README.md

# **Github Contributions**



## Fork vs Clone:

- Fork: Merge with original repo is possible with a pull request.
- Clone: Merge with original repo is only achieved by pushing to fork and then a pull request.

# Contributions without permissions:

*Note:* It is better to fork a repository before cloning it due to copyrights when the *user is NOT declared as a contributor*.

### General steps:

- 1. Fork repository.
- 2. Clone forked repository.
- 3. Make Changes in Local.
- 4. Push to Personal Remote.
- 5. Pull Request to Original Remote.

# Contributions with permissions:

**Note**: It is a faster option to clone the original repository without a previous fork of the project if the *user IS declared as a contributor*.

### General steps:

- 1. Clone
- 2. Make Changes in Local.
- 3. Push to Personal Remote.

Refer to Github official documentation for more information related to contributions.

# **Git Commands**



The following is a list of common git commands based on the Git Documentation.

Basic	Command	Description
1. help	<ul><li>1. git help</li><li>2. git help <command/></li><li>3. git help -a</li></ul>	<ol> <li>List common commands.</li> <li>Display help on git command.</li> <li>List all available commands.</li> </ol>
2. init	<ul><li>1. git init</li><li>2. git init -b   3. git init <subdir.></subdir.></li></ul>	<ol> <li>Initialize git repo in folder.</li> <li>Override branch name (config. default set if none).</li> </ol>

Basic	Command	Description
	<pre>4. git initbare <subdir.> 5. git inittemplate= <template-dir.> 6. git initshared [=(-options)]</template-dir.></subdir.></pre>	<ul> <li>3. Initialize a git repo inside a new subdir.</li> <li>4. Initialize a git bare repo inside new subdir.</li> <li>5. Specify dir. from which templates will be used.</li> <li>6. Make git readable/writable by users (see options).</li> </ul>
3. clone	<ol> <li>git clone <url></url></li> <li>git cloneno-hardlinks <dir.></dir.></li> <li>git clone <url> <dir.></dir.></url></li> <li>git clone <url>branch <branch>single-branch</branch></url></li> <li>git clonebare</li> <li>git clonemirror</li> <li>git clonetemplate= <temp_dir.> <dir.></dir.></temp_dir.></li> <li>git clonedepth= <depth></depth></li> </ol>	<ol> <li>Clone remote default branch with URL.</li> <li>Clone local repo for backup purposes.</li> <li>Clone remote default branch in dir.</li> <li>Clone remote single branch with repo URL.</li> <li>Clone remote with no remote-tracking &amp; config.</li> <li>Clonebare with remote tracking &amp; config</li> <li>Clone set template in dir. (see 2.git init).</li> <li>Clone truncated to a number of revisions.</li> </ol>
4. config	<ol> <li>git config</li> <li>git configglobal pull.rebase true</li> <li>git configglobal ff no</li> <li>git config ff no</li> <li>git config remote.origin.prune true</li> <li>git configglobal fetch.prune true</li> <li>git configglobal user.name <username></username></li> </ol>	<ol> <li>Display git global config (create if none).</li> <li>Set the pull command as rebase globally.</li> <li>Disable fast-forward merge for local repos.</li> <li>Disable fast-forward merge in local repo.</li> <li>Set auto-prune with fetch &amp; pull.</li> <li>Set auto-prune w/ fetch for local repos.</li> </ol>

Basic	Command	Description
	8. git configglobal user.email <e-mail></e-mail>	7. <b>Set</b> <i>author</i> to commits for <i>local</i> repos.
	<ul><li>9. git configsystem user.name <project></project></li><li>10. git configget user.name</li></ul>	<ul><li>8. Set <i>email</i> to commits for <i>local</i> repos.</li><li>9. Set <i>author</i> for all git users.</li></ul>
	11. git config -l	10. Get author/email from global/system.
	12. git config -e	11. List all variables set in config. file.
		12. Edit config files from global/system
		1. <b>Switch</b> to <i>branch</i> in working tree.
	1. git checkout <branch></branch>	<ol><li>Create and switch to feature (or any) branch.</li></ol>
	2. git checkout -b <feature></feature>	3. <b>Clone <i>remote</i></b> branch and <i>switch</i> .
	3. git checkout -b <branch> <origin branch=""></origin></branch>	4. <b>Discard</b> <i>changes</i> in file to <i>match current</i>
5. checkout	4. git checkout <file></file>	branch.
	5. git checkout -	5. Switch to last checkout.
	6. git checkout <branch>~n <file></file></branch>	6. Reverts local file in branch $n$ commits (e.g. $n=2$ ).
6. fetch	1. git fetch <origin></origin>	1. Fetch <i>all</i> .
	2. git fetch <origin> <branch></branch></origin>	2. Fetch <i>branch</i> .
	3. git fetchall	3. Fetch all <i>branches</i> in repo.
	4. git fetchdry-run	4. Show output but without fetching.
	5. git fetchappend	5. Fetch without overwriting
	6. git fetchdepth= <depth></depth>	(.git/FETCH_HEAD).
	7. git fetch -f	6. <b>Limit fetching</b> to <i>n depth</i> commits (e.g.
	8. git fetchprune	n=3).

