Git Week 1

Sunday, August 19, 2018 2:49 PM

- Git is a distributed version control system

- Git repo: A series of snapshots, or commits

- Command line or gui → not comfortable with cli / easier (interactive)
  - vital
  - automatable → devops
  - fast & easy

  both required!

git [command] [--flags] [arguments]

git help [command]
git [command] -h

- git config
  - --system for all user
  - --global for user
  - --local for current repo

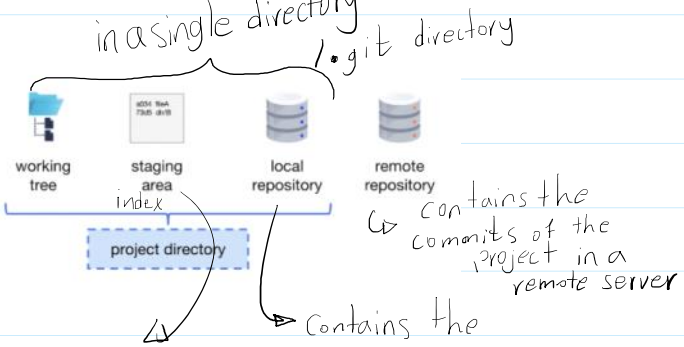
Specify the git editor:
git config --global core.editor nano

user info
git config --global user.name "_"
git config user.name

git config --global user.email "_"

git config --global user.email "___"
git config user.email

Locations of Git



↳ contains the commits of the project in a remote server

Contains the commits of the project

files that are planned for the next commit

if you delete your project directory, you are also deleting your local repository

git init → initialize git repo

git add <filename-or-directoryname> → add file to the staging area

↳ git add . → add all of the files but don't use it. it's a bad practice

git status
git status -s → short format

git commit → commit all staged file to the local repo

git commit -m "Commit message"

git log → see the history of commits

git log

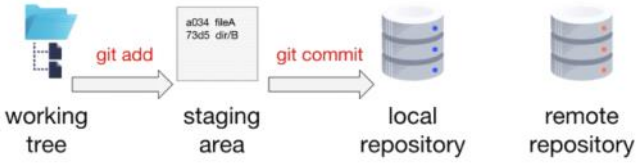
git log -2 → last two commit

git log --oneline → short version

yit log --oneline -2 → last two commit in short format

REVIEW

- `git status` - view the status of files in the working tree and staging area
- `git add` - adds untracked or modified files to the staging area
- `git commit` - creates a snapshot of the current project
- `git log` - view the commit history



Remote Repository

- A remote repository is often a "bare" repository → only repo not working tree
- By convention, remote repository names end with ".git"

Have a local repository?	Task
no	clone the remote

Have a local repository?	Task
no	clone the remote
yes	add the remote

A *clone* is a local copy of a remote repository

- origin is the default alias for the remote repository URL

- All commits belong to a branch
- A push add commits for a branch to a remote repository
- Commands:

```
git clone <URL.git> [localprojectname]
git remote --verbose

git remote add <name> <url>
↳ git remote add origin <url git>
```

- Don't work with Master branch

```
git push [-u] <repo> <branch>
```

-u: track this branch

repo: name or url

git push -u origin master

git clone ___url___
git add ____
git commit -m "____"
git push -u origin master
git status
git remote add origin ___url___
git push -u origin master

Quiz

1.
Which one of these statements about Git is true?

- A commit containing one small change to a project is not practical.
- Each version of the project is called a branch.
- Git helps manage the history of the project.

2.
Which one of these statements about branches is true?

- By default, a commit does not belong to a branch.
- A branch contains a small part of the project.
- The default branch is named "master".

3.
What is a request to merge your branch into another branch called?

- Automated test
- Code review
- Pull request

4.
If a remote repository is offline, which one of the following is true?

- You can continue to work with the local repository.
- You can continue to work, but only with the current version of the project.
- You must wait for the remote repository to become available.

5.
Which one of the following is true?

- ○ Git does not scale to large projects.
- ○ Git is owned by a single company.
- ◉ Git implements distributed version control.

6.
Which one of these statements about commits is true?

- ○ A commit contains only the changes to the project since the previous commit.
- ◉ A commit is a snapshot of the project.
- ○ Only the most recent commit is saved in the repository.

7.
Which location contains the list of files that will be included in the next commit?

- ◉ Working tree
- ○ Remote repository X
- ○ Staging area → correct
- ○ Branch

8.
Which location contains the commit history of a project?

- ○ Working tree
- ○ Branch
- ○ Staging area
- ◉ Remote repository

9.
When a file is first placed in the working tree, what is its status?

- ○ Committed
- ◉ Untracked
- ○ Modified
- ○ Staged

10.
What must you do to add a new file to the next commit?

- ◉ Add the file to the staging area.
- ○ Tag the file.
- ○ Push the file.
- ○ Check out the file.

11.
If you create a local repository in a folder with existing files, what will be the status of the files?

- ○ Modified
- ○ Committed
- ◉ Untracked
- ○ Staged

12.
Immediately after you commit, where is the commit located?

- ○ Local repository and remote repository
- ○ Neither repository
- ◉ Local repository

12.
Immediately after you commit, where is the commit located?

- ( ) Local repository and remote repository
- ( ) Neither repository
- (•) Local repository
- ( ) Remote repository

13.
Which one of these statements about remote repositories is true?

- ( ) A remote repository usually has a working tree.
- (•) By convention, remote repository names end in ".git".
- ( ) You must have one remote repository for each local repository.
- ( ) A remote repository usually has a staging area.

14.
What is a local copy of a remote repository called?

- (•) Clone
- ( ) Origin
- ( ) Branch
- ( ) Master

15.
After you clone a repository, which one of the following is true?

- (•) The remote repository information is available in the local repository.
- ( ) Only the most recent commit is available locally.
- ( ) New commits to the local repository will automatically be pushed to the remote repository.
- ( ) New commits on the remote repository will automatically be added to the local repository.

16.
What is origin?

- (•) An alias for the remote repository's URL.
- ( ) The first version of a file in the repository.
- ( ) The default branch name.
- ( ) The first commit of the repository.

17.
What must you do to add a local commit to the remote repository?

- (•) Push
- ( ) Pull
- ( ) Stage
- ( ) Merge