`Git Cheat-Sheet by frag.extract.a`

Small overview about the functions of git and the most used commands.

All covered commands start with `git`

Getting Started

init

initialize a repository
optional flag: `--bare` causing to have a repository without a working tree where you push from other repositories

clone 'url'

calls `init` but copies an existing repository

remote add origin 'url'

specify a remote repository electively on a website like `github.com` or `gitlab.com`

config --global user.name "Name"

sets an username for all local git repositories

config --global user.email E-mail

sets an E-Mail-address for all local git repositories

config --list

shows all set configurations for the called repository

Basic commands

status

gives informations about the current working tree, as un-/staged files and branch

add 'filename'/'path'

add a file to index
optional: by '*' adding all tracked files

commit

commit current contends of index. You will be asked for a commit-message in which you describe changes
common way: `-m " 'commit message' "` - one line commit

fetch

downloads from remote without any merges on local files

pull

download the newest commit from remote and tries to merge conflicts automatically

push

upload the newest commit to remote

checkout

switches branches if appended by 'branchname'
or: removes a staged file from commit if appended by 'filename'

branch

creates a new branch pointing on the same commit as the master
used for having a independent working tree, i.e. for an experimental build

log

information about the last commits
optional: `--stat` gives detailed information of commits as changed lines per file

merge

updates a branch to the state of an different one, by default with recursive auto-merging

Advanced/Specific commands

Some commands you probably only need in a very distinct situation

update-index assume-unchanged 'filename'

in case to untrack a file which already has been added to the git repository

SSH management

it is possible to use ssh to log in into your chosen remote website. Create a new ssh key by `ssh-keygen -t rsa -b 4096 -C "your_email@example.com"`, copy it to clipboard and paste it in settings → SSH and GPG keys.

config --global credential.helper cache

if you're using https to clone your repositories it might be useful to cache your credentials saving you from having to enter them every time

cherry-pick

apply chosen commits to branch instead of all (like with merge)

blame

used to see which contributor changed which line

Useful knowledge

Useful features of git and knowledge about common problems

The ".gitignore" file

file to exclude specific file types from being tracked.
i.e. "*.log"not to have LaTeX log files in the repository

Merge Conflict

<<<<<<< HEAD - start of conflict
your changes
======= - separator
changes in other branch
>>>>>>> BRANCH-NAME - end of conflict
To resolve the conflict delete the three added lines and decide with lines to keep, delete the others. After that commit.