Basic	Command	Description
		<ul> <li>7. Fetch even if it's not descendant of remote branch.</li> <li>8. Remove unexistant remote-tracking branches.</li> <li>1. Fast-forward merge branch with HEAD</li> </ul>
7.merge	<pre>1. git merge <branch> 2. git merge <branch> <target_branch> 3. git mergeno-ff <branch> 4. git mergecontinue 5. git mergeallow-unrelated-histories 6. git merge -base [-a] <commit_id> <commit_id> 7. git merge -s resolve <branch-1> <branch-2> 8. git merge -s recursive -X ours OR theirs <branch> 9. git merge -s octopus <branch-1> <branch-n> 10. git merge -s ours <branch-1> <branch-n> 11. git merge -s subtree <branch-1> <branch-2></branch-2></branch-1></branch-n></branch-1></branch-n></branch-1></branch></branch-2></branch-1></commit_id></commit_id></branch></target_branch></branch></branch></pre>	<ol> <li>(linear).</li> <li>Fast-forward merge branch to tip of target.</li> <li>Maintain commit history, may not fast-fwd.</li> <li>Conclude conflicting merge.</li> <li>Merge indep. projects by overriding safeties.</li> <li>Find ancestor on n commits for a 3-way merge.</li> <li>3-way merge 2 branch HEADs.</li> <li>3-way merge &gt;1 common ancestors for tree.</li> <li>Merges more than 2 branch HEADs.</li> <li>Merges multiple branches tip in HEAD.</li> <li>Reflect B tree structure as subtree of A.</li> </ol>
8. pull	<ul><li>1. git pull</li><li>2. git pull <url></url></li><li>3. git pull <origin> <branch></branch></origin></li></ul>	<ol> <li>Fetch &amp; merge remote-tracking with local.</li> <li>Clone, fetch &amp; merge remote's URL with local.</li> </ol>

Basic	Command	Description
	4. git pullrebase <origin> <branch></branch></origin>	3. Fetch & merge remote branch with local.
	5. git pullff-only	4. Fetch & rebase branch.
	6. git pullno-ff	5. <b>Update</b> <i>branch</i> without a merge commit.
	7. git pull -s <strategy> -X <option></option></strategy>	6. <b>Pull</b> & <b>commit</b> even for <i>fast-forwards</i> ( <i>linear</i> ).
		7. Same strategies and options as for merge last 5.
		1. Add <i>all changes</i> in files to stage.
	1. git add -A	2. Add changes without deletions for stage.
	2. git add .	3. Add <i>file</i> to stage.
	3. git add <file></file>	4. Show if <i>file</i> is <i>unexistant</i> .
	4. git add -n <file></file>	5. <b>Ignore</b> indexing <i>errors</i> for git add.
9. add	5. git addv	6. <b>Allows</b> to add <i>ignored</i> files.
	6. git add -force	7. Patch hunks interactively from index to
	7. git add -p	tree <sup>1</sup> .
	8. git add -i	8. Patch changes interactively from index to
	9. git add -e	tree.
		9. Interactive patch mode vs diff editor.
10. commit	1. git commit -m <msg></msg>	1. <b>Overwrite</b> commit <i>msg</i> .
	2. git commitdate= <date></date>	2. <b>Override</b> author's <i>date</i> in commit.
	3. commit -i <msg></msg>	3. Commit changes & unstaged content.
	4. git commitdry-run	4. List only commited, uncommited &
	5. git commit -v	untracked paths.
	6. git commitamend	

