Git Commands

* Some Linux command used in it git for directory manipulation
  + **pwm:** present working directory; shows in which directory we are in.
  + **ls:** list the content of the directory we are in.
  + **cd:** change the directory
  + **touch <file name>:** to create a file
* **git status:** shows the status of the directory we are in.
* **‘git add .’ / ‘git add - - a’:** to add files in the staging area.
* **git commit -m “message”:** commit the file to git.
* **git commit –a –m “message”:** It will stage all the tracked modified files and commit them. But untracked files will not get commit we have to first track them.
* **git diff:** It will compares the current working directory to the current staging area.
* **git diff --staged:** It will compare the previous commit to the current staging area.
* **Rm -rf .git:** to remove the directory from git.
* **git rm <filename>:** Deletes the file from the working directory. But if we want to delete a file in staging area we have to write command as  **git rm <filename> -f** .
* **git rm –cached <file name>:** The file get untracked . But it will still showed as it get deleted in git, but actually it still in directory just isn’t getting tacked by git.
* **git mv <old file name> <new file name>:** It is used to rename a file, but what it actually does is that it moves old file content to new file so it is used for both rename and move one file content to another. It will directly add the file to staging area.
* **git clone url name (** if want to change name**):** clones a remote git repository
* **Q :** by clicking Q we can exit from different options.
* ***Terminal shortcuts:***
* **Ctrl insert:** Copies the selected content.
* **Shift insert:** pastes the selected content.
* **Tab:** Auto completes the file name if same name doesn’t exist anywhere in directory.

Ignore file**:** To ignore files/directories in git we just have to create a “**.gitignore**” file and write the name of those file and directories in it to ignore.

* To ignore multiple files of same type we should write \*.extension to ignore all of them for e.g. To ignore all .txt files we just write “\*.txt in **“.gitignore”** file.
* We can ignore the whole path, single directory or multiple directory of same name or a specific file from the multiple files of same name.
* To ignore all the files with the same name have write file name like this (dir/) in “**.gitignore**”, so to ignore a file of a same name as other we have to specify the path of the file to ignore it.(for outer: /dir/, for inner e.g. static/dir)
* Git already ignores the blank folder automatically and if we put an ignored file/folder in it, it will still ignore it. If we add a file in blank folder git will recognize it but still ignore the ignored file.
* The **.gitignore** file allows more complex patterns, such as using wildcards, negation, and comments. Feel free to explore these possibilities for more fine-grained control over what to ignore.

Remember, the **.gitignore** file is an essential tool to keep your repository clean and avoid tracking unnecessary files. While the above tips cover most common use cases, you can tailor it to suit your specific project needs.

By following these guidelines, you can efficiently manage your Git repository and focus on tracking only the essential files while leaving out the temporary and generated files, build artifacts, and other non-essential elements.

Note: If we ignore already tracking file it will still be get tracked by git, to ignore the file first we have explicitly make it untracked with the help of **git rm –cached <file name>** command.

Git File status



**File status life cycle:** When we track the untracked files first time instead of saying that they are in staged we say they got unmodified (just for the first time), after that whenever we modify these files they will become modified, after which whenever we track these file again they will go to staged and then when we commit the files they will become unmodified again.

* When we modify a file which is still in the staging area (the area in which ready to commit files are placed.) then it will be present in both staging area and modified area, but in staged the version of file is before it get modified which is ready to get commit and in modified area new modified file is present.

When we commit the file, the file in staging will get committed not the modified one and we will still have the both version of the file (that’s why staging area is used to avoid these kind of situations).

But if we add the modified file in staging area it will merge with the already existing one in the staging area and will become the only version of file present in git.