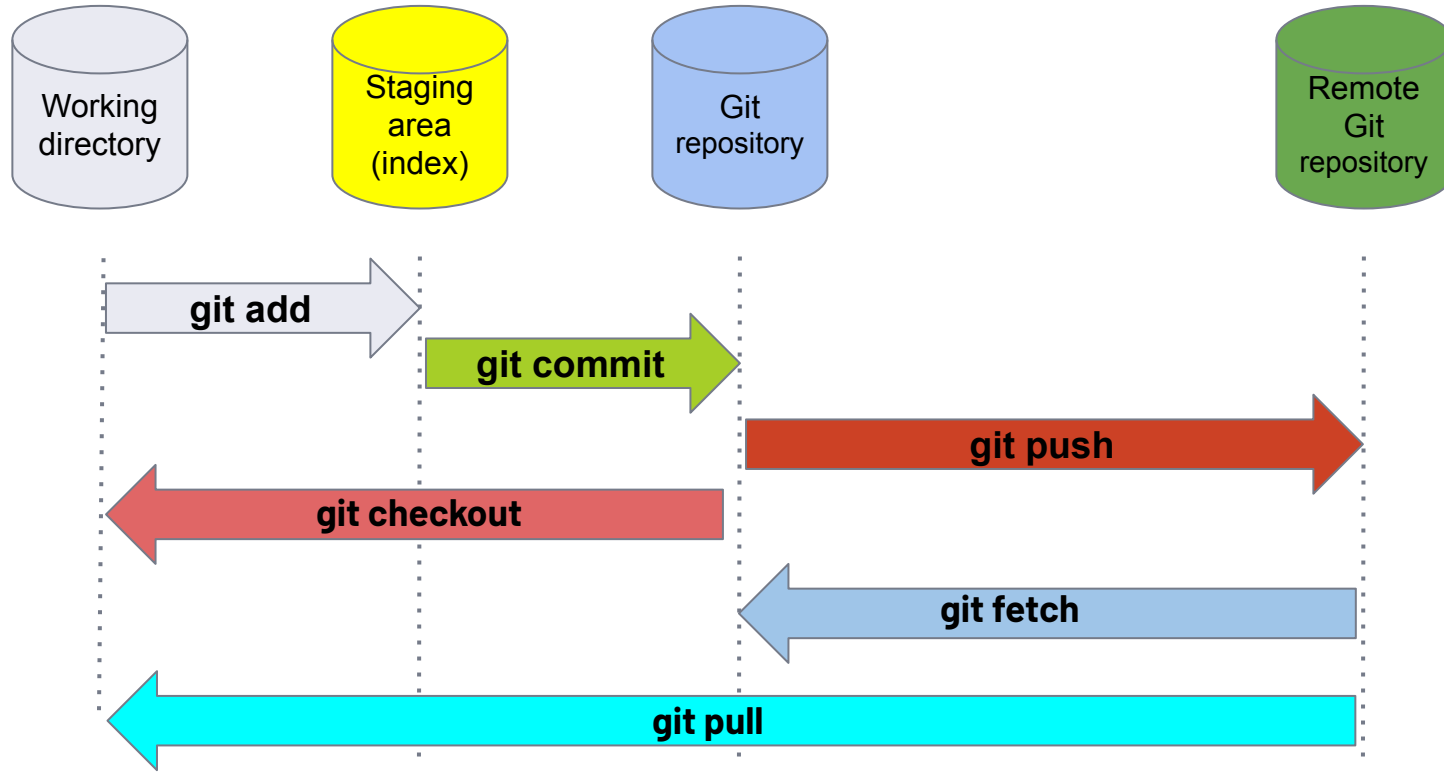
→ first push

```
git push -u origin master
```

→ remove remote origin

```
git remote rm origin
```

Github - Remote Repository



Git fork vs. clone: What's the difference?



