Git & GitHub Tutorial

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What is Git?

Git is a distributed version control system that tracks changes in your source code. It allows you to manage versions, collaborate, and work offline.

What is GitHub?

GitHub is a cloud-based platform that hosts Git repositories. It offers features like collaboration, pull requests, issue tracking, and CI/CD integration.

Basic Configuration

git config --global user.name "Your Name"

git config --global user.email "youremail@example.com"

git config --list

Initialize a Repository

git init

Clone a Repository

git clone https://github.com/username/repo-name.git

Check Status

git status

Add Files to Staging

git add filename

or

git add .

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Commit Changes

git commit -m "Your commit message"

View Commit History

git log

See Tracked Files

git ls-files

Rename or Move a File

git mv oldname.txt newname.txt

Remove a File

git rm filename

Create a File

touch filename.txt

Add a Remote

git remote add origin https://github.com/username/repo-name.git

View and Remove Remote

git remote -v

git remote remove origin

Push and Pull Changes

git push origin main

git pull origin main

Branching and Merging

Create Branch: git branch new-branch

Switch Branch: git checkout branch-name

Merge Branch: git checkout main

git merge branch-name

Delete Branch: git branch -d branch-name

Rename Branch: git branch -m new-name

Stash Changes

git stash

git stash pop

Append Text to File

echo "message" >> filename.txt

Conclusion

With these Git and GitHub commands, you can manage your code efficiently and collaborate with others effectively. Happy coding!