CSE326: Web Application Development Lab 0: Git & MAMP

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Git

What is VCS(Version Control System)?

- Database for *"Version"*
- A system for managing multiple revisions of the same unit of information
- Git, SVN, Mercurial, …
- Why use VCS?
    - To collaborate with team.
    - To backup the version of project.
    - To track what changes are happened in source code.
    - To reduce side-effects when develop a new module.
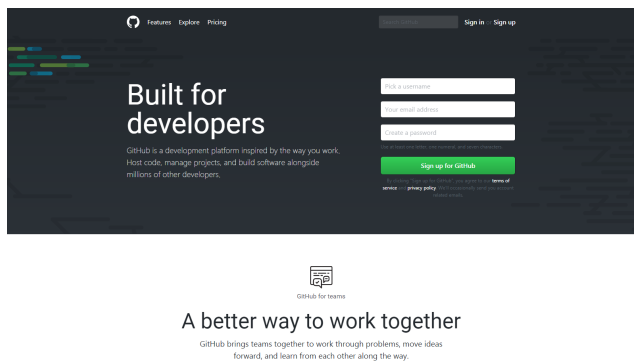
Git

What is Git?
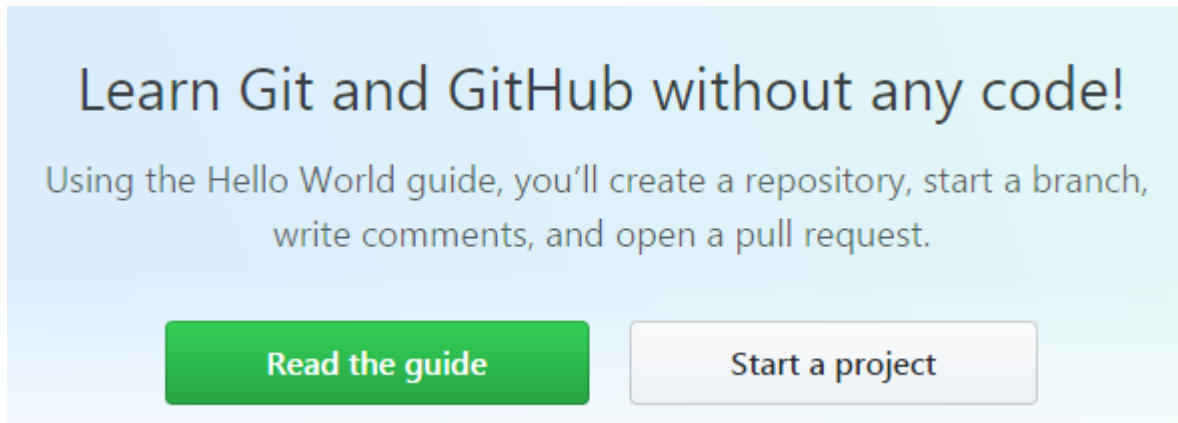

- The most commonly used VCS today.
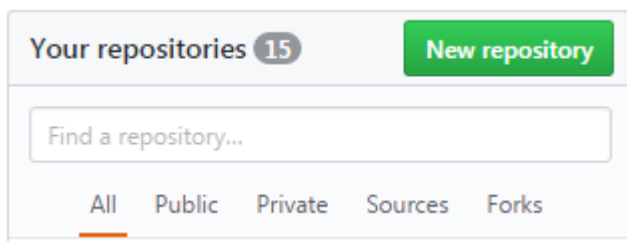- Git Tutorial: https://rogerdudler.github.io/git-guide/index.ko.html
- Download: https://git-scm.com/

Git

What is GitHub?

- Web based remote source code repository.
- It offers git repository hosting service.
- https://github.com/

Git

Create GitHub Remote Repository

- If you are new GitHub user, click "Start a project"

- If you are already registered in GitHub user, click "New repository"

Git

Create GitHub Remote Repository

Git

Create GitHub Remote Repository

- Copy your repository URL for next step.