Basic	Command	Description
	7. git commit -s	<ul> <li>5. Show differences between HEAD and commit.</li> <li>6. Modify the most recent commit msg.</li> <li>7. Add author signature at the end of commit msg.</li> </ul>
11.push	<ol> <li>git push</li> <li>git push -u <origin> <branch></branch></origin></li> <li>git pushall</li> <li>git push <origin>delete <branch></branch></origin></li> <li>git pushforce</li> <li>git pushforce-with-lease</li> <li>git pushprune <origin *="" heads="" refs=""></origin></li> <li>git pushmirror</li> </ol>	<ol> <li>Push commits.</li> <li>Push commits and set as upstream.</li> <li>Push all commits.</li> <li>Delete remote-tracking branch.</li> <li>Push commits and destroy all unmerged changes.</li> <li>Push and destroy personal unmerged changes.</li> <li>Remove remote without local counterpart.</li> <li>Overwrite remote with local branches.</li> </ol>
12.pull request	1. git request-pull <branch> <url> <feature></feature></url></branch>	Pull request for changes between tag and feature.
13. branch	<ol> <li>git branch</li> <li>git branch -r</li> <li>git branch -a</li> <li>git branch <branch></branch></li> <li>git branch -d <branch></branch></li> <li>git branch -D <branch></branch></li> </ol>	<ol> <li>See local branches.</li> <li>See remote branches.</li> <li>See local and remote branches.</li> <li>Create branch and name it.</li> <li>Delete unmerged branch.</li> <li>Delete merged &amp; unmerged branches.</li> </ol>

Basic	Command	Description
	7. git branch -f <branch> <feature></feature></branch>	7. <b>Rewrite</b> local <i>branch</i> with <i>feature</i> branch.
	8. git branchshow-current	8. Show current branch in local.
	9. git branchset-upstream-to	9. Make an existing git branch <b>track</b> a
	10. git branch / grep -v <branch(es)> / xargs git</branch(es)>	remote.
	branch -D	10. <b>Delete</b> <i>all</i> branches <i>excepting</i> selected.
		1. Check for differences in local & remote- tracking.
	1. git diff	2. <b>Check</b> for <b>differences</b> in <i>local</i> & <i>staged</i> changes.
	2. git diffstaged	3. Check for differences in work dir. & last
	3. git diff HEAD	commit.
	4. git diffcolor-words	4. Highlight changes with color granularity.
14. diff	5. git diff <branch> <feature> <file></file></feature></branch>	5. Check for differences in a file between
	<pre>6. git diff <commit_id> <commit_id> <file></file></commit_id></commit_id></pre>	two branches.
	7. git diffstats	6. Check for differences in a file between
	8. git diff-files	two commits.
	9. git diff stash@{n} <branch></branch>	7. <b>Show insertions</b> & <b>deletions</b> in staged and local.
		8. Compare <i>files</i> in the <i>working tree</i> <sup>2</sup> .
		9. Compare stash <i>n</i> with <i>branch</i> .
15. log	1. git log -n	1. <b>Display </b> logs from last 1,2,n commits.
	2. git logoneline	2. <b>Show <i>IDs</i></b> from commits.
	3. git log -pfollow <file></file>	3. <b>Show commits</b> on a file.
	4. git logonelinedecorate	4. Display commits~branches.

Basic	Command	Description
	5. git logstats	5. Show insertions & deletions.
	6. git shortlog	6. <b>Display commits</b> first coding line by
	7. git logpretty=format:"%cn committed %h on	author.
	%cd"	7. <b>Customized log</b> (show author, hash &
	8. git logafter= <yyyy-m-d>before= <yyyy-m-< td=""><td>date).</td></yyyy-m-<></yyyy-m-d>	date).
	d>	8. <b>Search</b> for <i>commits</i> in <i>range</i> .
	9. git logauthor= <username></username>	9. <b>Search</b> for <i>commits</i> by <i>author</i> .
	1. git revert <commit_id></commit_id>	1. <b>Invert commit</b> & <b>commit</b> undone changes.
	2. git revert <commit_id>no-edit</commit_id>	2. Reverts without a new commit msg.
16. revert	<pre>3. git revert -n <commit_id></commit_id></pre>	3. Invert changes & stage only.
	4. git revert -n <head>~n</head>	4. Revert <i>n commits</i> .
	5. git revert -n <head>~n <head>~m</head></head>	5. <b>Revert</b> from $n \rightarrow m$ commits $[n,m]$ .
		1. Untrack <i>file</i> .
	1. git reset <file></file>	2. Unmerge & uncommit but don't unstage
	2. git resetmixed <head>~n</head>	(default).
	3. git resetmixed <commit-id></commit-id>	3. Mixed with commit hash (default).
17. reset	4. git resethard <head>~n</head>	4. <b>Undo</b> all <i>n</i> changes.
	5. git resetsoft <head>~n</head>	5. <b>Hard reset</b> but able to <i>recover changes</i>
	6. git reset -p	with <i>git commit</i> .
		6. Patch interactively (git add -p inverse).
18. stash	1. git stash	1. Saves work dir. from local & hard reset.
	2. git stash push -m <msg></msg>	2. Saves work dir. from local with msg &
	3. git stash list	hard reset.

