Lab 6

Git-1

- It's essential to use a version control system for software development and other documentation works.
- Basic solution: Making copies
- We need a systematic management system for version control and collaboration.

Changes: storing data as changes to the base version.

vs

Snapshots: storing data as snapshots

- **Version Controls**
    1. Local: controls by itself.
    2. Centralized: relies on central VCS server (con)
    3. Distributed: even if something is wrong with central server, there are copies restored in each local. (complement for centralized version)

- **Three States in Git**

Working Directory (modified) → *Stages Fixes* → Staging Area (staged) → *Commit* → Repository/git directory (Committed) → *Checkout the project*

- Git configurations are stored in three levels

1. **System** level: Affects all uses and repositories on the system.
2. **Global** (user) level: Affects all repositories of a current user.
3. **Local** level: Specific to the current repository.

・Git Commands

$ git init	Initializing a Repository in an Existing Directory
$ git status	Checking Repository Status
$ git add [file_name]	Adding a new file to be staged (tracked)
$ git add .	Adding all files to be stage (tracked)
$ git rm --cached [file_name]	Unstaging a file
$ nano .gitignore	Ignoring a file
$ git commit -m “commit message”	Commit
$ git branch	Change branch name