



# Git Cheat Sheet

## Git Configuration

Command	Description
<code>git config --global user.name "Your Name"</code>	Sets the author name for all future commits.
<code>git config --global user.email "mole@cool"</code>	Sets the author email for all future commits.
<code>git config --global core.editor "nano"</code>	Sets the default Git text editor to nano
<code>git config --list</code>	Lists all current configuration settings.

## Essential Git

Command	Description
<code>git init</code>	Creates a new empty repository in the current folder.
<code>git status</code>	Summarizes the current state of the working tree and staging area.
<code>git log</code>	Shows all commits in reverse chronological order (most recent first).
<code>git add</code>	Stages one or more files.
<code>git commit</code>	Records changes in staging area in a new commit.
<code>git commit -m "message"</code>	Shortcut to simultaneously commit and specify the commit message.
<code>git diff</code>	Shows differences in files between working tree and HEAD.
<code>git diff --cached</code>	Shows differences in files between staging area and HEAD.
<code>git diff COMMIT_ID</code>	Show differences in files between HEAD and a specific commit.
<code>git checkout COMMIT_ID</code>	Temporarily reverts the repository to the state of a specific commit.
<code>git checkout master</code>	Restores working tree when in DETACHED HEAD state.

## Git Branches

Command	Description
<code>git branch</code>	Lists existing branches.
<code>git branch BRANCH</code>	Creates a new branch BRANCH from the current HEAD.
<code>git checkout BRANCH</code>	Switches to the specified branch.
<code>git checkout -b BRANCH</code>	Creates a new branch and switches to it from the current HEAD.
<code>git merge BRANCH</code>	Merges commits of BRANCH onto the history of the current branch.
<code>git branch -D BRANCH</code>	Deletes branch BRANCH and its associated history.

## GitHub

Command	Description
<code>git clone URL DIR</code>	Clones (downloads) a repository from URL into a new directory DIR.
<code>git remote -v</code>	Lists all remote repositories associated with the current repository.

Command	Description
<code>git remote add NAME URL</code>	Adds a remote repository NAME pointing to URL.
<code>git remote rm NAME</code>	Removes NAME from the list of tracked repositories.
<code>git push NAME BRANCH</code>	Copies commits of the current branch onto branch BRANCH of NAME.
<code>git pull NAME BRANCH</code>	Merges commits of branch BRANCH of NAME onto the current branch.

## Undoing Changes

Command	Description
<code>git checkout -- FILE</code>	Discards changes to a specific file in the working tree.
<code>git reset HEAD FILE</code>	Unstages a specific file (opposite of git add) but retains changes.
<code>git reset HEAD</code>	Unstages all currently staged files.
<code>git reset --hard HEAD</code>	Erases <b>all</b> changes, reverting the repository to the state of HEAD.

## Glossary

Term	Description
branch	A self-contained collection of commits that represent a line of development.
commit	A single point in the Git repository history.
HEAD	The commit at the tip of a branch or the most recent version of the repository.
remote	A repository hosted elsewhere, often on the cloud.
repository	The collection of all files, changes (commits), and branches.
staging area	All the files and changes added to the staging area but not yet committed.
working tree	All files and changes not yet added to the staging area.