Basic	Command	Description
	4. git stash liststat	3. <b>List </b> <i>stashed</i> changes as an <i>index</i> [n]
	5. git stash apply	4. <b>Show summary</b> of <i>changes</i> in <i>stash list</i>
	6. git stash pop -n	5. Recover stash[0] from work dir.
	7. git stash drop -n	6. <b>Recover stash n</b> & delete it from stash list.
		7. <b>Delete</b> <i>stash n</i> from <i>stash list</i> .
	1. git status	1. List (un)staged, (un)tracked changes
19. status	2. git status -s	(work dir.,stage & modif.).
19. Status	3. git status -b	2. Status in short format.
		3. <b>Status</b> on a <i>branch</i> .
20. touch	1. git touch <name.ext></name.ext>	1. Create file with extension (e.g test.txt).
	1. git switch <branch></branch>	1. Switch to <i>branch</i> .
21. switch	2. git switch -c <branch></branch>	2. <b>Create</b> a new <i>branch</i> and <i>switch</i> .
	3. git switch -c <branch> <commit_id></commit_id></branch>	3. <b>Grow branch</b> from <i>commit</i> .
	1. cd ~/ <home></home>	1. <b>Change dir.</b> to <i>home</i> (e.g ~/Desktop)
22. cd	2. cd ~/ <home> / <dir.></dir.></home>	2. <b>Change dir.</b> to a <i>folder</i> in <i>home</i> .
	<pre>3. cd ~/ <home> / <dir.> / <subdir.></subdir.></dir.></home></pre>	3. <b>Change dir.</b> to n <i>sub-folders</i> in <i>home</i> .
	1. ls	1. List subfolders in <i>dir</i> .
23. ls	2. ls -la	2. <b>List subfolders</b> in <i>dir</i> with <i>hidden files</i> .
24. rm	1. git rm <file></file>	1. Remove file from git tracking & local.
	2.rm <file></file>	2. Remove file from local only.

Basic	Command	Description
25. mv	<pre>1. git mv <file.ext> <new-filename.ext> 2. git mv <file.ext></file.ext></new-filename.ext></file.ext></pre>	<ul><li>1. Rename file with the same <i>extension</i>.</li><li>2. Move file from dir.1 to subdir. (inside dir.1)</li></ul>
26. mkdir	<pre>1. git mkdir ~/ <home> / <dir.> / <subdir.>/<new_dir.></new_dir.></subdir.></dir.></home></pre>	1. Create dir. in path.
27. remote	<ol> <li>git remote</li> <li>git remote -v</li> <li>git remote rename <old-name> <new-name></new-name></old-name></li> <li>git remote add <url></url></li> </ol>	<ol> <li>List remote branches.</li> <li>List remote branches with URL.</li> <li>Rename remote.</li> <li>Connection with repo with URL.</li> </ol>
28. gitk	1. gitk 2. gitk HEADFETCH_HEAD	<ul><li>1. Show Git GUI for commits.</li><li>2. Show Git GUI for all users since last push.</li></ul>

*Note*: Remember to call branches by their names in your commands (see 13. branch).

Tip: <main> is the default name for remote repositories as <master> is for local.

## **Definitions:**

origin: Primary working dir. of remote repositories by default.

fetch: Fetch is the safe version of pull because local files aren't merged until they are reviewed, checked out & merged.

revert: Revert is *safer* than doing git *reset*, checkout to *discard* (*see 5.4*), etc. This is because commit *history isn't erased* but a new inverted commit is appended.

feature: Feature represents a branch of developments in progress with their descriptions.

See Also:

Glossary

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Feel free to send me an email if you have any questions.

Contributions are greatly appreciated!

*Note*: If you are interested in learning more about git commands you can check out the list below and refer to the git documentation for more options on these commands.

