

GIT QUICK REFERENCE CARD

Frequently used GIT commands – Version v1.1 July 2014

Main commands

add..... Add file contents to the index

-A [:/] adds all file changes including deletions to the staging area [for the whole tree]

-f allow adding otherwise ignored files

-p choose hunks of patch between the index and the work tree and add them to the index

am..... Apply a series of patches from a mailbox

archive..... Create an archive of files from a named tree

bisect..... Find by binary search the change that introduced a bug

⇒ **search for existence of file in last commits:** `bisect run test -f file.txt`

branch..... List, create, or delete branches

-a lists all branches including the remote branches

-d delete ... **branch**

-m rename branch: `...old_name new_name`

-v lists more information about the branches

bundle..... Move objects and refs by archive

checkout..... checkout a branch or paths to the working tree (prepend **--** before path to avoid ambiguity).

-b create a branch **new_name** and switch to it instantly

⇒ **restore working tree and reset index:**
 `checkout HEAD -- dir`

cherry-pick. can be used to change order of commits

citool..... Graphical alternative to `commit`

clean..... Remove untracked files from the working tree

-f force (required!)

-x include hidden files

-d directories as well

clone..... Clone a repository into a new directory

commit..... Record changes to the repository

-a adding changes of files known by the Git repository to the commit

-m Set comment for commitment – correct it with prepending **--amend** to argument

describe..... Show the most recent tag that is reachable from a commit

diff..... Show changes between commits, commit and working tree, etc.

--cached compare stage area with last commit

fetch..... Download objects and refs from another repository

format-patch Prepare patches for e-mail submission

gc..... Cleanup unnecessary files and optimize the local repository

grep..... Print lines matching a pattern

gui..... A portable graphical interface to Git

init..... Create an empty git repository or reinitialize an existing one

log..... Show commit logs (prepend **--** before path to avoid ambiguity)

-p show diffs of each commit

--stat precise output with some stats

--abbrev-commit
 shortend (but unique) SHA-1 values for the commit objects

--oneline show logs as shortened oneliner

--reverse reverse log-history output

--follow entire history including renames

--graph show visual timeline

⇒ **show all files that ever existed in HEAD:**
 `git log --pretty=format: --name-status | cut -f2- | sort -u`

merge..... Join two or more development histories together

-s specify your merge strategy (see `man git-merge`)

-X apply option to strategy (eg. *ours*, *theirs*)

--ff only update the branch pointer, without creating a merge commit (default)

mv..... Move or rename a file, a directory, or a symlink

notes..... Add/inspect commit notes

pull..... Fetch from and merge with another repository or a local branch

push..... Update remote refs along with associated objects

⇒ **delete branch in remote repo called test-branch:** `push origin :testbranch`

rebase..... Forward-port local commits to the updated upstream head

-i rebase interactively

--autosquash

 When the commit log message begins with "squash! ..." (or "fixup! ..."), automatically modify the todo list of **rebase -i**

reset..... Reset current HEAD to the specified state (Remove a *file* from staging area)

--soft move HEAD pointer only

--mixed resets staging area to HEAD (default!)

--hard resets staging area and working tree to HEAD

revert..... creates a new commit that undoes the changes from a previous commit (adds new history to Project)

rm..... Remove files from the working tree and from the index

-r remove recursive – for removing additionally from repo, add **--cached ***

shortlog..... Summarize git log output

show..... Show various types of objects

⇒ **allows you to see and retrieve files from branches, commits and tags:**
 `show [reference]:[filename] > out.txt`

stash Stash the changes in a dirty working directory away
status Show the working tree status
submodule ... Initialize, update, add or inspect submodules
 --recurse-submodules
 pull changes from main repo + submodules
tag Create, list, delete or verify a tag object signed with GPG
gitk The git repository browser

Manipulators

config Get and set repository or global options
 --list show all items in config
 --get-regexp
 show given pattern in my configuration, e.g. 'alias'
 --global write to global ~/.gitconfig file
 --system write to system-wide configuration
 --local to repository's configuration .git/config
 ⇒ **set alias for staged file prompt: config --global alias.staged 'diff --cached'**
fast-export . Git data exporter
fast-import . Backend for fast Git data importers
filter-branch
 Rewrite branches
mergetool ... Run merge conflict resolution tools to resolve merge conflicts
pack-refs ... Pack heads and tags for efficient repository access
prune Prune all unreachable objects from the object database
reflog Manage reflog information
relink Hardlink common objects in local repositories
remote Manage set of tracked repositories
 -v show details about the remotes

