

Git & GitHub Notes

What is Git?

- Git is a distributed version control system (VCS).
- Helps track changes in source code during software development.
- Created by Linus Torvalds in 2005.

What is GitHub?

- GitHub is a web-based platform that uses Git.
- Provides remote repositories and collaboration tools.
- Owned by Microsoft.

Git Basics

1. `git init` - Initialize a Git repository
2. `git clone URL` - Clone a repository
3. `git status` - Check repo status
4. `git add .` - Stage all changes
5. `git commit -m "msg"` - Commit with message
6. `git log` - View commit history
7. `git diff` - Show file differences

Working with Remote Repos

1. `git remote add origin URL` - Connect local repo to remote
2. `git push origin branch` - Push changes to remote
3. `git pull origin branch` - Pull changes from remote
4. `git fetch` - Download commits without merging

Branching & Merging

1. `git branch` - List branches
2. `git branch new-branch` - Create a new branch

Git & GitHub Notes

3. git checkout branch - Switch to branch
4. git merge branch - Merge a branch
5. git branch -d branch - Delete a branch

GitHub Common Terms

- Repository: A project folder on GitHub.
- Fork: Copy of a repository to your account.
- Pull Request (PR): Request to merge changes into the main repo.
- Issues: Report bugs or request features.