Common Git Commands

Configuration

git config --global user.name "Your Name": Sets the name you want attached to your commit transactions.

git config --global user.email "your.email@example.com": Sets the email you want attached to your commit transactions.

Creating Repositories

git init: Initializes a new Git repository.

git clone <repository_url>: Clones an existing repository from a URL.

Basic Snapshotting

git status: Shows the status of changes as untracked, modified, or staged.

git add <file>: Adds a file to the staging area.

git add .: Adds all changes in the current directory to the staging area.

git commit -m "commit message": Commits the staged snapshot with a message.

git commit -am "commit message": Adds all modified tracked files to the staging area and commits them.

Branching and Merging

git branch: Lists all local branches in the current repository.

git branch <branch_name>: Creates a new branch.

git checkout <branch_name>: Switches to the specified branch.

git checkout -b <branch_name>: Creates and switches to a new branch.

git merge <branch_name>: Merges the specified branch into the current branch.

git branch -d <branch_name>: Deletes the specified branch.

Remote Repositories

git remote add <name> <url>: Adds a remote repository.

git remote -v: Lists remote repositories with their URLs.

git fetch <remote>: Fetches changes from the remote repository.

git pull <remote> <branch>: Fetches and merges changes from the remote repository into the current branch.

git push <remote> <branch>: Pushes the current branch to the remote repository.

Inspecting and Comparing

git log: Shows the commit history.

git log --oneline: Shows the commit history in a condensed form.

git diff: Shows the differences between working directory and the index.

git diff <commit1> <commit2>: Shows the differences between two commits.

git show <commit>: Shows information about a specific commit.

Undoing Changes

git reset <file>: Unstages a file while retaining its changes in the working directory.

git reset --hard <commit>: Resets the index and working directory to the specified commit.

git revert <commit>: Creates a new commit that undoes the changes made by the specified commit.

Stashing Changes

git stash: Stashes changes in the working directory.

git stash apply: Applies the most recently stashed changes.

git stash pop: Applies the most recently stashed changes and removes them from the stash list.

git stash list: Lists all stashed changes.

Tagging

git tag <tag_name>: Creates a new tag.

git tag -a <tag_name> -m "tag message": Creates an annotated tag.