Git

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Why use Git?

1. Git is a version control system that allows you to keep track of the changes you have made the files AND allows you to revert to previous versions
2. Git allows multiple people to work collaboratively on the same project

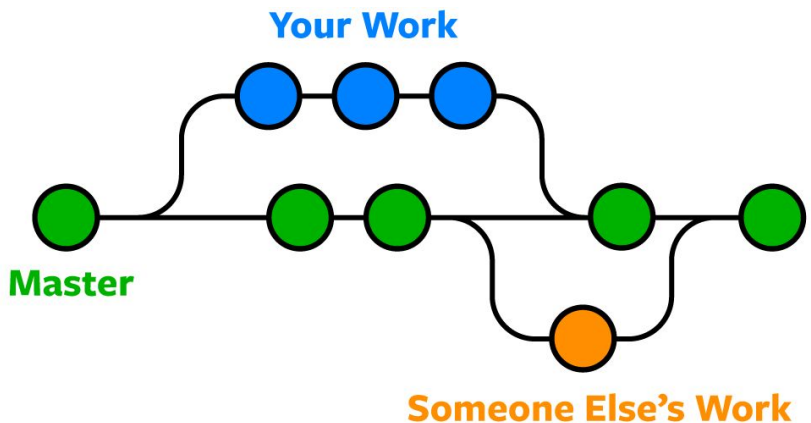
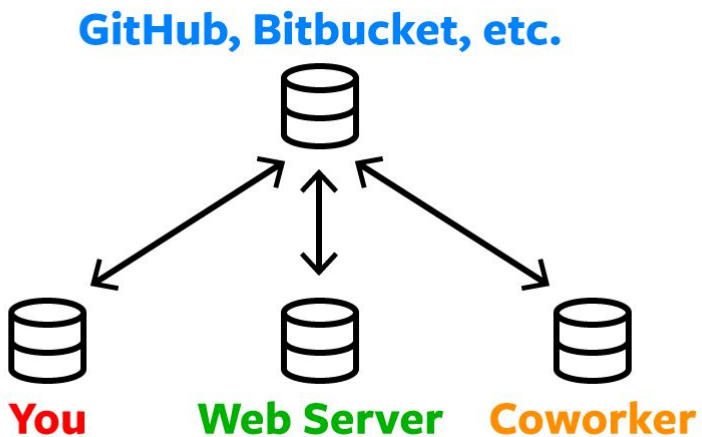


Image from https://www.nobledesktop.com/blog/what-is-git-and-why-should-you-use-it

Github

- Github is a website that hosts projects (called repositories or “repos” for short)
- Github hosts the remote copy of the repo, and each collaborator works on their own local copy
- You can push your local changes to the remote copy, and you pull changes from remote copy to your local copy



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Let's walk through an example

