**Using Git**

**Global Settings**

Related Setup: <https://gist.github.com/hofmannsven/6814278>

Related Pro Tips: <https://ochronus.com/git-tips-from-the-trenches/>

Interactive Beginners Tutorial: <http://try.github.io/>

**Reminder**

Press minus + shift + s and return to chop/fold long lines!

Show folder content: ls -la

**Notes**

Do not put (external) dependencies in version control!

**Setup**

See where Git is located: which git

Get the version of Git: git --version

Create an alias (shortcut) for git status: git config --global alias.st status

**Help**

Help: git help

**General**

Initialize Git: git init

Get everything ready to commit: git add .

Get custom file ready to commit: git add index.html

Commit changes: git commit -m "Message"

Add and commit in one step: git commit -am "Message"

Remove files from Git: git rm index.html

Update all changes: git add -u

Remove file but do not track anymore: git rm --cached index.html

Move or rename files: git mv index.html dir/index\_new.html

Undo modifications (restore files from latest commited version): git checkout -- index.html

Restore file from a custom commit (in current branch): git checkout 6eb715d -- index.html

**Reset**

Go back to commit: git revert 073791e7dd71b90daa853b2c5acc2c925f02dbc6

Soft reset (move HEAD only; neither staging nor working dir is changed): git reset --soft 073791e7dd71b90daa853b2c5acc2c925f02dbc6

Undo latest commit: git reset --soft HEAD~

Mixed reset (move HEAD and change staging to match repo; does not affect working dir): git reset --mixed 073791e7dd71b90daa853b2c5acc2c925f02dbc6

Hard reset (move HEAD and change staging dir and working dir to match repo): git reset --hard 073791e7dd71b90daa853b2c5acc2c925f02dbc6

**Update & Delete**

Test-Delete untracked files: git clean -n

Delete untracked files (not staging): git clean -f

Unstage (undo adds): git reset HEAD index.html

Commit to most recent commit: git commit --amend -m "Message"

Update most recent commit message: git commit --amend -m "New Message"

**Branch**

Show branches: git branch

Create branch: git branch branchname

Change to branch: git checkout branchname

Create and change to new branch: git checkout -b branchname

Rename branch: git branch -m branchname new\_branchname or: git branch --move branchname new\_branchname

Show all completely merged branches with current branch: git branch --merged

Delete merged branch (only possible if not HEAD): git branch -d branchname or: git branch --delete branchname

Delete not merged branch: git branch -D branch\_to\_delete

**Merge**

True merge (fast forward): git merge branchname

Merge to master (only if fast forward): git merge --ff-only branchname

Merge to master (force a new commit): git merge --no-ff branchname

Stop merge (in case of conflicts): git merge --abort

Stop merge (in case of conflicts): git reset --merge // prior to v1.7.4

Merge only one specific commit: git cherry-pick 073791e7

**Stash**

Put in stash: git stash save "Message"

Show stash: git stash list

Show stash stats: git stash show stash@{0}

Show stash changes: git stash show -p stash@{0}

Use custom stash item and drop it: git stash pop stash@{0}

Use custom stash item and do not drop it: git stash apply stash@{0}

Delete custom stash item: git stash drop stash@{0}

Delete complete stash: git stash clear

**Gitignore & Gitkeep**

About: <https://help.github.com/articles/ignoring-files>

Useful templates: <https://github.com/github/gitignore>

Add or edit gitignore: nano .gitignore

Track empty dir: touch dir/.gitkeep

**Log**

Show commits: git log

Show oneline-summary of commits: git log --oneline

Show oneline-summary of commits with full SHA-1: git log --format=oneline

Show oneline-summary of the last three commits: git log --oneline -3

Show only custom commits: git log --author="Sven" git log --grep="Message" git log --until=2013-01-01 git log --since=2013-01-01

Show only custom data of commit: git log --format=short git log --format=full git log --format=fuller git log --format=email git log --format=raw

Show changes: git log -p

Show every commit since special commit for custom file only: git log 6eb715d.. index.html

Show changes of every commit since special commit for custom file only: git log -p 6eb715d.. index.html

Show stats and summary of commits: git log --stat --summary

Show history of commits as graph: git log --graph

Show history of commits as graph-summary: git log --oneline --graph --all --decorate

**Compare**

Compare modified files: git diff

Compare modified files and highlight changes only: git diff --color-words index.html

Compare modified files within the staging area: git diff --staged

Compare branches: git diff master..branchname

Compare branches like above: git diff --color-words master..branchname^

Compare commits: git diff 6eb715d git diff 6eb715d..HEAD git diff 6eb715d..537a09f

Compare commits of file: git diff 6eb715d index.html git diff 6eb715d..537a09f index.html

Compare without caring about spaces: git diff -b 6eb715d..HEAD or: git diff --ignore-space-change 6eb715d..HEAD

Compare without caring about all spaces: git diff -w 6eb715d..HEAD or: git diff --ignore-all-space 6eb715d..HEAD

Useful comparings: git diff --stat --summary 6eb715d..HEAD

Blame: git blame -L10,+1 index.html

**Releases & Version Tags**

Show all released versions: git tag

Show all released versions with comments: git tag -l -n1

Create release version: git tag v1.0.0

Create release version with comment: git tag -a v1.0.0 -m 'Message'

Checkout a specific release version: git checkout v1.0.0

**Collaborate**

Show remote: git remote

Show remote details: git remote -v

Add remote origin from GitHub project: git remote add origin https://github.com/user/project.git

Add remote origin from existing empty project on server: git remote add origin ssh://root@123.123.123.123/path/to/repository/.git

Remove origin: git remote rm origin

Show remote branches: git branch -r

Show all branches: git branch -a

Compare: git diff origin/master..master

Push (set default with -u): git push -u origin master

Push to default: git push origin master

Fetch: git fetch origin

Fetch a custom branch: git fetch origin branchname:local\_branchname

Pull: git pull

Pull specific branch: git pull origin branchname

Merge fetched commits: git merge origin/master

Clone to localhost: git clone https://github.com/user/project.git or: git clone ssh://user@domain.com/~/dir/.git

Clone to localhost folder: git clone https://github.com/user/project.git ~/dir/folder

Clone specific branch to localhost: git clone -b branchname https://github.com/user/project.git

Delete remote branch (push nothing): git push origin :branchname or: git push origin --delete branchname

**Archive**

Create a zip-archive: git archive --format zip --output filename.zip master

Export/write custom log to a file: git log --author=sven --all > log.txt

**Troubleshooting**

Ignore files that have already been committed to a Git repository: <http://stackoverflow.com/a/1139797/1815847>

**Security**

Hide Git on the web via .htaccess: RedirectMatch 404 /\.git (more info here: <http://stackoverflow.com/a/17916515/1815847>)

**Large File Storage**

Website: <https://git-lfs.github.com/>

Install: brew install git-lfs

Track \*.psd files: git lfs track "\*.psd" (init, add, commit and push as written above)