### Other Commands:

- git am ~ Splits patches from a mailbox into commit msg, author and patches to apply them to branch.
  - e.g: git am --keep-cr --signoff < a\_file.patch to apply patch as commit.
- git apply ~ Apply a patch to files and add them to the index.
  - e.g: git apply < a\_file.patch to apply patch to files.
- git archive ~ Combine multiple files in a single file but removes git data.
  - e.g: git archive --format=zip --output=archive.zip HEAD to create a zip file with all files in HEAD.
- git bisect ~ Binary search algorithm to find commit in project history which caused a bug.
  - e.g: git bisect start to start the search.
- git blame ~ Show what revision and author last modified each line of a file.
  - e.g: git blame <file> to show the last author of each line in file.

- git bugreport ~ Create a report to send to git mailing list.
  - e.g: git bugreport -o report.txt to create a report and save it to report.txt.
- git bundle ~ Move objects and refs by archive.
  - e.g: git bundle create <file> <branch> to create a bundle with branch.
- git cat-file ~ Provide content or type and size information for repository objects.
  - e.g: git cat-file -p <commit> to show the content of commit.
- git check-attr ~ Display git attributes.
  - e.g: git check-attr -a to show all attributes.
- git check-mailmap ~ Show canonical names and email addresses of contacts.
  - e.g: git check-mailmap <name> to show the canonical name of name.
- git check-ref-format ~ Ensure that a reference name is well formed.
  - e.g: git check-ref-format --branch @{-1} print the name of the previous branch.
- git check-ignore ~ Debug gitignore files.
  - e.g: git check-ignore -v <file> to show the gitignore file that ignores file.
- git cherry ~ Find commits not merged upstream.
  - e.g: git cherry -v <branch> to show the commits not merged in branch.
- git cherry-pick ~ Apply the changes introduced by some existing commits.
  - e.g: git cherry-pick <commit> to apply the changes of commit to current branch.
- git citool ~ Graphical alternative to git-commit.
  - e.g: git citool to open the graphical commit tool.
- git clean ~ Remove untracked files from the working tree.
  - e.g: git clean -n to show what files what files would be removed without removing them.
- git clone ~ Clone a repository into a new directory.
  - *e.g:* git clone <repo> to clone repo into current directory.
- git column ~ Display data in columns.
  - e.g: git column --mode=html <file> to display file in html columns.
- git commit ~ Record changes to the repository.
  - **e.g:** git commit -m <msg> to commit with msg.

- git commit-graph ~ Write and verify a commit-graph file.
  - e.g: git show-ref -s | git commit-graph write --stdin-commits to write a commit-graph file for reachable commits.
- git commit-reach ~ Find commits that are reachable from a commit.
  - e.g: git commit-reach <commit> to show the commits that are reachable from commit.
- git commit-tree ~ Create a new commit object.
  - e.g: git commit-tree <tree> -m <msg> to create a commit with tree and msg.
- git config ~ Get and set repository or global options.
  - e.g: git config --global user.name <name> to set the global user name.
- git count-objects ~ Count unpacked number of objects and their disk consumption.
  - e.g: git count-objects -v to show the number of objects and their size.
- git credential ~ Retrieve and store user credentials.
  - e.g: git credential fill attempt to add "username" and "password" attributes by reading config credential helpers.
- git credential-cache ~ Helper to temporarily store passwords in memory.
  - e.g: git credential-cache exit exit early, forgetting all cached credentials before their timeout.
- git credential-store ~ Helper to store credentials on disk to reduce time to fill.
  - e.g: git credential-store <file> to store credentials in file.
- git cvsexportcommit ~ Export a single commit to a CVS checkout.
  - e.g: git cvsexportcommit <commit> to export commit to a CVS checkout.
- git cvsimport ~ Create a new git repository from a CVS checkout.
  - e.g: git cvsimport -v -d <cvsroot> <module> <project> to create a new git repository from a CVS checkout.
- git cvsserver ~ Server for CVS clients to connect to and use Git repositories.
  - e.g git cvsserver --base-path=<path> <repo> to start the git cvsserver.
- git daemon ~ A really simple server for Git repositories.
  - e.g: git daemon --reuseaddr --base-path=<dir.> --export-all to restart server & look for repos in dir. to export.
- git describe ~ Describe specific commits with their hash.
  - e.g: git describe commit to describe commit with its hash (HEAD by default).
- git diff ~ Show changes between commits, commit and working tree, etc.
  - *e.g:* git diff --stat to show the summary of the changed files.