⇒ **remove all branches which are not in the remote anymore: remote update --prune**
repack Pack unpacked objects in a repository
replace Create, list, delete refs to replace objects

Interrogators

annotate Annotate file lines with commit information
blame Show what revision and author last modified each line of a file
cherry Find commits not merged upstream
count-objects
 Count unpacked number of objects and their disk consumption
difftool Show changes using common diff tools
fsck Verifies the connectivity and validity of the objects in the database
get-tar-commit-id
 Extract commit ID from an archive created using archive
help Display help information about git
instaweb Instantly browse your working repository in gitweb
merge-tree .. Show three-way merge without touching index
rerere Reuse recorded resolution of conflicted merges
rev-parse ... Pick out and massage parameters
show-branch . Show branches and their commits
verify-tag .. Check the GPG signature of tags
whatchanged . Show logs with difference each commit introduces

Interacting with Others

archimport .. Import an Arch repository into git
cvsexportcommit
 Export a single commit to a CVS checkout

cvsimport ... Salvage your data out of another SCM people love to hate
cvsserver ... A CVS server emulator for git
imap-send ... Send a collection of patches from stdin to an IMAP folder
quiltimport . Applies a quilt patchset onto the current branch
request-pull Generates a summary of pending changes
send-email .. Send a collection of patches as emails
svn Bidirectional operation between a Subversion repository and git

Manipulators (plumbing)

apply Apply a patch to files and/or to the index
checkout-index
 Copy files from the index to the working tree
commit-tree . Create a new commit object
hash-object . Compute object ID and optionally creates a blob from a file
index-pack .. Build pack index file for an existing packed archive
merge-file .. Run a three-way file merge
merge-index . Run a merge for files needing merging
mktag Creates a tag object
mktree Build a tree-object from ls-tree formatted text
pack-objects Create a packed archive of objects
prune-packed Remove extra objects that are already in pack files
read-tree ... Reads tree information into the index
symbolic-ref Read and modify symbolic refs
unpack-objects
 Unpack objects from a packed archive
update-index Register file contents in the working tree to the index

⇒ **push some version of file to remote repository and then disable changes tracking locally:** `git update-index --assume-unchanged <file>`

`update-ref ..` Update the object name stored in a ref safely

`write-tree ..` Create a tree object from the current index

Interrogators (plumbing)

`cat-file` Provide content or type and size information for repository objects

`diff-files ..` Compares files in the working tree and the index

`diff-index ..` Compares content and mode of blobs between the index and repository

`diff-tree ...` show files which have been changed by last commit

`--name-only`
show only names of files

`-r` recursively

`for-each-ref` Output information on each ref

`ls-files` Show information about files in the index and the working tree

`ls-remote ...` List references in a remote repository

`ls-tree` List the contents of a tree object

⇒ **list all files for specific branch:** `ls-tree -r master --name-only`

`merge-base ..` Find as good common ancestors as possible for a merge

`name-rev` Find symbolic names for given revs

`pack-redundant`
Find redundant pack files

`rev-list` Lists commit objects in reverse chronological order

`show-index ..` Show packed archive index

`show-ref` List references in a local repository

`unpack-file ..` Creates a temporary file with a blobs contents

`var` Show a git logical variable

`verify-pack ..` Validate packed git archive files

Synching repositories

`daemon` A really simple server for git repositories

`fetch-pack ..` Receive missing objects from another repository

`http-backend` Server side implementation of Git over HTTP

`send-pack ...` Push objects over git protocol to another repository

`update-server-info`
Update auxiliary info file to help dumb servers

Helper commands

`http-fetch ..` Download from a remote git repository via HTTP

`http-push ...` Push objects over HTTP/DAV to another repository

`parse-remote` Routines to help parsing remote repository access parameters

`receive-pack` Receive what is pushed into the repository

`shell` Restricted login shell for only SSH access

`upload-archive`
Send archive back to archive

`upload-pack ..` Send objects packed back to `fetch-pack`

Internal helper commands

`check-attr ..` Display git attributes information

`check-ref-format`
Ensures that a reference name is well formed

`fmt-merge-msg`
Produce a merge commit message

`mailinfo` Extracts patch and authorship from a single e-mail message

`mailsplit ...` Simple UNIX mbox splitter program

`merge-one-file`
The standard helper program to use with `merge-index`

`patch-id` Compute unique ID for a patch

`sh-setup` Common git shell script setup code

`stripspace ..` Filter out empty lines

github.com/emzap79/QRCS

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This TeXfile is based on Gabriel B. Burcas © `git-qrc.tex` and has then been modified to my own requirements.