Git essentials

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git init

It initiates new repository in the current directory. Git creates a new directory named ‘.git’ in the specified directory.

git clone

git clone command is used to create a copy of an existing Git repository from a remote location, from Git servers

- git clone https://github.com/example/repository.git

git status

git status provides you with information about the current state of your git repository.

- git status
- git status -s

git config

This command is used to configure various aspects of git, including information, preferences, and repository settings.

- git config --global user.name “your-name”
- git config --global user.email “your-email”
- git config --list

git alias

git aliases like shortcuts or nicknames for longer git commands. it lets you create shorter, easier-to-remember names of the commands

- git config --global alias.ci commit
- git config --global alias.br branch
- git config --global alias.st status

git commit

git commit is used when you’ve made changes to your files in a git repository and you’re ready to save the changes as new version

```
git commit -m "Your commit message here"
```

git diff

git diff command is used to show the difference between different states of your git repository, like changes between commits, changes between the working directory and stating area, or changes between branches.

- git diff
- git diff --staged
- git diff <commit-1> <commit-2>
- git diff <branch-1> <branch-2>
- git diff <filename>

git stash

this command is used when you want to record the current state of working directory and the index, but want to go back to clean working directory.

- git stash
- git stash list
- git stash apply
- git stash pop
- git stash clear

.git ignore

.git ignore it is a file in a git repository. it is configuration file used git to specify intentionally untracked files that git should ignore. this file is particularly useful for excluding files and directories from version control that don't want to be tracked.

git tag

this command in git is used to create, list, delete, or verify tags. Tags are used to mark specific points in the history. They are typically used to indicate stable versions of software.

- git tag v1.0.0

git blame

it it is tool used to determine who last modified each line of a file, along with the commit ID and the timestamp of the modification.

- git blame <filename>
- git blame --since="3 weeks ago" filename

git clean

this command in git is used to remove untracked files from the working directory. untracked files that are not being currently tracked by the git.

- git clean
- git clean -d
- git clean -f

git revert

this command in git is used to undo changes made in a specific commit or range of commits by creating a new commit that reverses those changes. this is a safe way to undo changes without altering the commit history.

- git revert <commit>
- git revert <start>..<end>

git reset

this command used to undo changes made in the working directory, staging area (index), commit history .Its often used to manipulate HEAD pointer and staging area.

- git reset
- git reset --hard
- git reset <commit>
- git reset --hard HEAD
- git reset --interactive

git rm

this command in git is used to remove files from the working directory and git index. this command can be used to stop tracking files that are currently being tracked by git or to remove untracked files from the working directory.

- git rm <file>
- git rm '*.txt'
- git rm -r <directory>

git rebase

this command is used to change the base of a branch by applying commits from another branch on top of it. It's commonly used to integrate changes from one branch into another while maintaining a clean and linear history.

- git rebase main

git reflog

Reference logs, or "ref logs", record when the tips of branches and other references were updated in the local repository. Reflogs are useful in various Git commands, to specify the old value of a reference.