- git diff-files ~ Show changes between index and working tree.

  e.g: --diff-algorithm={minimal} to include the smallest possible diff are included.
- git diff-index ~ Show changes between commits, commit and working tree, etc.

  e.g: git diff-index --compact-summary HEAD to show the summary of the changed files in HEAD.
- git diff-tree ~ Show changes between commits, commit and working tree, etc.

  e.g: git diff-tree --s7hortstat HEAD to show the summary of the changed files in HEAD.
- git difftool ~ Show changes using common diff tools.
   e.g: git difftool --tool-help to show the list of available tools.
- git fast-export ~ Git data exporter.
   e.g: git fast-export --all to export all data.
- git fast-import ~ Git data importer.
  - e.g: git fast-import --max-pack-size=1G to import data into a packfile of size 1G (default is unlimited)
- git fetch ~ Download objects and refs from another repository.
  - e.g: git fetch <repo> to fetch objects and refs from repo.
- git fetch-pack ~ Receive missing objects from another repository.
   e.g: git fetch-pack --prune --all to fetch all objects and prune refs that are missing on the remote.
- git filter-branch ~ Rewrite branches.
   e.g: git filter-branch --tree-filter 'rm -f \*.txt' HEAD to remove all .txt files.
- git fmt-merge-msg ~ Produce a merge commit message.
   e.g: git fmt-merge-msg <file> to produce a merge commit message from file.
- git for-each-ref ~ Iterate over references.

  e.g: git for-each-ref --format='%(refname)' refs/heads to list all branches.
- git format-patch ~ Prepare patches for e-mail submission.

  e.g: git format-patch -root <commit> to format everything up from start until commit.
- git fsck ~ Verifies the connectivity and validity of the objects in the database.
   e.g: git fsck --cache to check the connectivity and validity of the objects in the cache.
- git gc ~ Cleanup unnecessary files and optimize the local repository.
   e.g: git gc --force to force garbage collection.

- git get-tar-commit-id ~ Extract commit ID from an archive created using git-archive.
  - e.g: git get-tar-commit-id <file> to extract most recent commit ID from file.
- git grep ~ Print lines matching a pattern.
  - e.g: git grep -n 'print' <file> to print lines containing 'print' and their line numbers.
- git qui ~ A portable graphical interface to Git.
  - e.g: git gui citool --nocommit Checks for unmerged entries on index and exits gui without committing.
- git hash-object ~ Compute object ID and optionally creates a blob from a file.
  - e.g: git hash-object -w --path <file> write the blob to the object database and print its hash.
- git help ~ Display help information about Git.
  - e.g: git help -all to display all git commands.
- git http-fetch ~ Download objects and refs from another repository via HTTP.
  - e.g: git http-fetch -v <[URL]/refs> to report all refs downloaded in repo.
- git http-backend ~ Server side implementation of Git over HTTP.
  - e.g: git http-backend serve git repo to clients over HTTP(s) protocols.
- git imap-send ~ Send a collection of patches from stdin to an IMAP folder.
  - e.g: git imap-send <repo> to send a collection of patches from stdin to an IMAP folder.
- git index-pack ~ Build pack index file for an existing packed archive.
  - e.g: git index-pack <file> to build pack index file for file.
- git init ~ Create an empty Git repository or reinitialize an existing one.
  - e.g: git init -b <branch-name> to create an empty local Git repository with given branch name.
- git init-db ~ Create an empty Git repository or reinitialize an existing one.
  - e.g: git init-db --config <config-file> to create an empty local Git repository with given config file.
- git instaweb ~ Instantly browse your working repository in gitweb.
  - e.g: git instaweb --httpd=python --port=8080 to start a python web server on port 8080.
- git interpret-trailers ~ Parse trailer lines from text.
  - e.g: git interpret-trailers --check <file> to check if file contains trailer lines (similar to RFC 822 e-mail headers)
- git log ~ Show commit logs.
  - e.g: git log --follow <file> to show commit logs beyond renames for file.

• git Is-files ~ Show information about files in the index and the working tree.

