



Aalto University
School of Electrical
Engineering

Software Project Management / Git

Protopaja / Protocamp / ELEC-D0301

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7.6.2022

What is Git?

- Open-source version control system
- Used to control software development of a group or when multiple computers are used

Features:

- Supports non-linear development
- Tracks history
- Creates backups
- Scalable
- Supports collaboration
- Distributed Development



What is GitLab (GitHub)?

- GitLab (GitHub): company that provides a hosting service
- Git: version control system downloaded on your computer

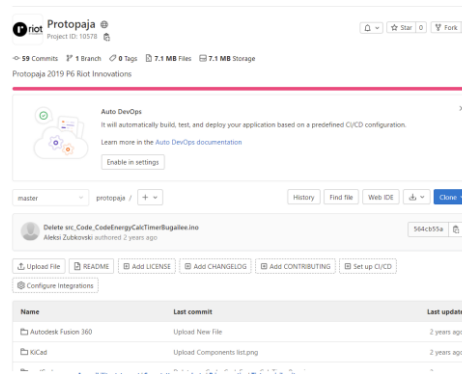
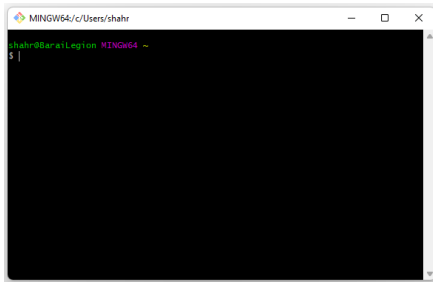


GitLab



GitHub

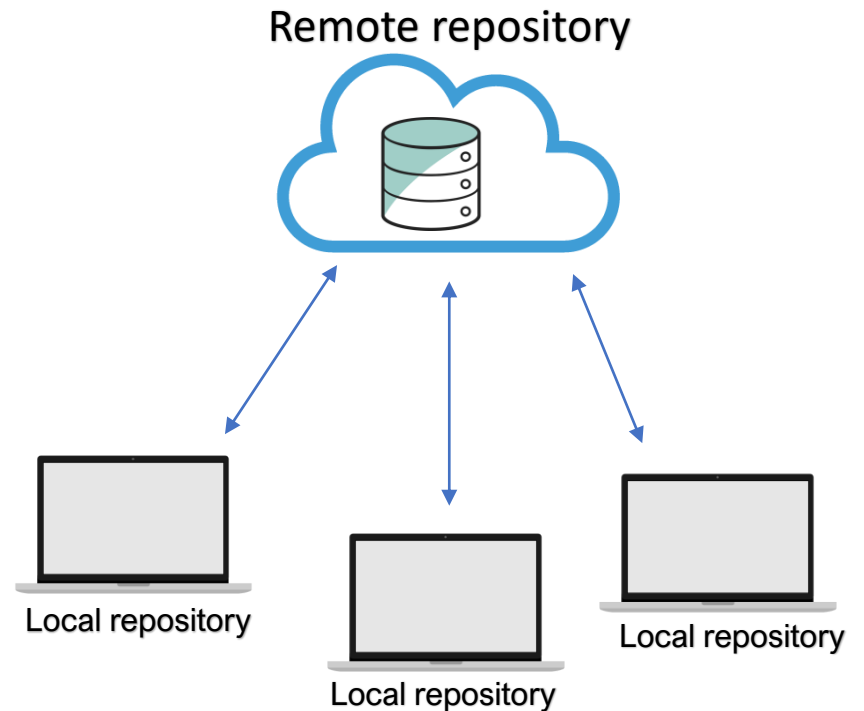
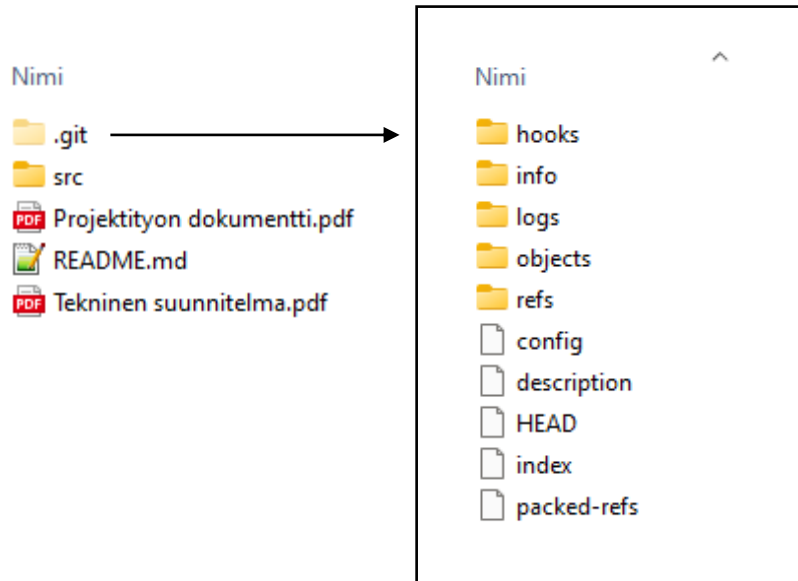
Terminal vs GUI



