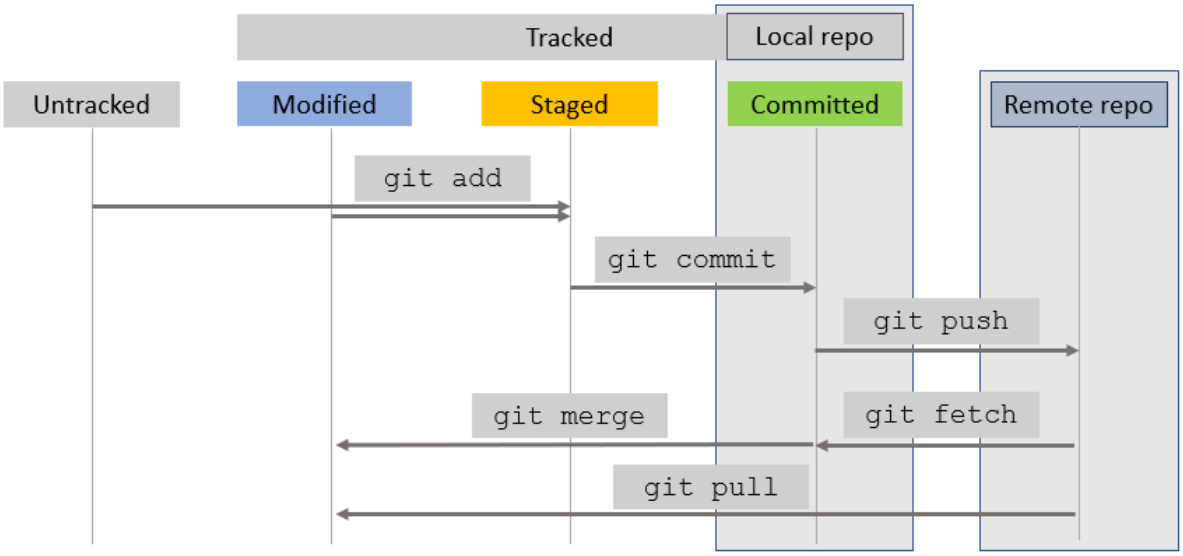
Git Cheat Sheet

Basic Workflow

`git init` :: turn current directory into git repository.
`git add <file>` :: stage the file for commit i.e. track changes.
`git commit` :: confirm changes with message/explanation.
`git push` :: publish/back-up changes on GitHub (remote server).

Syncing with GitHub

`git clone <copied-url>` :: download remote into new local repository
`git fetch` :: brings in information on changes from the remote
`git merge` :: merge changes into your local repository
`git pull` :: short cut to fetch and merge in one step



Checking for Changes

`git status` :: show which files have been tracked or modified.
`git diff <file>` :: show difference between current file and last commit.
`git log <file>` :: show commit history [for optional `<file>`]

Other Useful Commands

`git rm <file>` :: delete file and remove from repository.
`git rm --cached <file>` :: delete file from repository, but keep local copy.
`git mv <file> <new_name>` :: rename file, and keep tracking same history.
`git remote -v` :: check url for tracked remote repository
`git <command> --help` :: open help documentation for any command!

Using Branches

`git branch` :: List local branches (* = you are here).

`git branch <branch-name>` :: Create new branch

`git checkout <branch-name>` :: Change to `<branch-name>` (NB. Updates local directory)

`git diff <branch1>..<branch2> <path>` :: Check difference between two branches (in optional `<path>`)

`git merge <branch-name>` :: Merge changes from `<branch-name>` into current branch

Undoing Mistakes

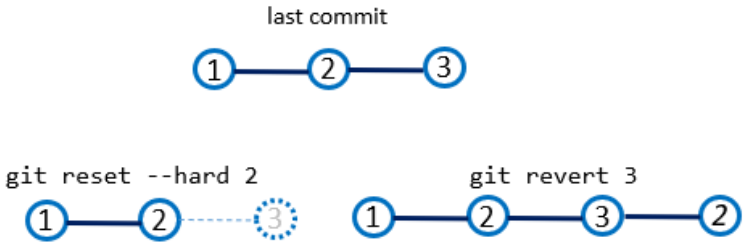
`git checkout [<commit>] -- <path>` :: Restore previous version of file

`git reset --hard HEAD` :: Go back to last commit, discarding all changes in working directory

`git reset --hard [<commit>]` :: Discard all commits after `[<commit>]`

`git reset [HEAD] <path>` :: Undo git add (undo staging or tracking file)

`git revert <commit>` :: Undo changes introduced by single commit, recording this in history



Checking git settings

`git config --global -l` :: Check global username and email settings

`git config --local -l` :: Check local repository settings e.g., path to remote repository

`git config --global core.editor notepad` :: Change editor used for commit messages to notepad (modify to choose other).

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Note: In the examples above, `<path>` is a more general name for `<file>`, so these options can be used interchangeably. `<path>` can point to either a file or directory name, with option of including full directory structure (relative to wherever you run the command).