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e.g: git 1s-files -u to show unmerged files.
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- git Is-remote ~ List references in a remote repository.
  - e.g: git 1s-remote <[URL]/refs> to display references in a remote repository associated with commits IDs.
- git ls-tree ~ List the contents of a tree object.
  - e.g: git 1s-tree <tree> to list the contents of tree with its id
- git mailinfo ~ Extracts patch and authorship from a single e-mail message.
  - e.g: git mailinfo <file> to extracts patch and authorship from file.
- git mailsplit ~ Splits a single mailbox into mboxrd format.
  - e.g: git mailsplit <mbox> to splits mbox into mboxrd format.
- **git merge** ~ Join two or more development histories together.
  - e.g: git merge --allow-unrelated-histories <branch> to join two or more development histories together.
- git merge-base ~ Find as good common ancestors as possible for a merge.
  - e.g: git merge-base <branch1> <branch2> to find as good common ancestors as possible for a merge.
- git merge-file ~ Run a three-way file merge.
  - e.g: git merge-file <file1> <file2> <file3> to run a three-way file merge.
- git merge-index ~ Run a merge for files in the index.
  - e.g: git merge-index -a to run a merge for files in the index that need merging.
- git merge-tree ~ Show three-way merge without touching index.
  - e.g: git merge-tree <file> to show three-way merge without touching index.
- git mergetool ~ Run merge conflict resolution tools to resolve merge conflicts.
  - e.g: git mergetool--tool-help to list available tools.
- merge-index ~ Run a merge for files in the index.
  - e.g: git merge-index -o <file> to run a merge for files in the index that need merging and write the result to file.
- git mktag ~ Create a tag object.
  - e.g: git mktag <file> to create a tag object.
- git mktree ~ Build a tree-object from Is-tree formatted text.
  - e.g: git mktree <file> to build a tree-object from ls-tree formatted text.

git mv ~ Move or rename a file, a directory, or a symlink.
 e.g: git mv <file1> <file2> to move or rename file1 to file2.

- git name-rev ~ Find symbolic names for given revs.
   e.g: git name-rev --all <commit> to find symbolic names for given commit.
- git notes ~ Add or inspect object notes.
   e.g: git notes add -m "note" <commit> to add a note to commit.
- git pack-objects ~ Create a packed archive of objects.
   e.g: git pack-objects <file> to create a packed archive of objects in file.
- git pack-redundant ~ Find redundant pack files for piping to xargs rm.

  e.g: git pack-redundant --all to find redundant pack files for piping to xargs rm.
- git pack-refs ~ Pack heads and tags for efficient repository access.

  e.g: git pack-refs --all to pack heads and tags that are already packed
- git patch-id ~ Compute unique ID for a patch.

  e.g: git patch-id <file> to compute unique ID for a patch.
- git prune ~ Prune all unreachable objects from the object database.

  e.g: git prune to prune all unreachable objects from the object database.
- git prune-packed ~ Prune loose objects that are already in pack files.

  e.g: git prune-packed to prune loose objects that are already in pack files.
- git pull ~ Fetch from and integrate with another repository or a local branch.

  e.g: git pull to fetch from and integrate with another repository or a local branch.
- git push ~ Update remote refs along with associated objects.
   e.g: git push to update remote refs along with associated objects.
- git range-diff ~ Show changes between two commit ranges.

  e.g: git range-diff <file> to show changes between two commit ranges.
- git read-tree ~ Reads tree information into the index.
   e.g: git read-tree <file> to read tree information into the index.
- git rebase ~ Reapply commits on top of another base tip.
   e.g: git rebase to reapply commits on top of another base tip.

git receive-pack ~ Receive what is pushed into the repository.
 e.g: git receive-pack <file> to receive what is pushed into the repository.

- git reflog ~ Manage reflog information.
   e.g: git reflog to manage reflog information.
- git remote ~ Manage set of tracked repositories.

  e.g: git remote to manage set of tracked repositories.
- git remote-ext ~ External helper to communicate with a remote repository.

  e.g: git remote-ext <file> to communicate with a remote repository.
- git remote-fd ~ Helper to communicate with a remote repository.

  e.g: git remote-fd <file> to communicate with a remote repository.
- git repack ~ Pack unpacked objects in a repository.
   e.g: git repack to pack unpacked objects in a repository.
- git replace ~ Create, list, delete refs to replace objects.

  e.g: git replace to create, list, delete refs to replace objects.
- git request-pull ~ Generates a summary of pending changes.

  e.g: git request-pull to generate a summary of pending changes.
- git rerere ~ Reuse recorded resolution of conflicted merges.
   e.g: git rerere to reuse recorded resolution of conflicted merges.
- git reset ~ Reset current HEAD to the specified state.