git

Repository

- The repository is the **.git** folder
 - track all changes
 - record history

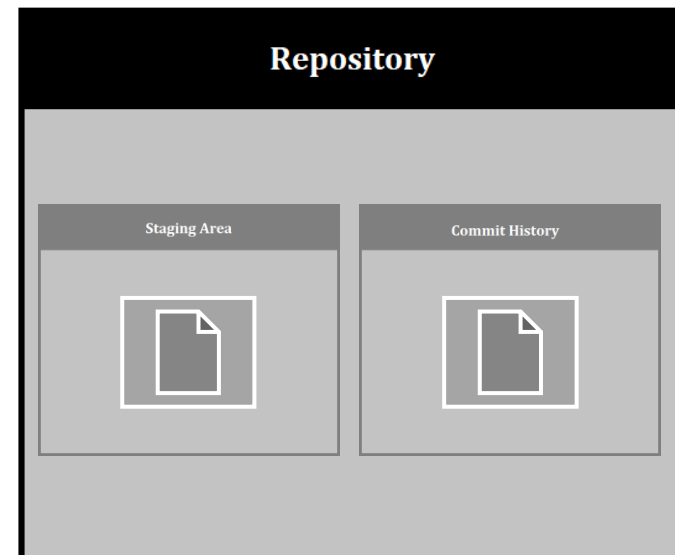
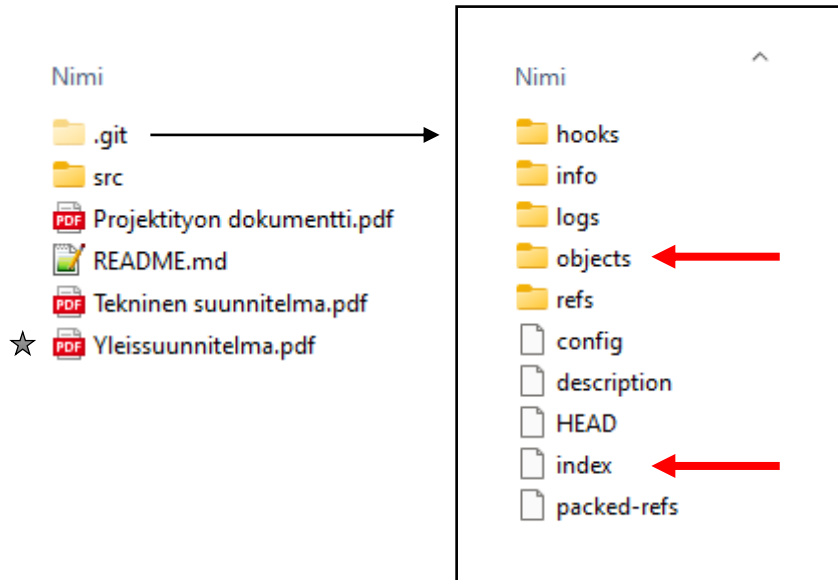
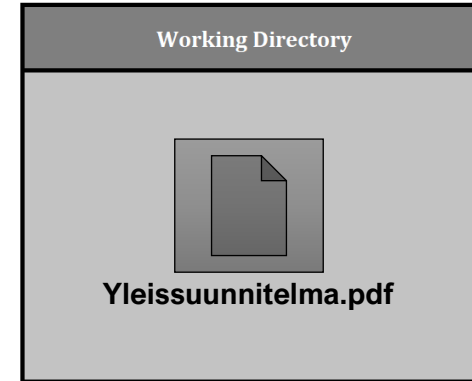


Git Workflow

- Working directory
- Staging area
- Commit history

Commands:

- git status
- git add <file name>
- git commit -m "First com....."



Branch & Merging

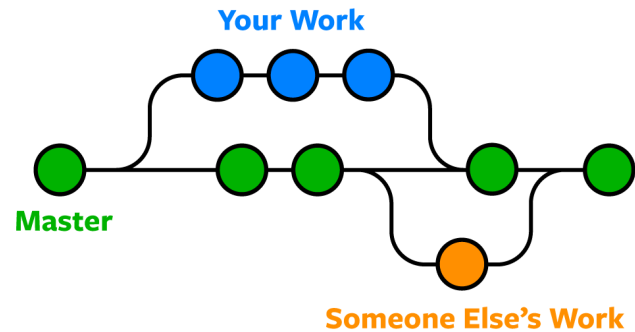
- A branch is a pointer to a commit
- The default branch in Git is called Master or main

Command **git branch**

- In the terminal -> list of all the branches

Command **git merge**

- In the terminal -> merge your working branch with Master branch



Using Git (Commands)

Starting project:

- Create new project (git init)
- Clone existing project (git clone)

Files in Git:

- Adding files (git add) and removing files (git rm)
- Check status (git status)

Updating:

- Locally (git commit) and remote server (git push)
- From remote server (git pull)
- Merging (git merge)

More command can be found...

<https://docs.gitlab.com/ee/gitlab-basics/start-using-git.html>

GIT DEMO WEB GUI



GitLab

version.aalto.fi