Git

Git Initial Setting

Steps

1. Initialize Git *Workspace*: `git init`
2. User login:
   - `git config user.name "Your Name"`
   - `git config user.email yourGitEmail@abcde.def` (No double quotes!)
3. Naming your GitHub *Remote Repository*: `git remote add origin https://github.com/...`

Git

Git Basic Workflow

Steps

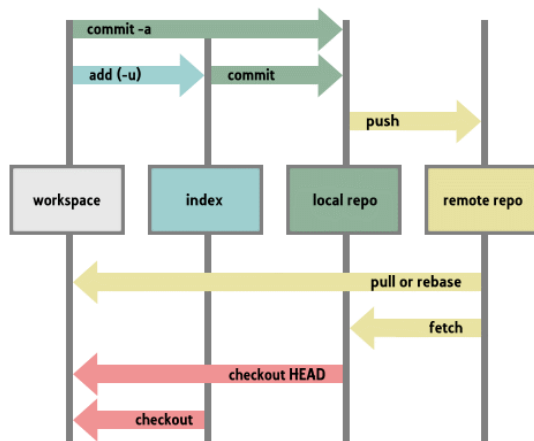1. Pull your remote repository to *Local Repository and Workspace*
2. Coding, Coding, Coding … in your *Workspace*
3. Add your changes to *Index*
4. Commit(Save) your changes to *Local Repository*
5. Pull your remote repository again
   - Conflict could be occured when remote repository modified before push
6. Upload your works in *Local Repository to Remote Repository*

Git

Git Basic Workflow
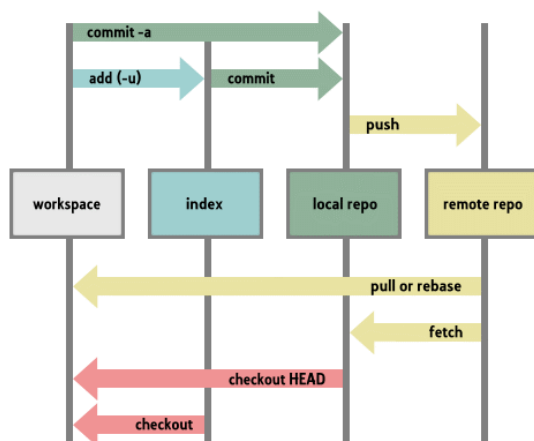
Steps(Commands)

1. `git pull origin master`
2. Coding, Coding, Coding … in your *Workspace*
3. `git add *`
4. `git commit -m "Describe what changes are happend..."`
5. `git pull origin master`
6. `git push origin master`

MAMP

What is MAMP?

- MAMP: Machintosh + Apache + MySQL + PHP
  - Apache: HTTP/HTTPS Server
  - MySQL: Open-source relational database management system(RDBMS)
  - PHP: Server-side scripting language.
- It setups local server environment.
- It supports Mac and Windows both.
- Download: https://www.mamp.info/en/downloads/

Lab 0. Git & MAMP

Exercise 1: Setup Git & Create GitHub Repository

1. Download *Git* and install it.
   - **Don't change any settings when you install Git.**
2. Create new GitHub Repository.
3. Open Terminal.
   - Windows: `Win+R -> cmd`
   - Mac: Open Spotlight -> Search '터미널' or 'Terminal'
4. Follow the Git Basic Workflow(slide 7-8).
   - Initialize ~ Pull -> *Create some file(anything is okay)* -> Add ~ Push
   - Type the commands in *Terminal or Git Bash*.
5. Show your GitHub repository to TA.

Lab 0. Git & MAMP

Exercise 2.1: Setup MAMP Environment(Apache)

1. Download *MAMP* and install it.
    - **Don't install *MAMP PRO*.**
2. Execute MAMP and click "Start Servers".
    - If you got error, restart MAMP, start server and stop server(for terminate services).
    - And start server again.
3. Open your Internet browser(IE, Chrome, Firefox, …).
4. Type "localhost" or "127.0.0.1" in address.
5. Show your Internet Browser to TA.

Lab 0. Git & MAMP

Exercise 2.2: Setup MAMP Environment(MySQL)

After Exercise 2.1…

1. Type command Terminal: `mysql -uroot -proot`
2. Show your terminal to TA.