  e.g: git reset to reset current HEAD to the specified state.
- git resolve-undo ~ Undo the last cherry-pick, revert or merge.

  e.g: git resolve-undo to undo the last cherry-pick, revert or merge.
- git rev-list ~ Lists commit objects in reverse chronological order.
   e.g: git rev-list to list commit objects in reverse chronological order.
- git rev-parse ~ Pick out and massage parameters.
   e.g: git rev-parse to pick out and massage parameters.
- git revert ~ Revert some existing commits.
   e.g: git revert to revert some existing commits.

git rm ~ Remove files from the working tree and from the index.
 e.g: git rm to remove files from the working tree and from the index.

- git send-email ~ Send a collection of patches as emails.
   e.g: git send-email to send a collection of patches as emails.
- git shell ~ Restricted login shell for git-only SSH access.
   e.g git-shell -c '<command>' to run a git-shell command.
- git shortlog ~ Summarize 'git log' output.

  e.g: git shortlog to summarize 'git log' output.
- git show ~ Show various types of objects.
   e.g: git show to show various types of objects.
- git show-branch ~ Show branches and their commits.

  e.g: git show-branch to show branches and their commits.
- git stage ~ Stage file contents for the next commit.

  e.g: git stage to stage file contents for the next commit.
- git stash ~ Stash the changes in a dirty working directory away.

  e.g: git stash to stash the changes in a dirty working directory away.
- git status ~ Show the working tree status.

  e.g: git status to show the working tree status.
- git stripspace ~ Remove unnecessary whitespace.

  e.g: git stripspace to remove unnecessary whitespace.
- git submodule ~ Initialize, update or inspect submodules.

  e.g: git submodule to initialize, update or inspect submodules.
- git tag ~ Create, list, delete or verify a tag object signed with GPG.

  e.g: git tag --annotate to create, list, delete or verify a tag object signed with GPG.
- git tar-tree ~ Show the contents of a tree object as a tar archive.

  e.g: git tar-tree to show the contents of a tree object as a tar archive.
- git unpack-file ~ Unpack a packed archive.
   e.g: git unpack-file to unpack a packed archive.

git unpack-objects ~ Unpack objects from a packed archive.
 e.q: git unpack-objects to unpack objects from a packed archive.

- git update-index ~ Register file contents in the working tree to the index.

  e.g: git update-index to register file contents in the working tree to the index.
- git update-ref ~ Update the object name stored in a ref safely.
   e.g: git update-ref to update the object name stored in a ref safely.
- git update-server-info ~ Update auxiliary info file to help dumb servers.

  e.g: git update-server-info to update auxiliary info file to help dumb servers.
- git upload-archive ~ Send archive back to git-upload-archive on the other end.

  e.g: git upload-archive to send archive back to git-upload-archive on the other end.
- git upload-pack ~ Send objects packed back to git-upload-pack on the other end.

  e.g: git upload-pack to send objects packed back to git-upload-pack on the other end.
- git var ~ Show a Git logical variable.
   e.g: git var to show a Git logical variable.
- git verify-commit ~ Check the GPG signature of commits.

  e.g: git verify-commit to check the GPG signature of commits.
- git verify-pack ~ Check the GPG signature of packed objects.

  e.g: git verify-pack to check the GPG signature of packed objects.
- git verify-tag ~ Check the GPG signature of tags.
   e.g: git verify-tag to check the GPG signature of tags.
- git web--browse ~ Show a file or directory from a web browser.

  e.g: git web--browse to show a file or directory from a web browser.
- git whatchanged ~ Show logs with difference each commit introduces.

  e.g: git whatchanged to show logs with difference each commit introduces.
- git write-tree ~ Create a tree object from the current index.

  e.g: git write-tree to create a tree object from the current index.
- git zcat-file ~ Show the contents of a file from a blob object.
   e.g: git zcat-file to show the contents of a file from a blob object.

• git zip-archive ~ Create a zip archive of files from a named tree.

e.g: git zip-archive to create a zip archive of files from a named tree.

git zstd ~ Compress or decompress files using zstd.
 e.g: git zstd to compress or decompress files using zstd.

### References:

- 1. Git
- 2. Linux Man
- 3. Official Git Pro ebook. Chacon, S and Straub, B. (2022).

Text-Editor:

X VISUAL STUDIO CODE