https://github.com/1um0s/devops-git-tutorial

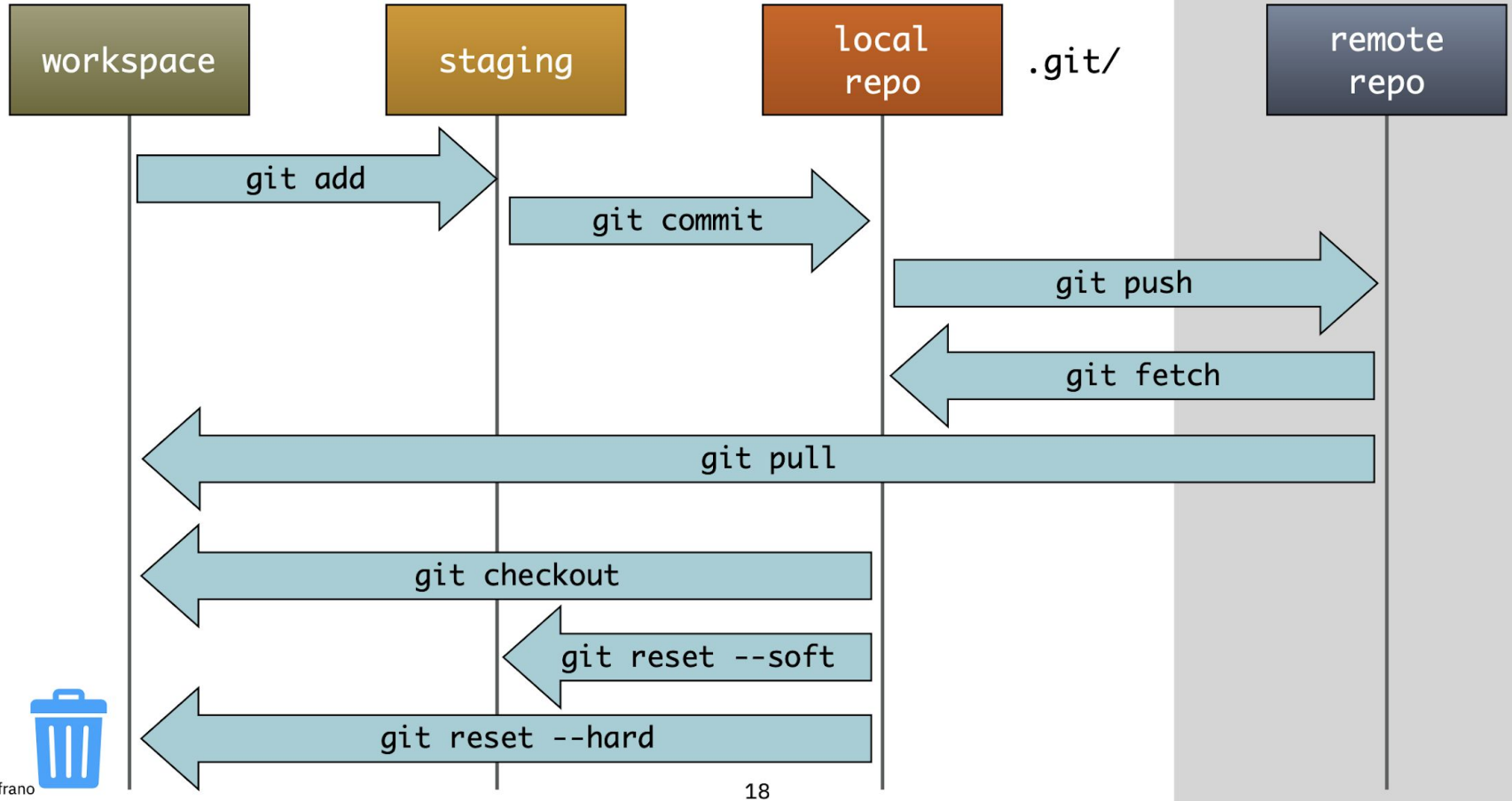
Using Git in terminal

- **git clone <https-repo-url>**: make a local copy of a remote repository
- **git branch:** list out all the local branches
- **git pull:** download any changes from remote to local
- **git checkout -b <branch-name>**: create and switch to new branch
- **git status:** check what changes have been made
- **git add <filename>:** move file to staging area before commit
- **git commit -m "<commit-msg>":** add a commit message
- **git push -u origin <branch-name>:** push local branch to remote
- **git log**: displays previous commits

Useful terminal commands:

- **pwd:** print working (current) directory
- **ls <dirname>:** list files in current directory or given directory
- **cd <dirname>**: change directories
- **cat <filename>:** shows content of given filename
- **head -n <filename>:** shows the first n lines of given filename
- **clear:** clear the terminal
- **touch <filename>:** creates a new file with filename

Git Command Workflow



Common Issues

1. You cannot clone one github repo into another repo
2. master ➜ main
3. Set up your git config and ssh keys: refer to Slide 36 in NYU Classes > Resources > 02-Social-Coding-with-Git.pdf