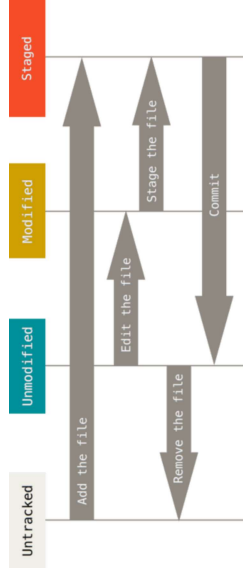# Git Cheat Sheet

Workflow

Start a new repository

Command	Description
git init	Create a new repository in the current directory
git clone <url> [<dir>]	Clone a remote repository

History

Command	Description
git log	Show commit logs
git log --oneline	Show commit logs with one line per commit
git show	Show the changes of the last commit
git shortlog	Summarize git log output by author
git blame <file>	Show who changed which line in a file

Local changes

Command	Description
git status	List which files are staged, unstaged, and untracked
git add <file>	Add a file to the staging area
git add -p	Interactively choose hunks of a file to add to the staging area

Local changes (cont.)

Command	Description
git diff	Show unstaged changes
git diff --staged	Show staged changes
git commit	Commit staged changes using the default editor
git commit -m <message>	Commit staged changes with a message provided on the command line
git commit --amend	Amend the last commit
git reset HEAD <file>	Unstage a file
git checkout -- <file>	Discard local changes in a file

Branches

Command	Description
git branch	List local branches
git branch -r	List remote branches
git branch <branch>	Create a new branch
git checkout <branch>	Switch to a branch
git checkout -b <branch>	Create a new branch and switch to it
git merge <branch>	Merge a branch into the active branch
git branch -d <branch>	Delete a branch

Tags

Command	Description
git tag	List tags
git tag <tag>	Create a tag
git tag -a <tag>	Create an annotated tag
git tag -s <tag>	Create a GPG-signed tag
git tag -d <tag>	Delete a tag
git show <tag>	Show the tag data

Collaboration

Command	Description
git remote -v	List remote repositories
git remote add <name> <url>	Add a new remote repository
git fetch <remote>	Download all changes from a remote repository but don't integrate them
git pull <remote>	Download changes and directly merge/integrate them
git pull <remote> <branch>	Download changes and directly merge/integrate a remote branch
git push <remote> <branch>	Upload local changes to a remote repository
git push <remote> --delete <branch>	Delete a remote branch
git push <remote> --tags	Push tags to a remote repository

Stashing

Command	Description
git stash	Stash the changes in a dirty working directory away
git stash list	List all stashes
git stash pop	Apply the last stash and delete it
git stash apply	Apply the last stash but don't delete it
git stash drop	Delete the last stash
git stash clear	Delete all stashes

Writing good commit messages

1. Separate subject from body with a blank line
2. Limit the subject line to 50 characters
3. Capitalize the subject line
4. Do not end the subject line with a period
5. Use the imperative mood in the subject line
6. Wrap the body at 72 characters
7. Use the body to explain what and why vs. how