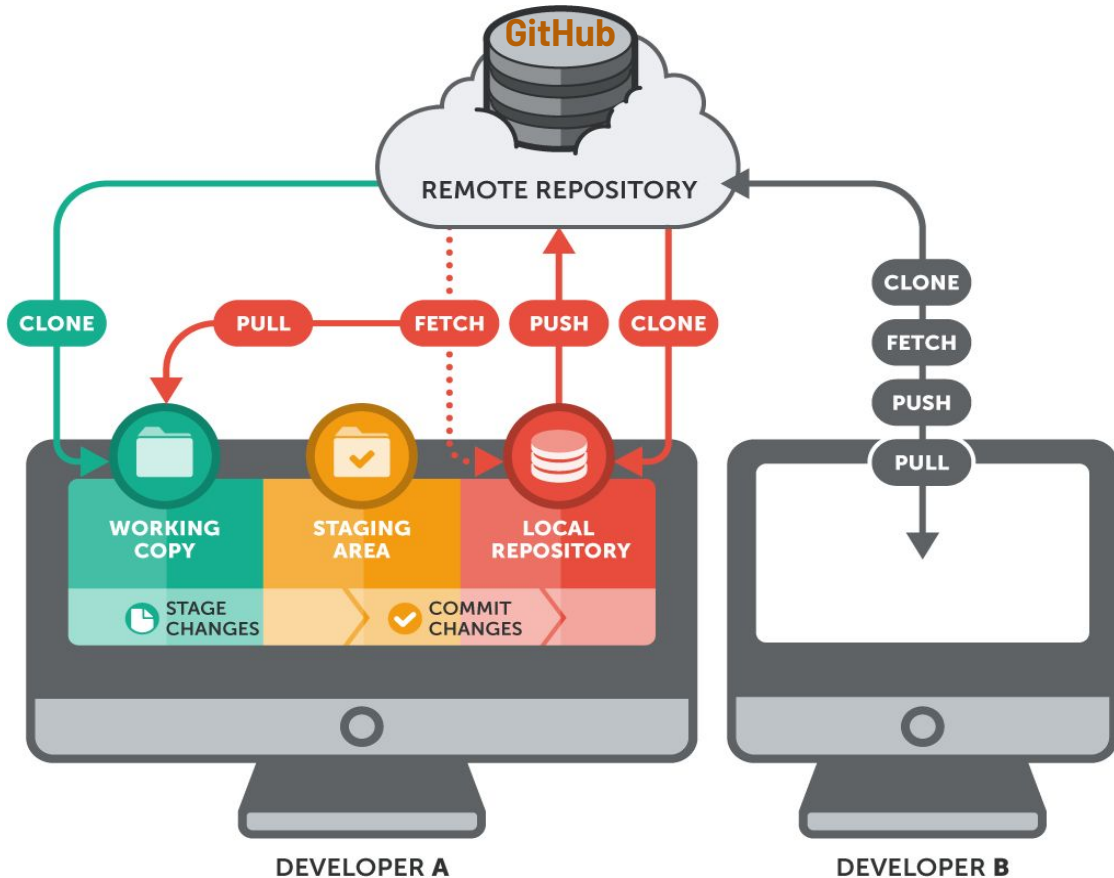
Git clone vs. fork

- **Git clone** is primarily used to point to an existing repo and make a clone or copy of that repo at in a new directory, at another location.
- When a Git repository is cloned, the target repository remains shared amongst all of the developers who had previously contributed to it.
- Other developers who had previously contributed to that codebase will continue to push their changes and pull updates from the cloned repository.
- In contrast to a clone, a **Git fork** operation will create a completely new copy of the target repository. The developer who performs the fork will have complete control over the newly copied codebase.
- Developers who contributed to the Git repository that was forked will have no knowledge of the newly forked repo.
- Previous contributors will have no means with which they can contribute to or synchronize with the Git fork unless the developer who performed the fork operation provides access to them.



Summary

Git Basics





THANKS!

Any questions?

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