**Git is a version control system (vcs)**

* Easily recover files
* Who introduced an issue and when? ( samaja jar yeka team member ne app madhe kahi update kele and app crash jala . git mula he samaju shakate kontya team member mule app crash jal.)
* Roll back to previously working stage.
* Git has integrity.

**Three stage architecture**

1. **Working directory –** Normal files tree structure in file explorer.
2. **Staging area –** set of files which will add to next commit.

For e.g. - we need to commit only **index.html** and **index.css**. because **engine.js** has error.

1. **Git directory (repository) -** it is a hidden folder which contain all versions (v1,v2,……) of our project.

Diagram

Description automatically generated

**Command**

1. Pwd :- present working directory.
2. Cd :- change directory.

For a folder have space in his name than use double quotes or single quotes.

e.g. **cd /g/'learn git'/a**

To go to previous working directory. Use **cd -** or **cd $OLDPWD**

1. Ls :- show list of all files in pwd (present working directory).
2. Git status :– to check status of git repository or directory.
3. Git init :- to create new git repository. (when new git repository is created **.git** hidden folder auto created)
4. Git add - -a **OR** git add . :- stage all files to staging area .
5. Git add <file name with extension> :- for stage particular file to staging area.
6. git rm --cached <file name with extension> :- for remove a file from staging area.
7. git reset :- for unstage all files from staging area.
8. git commit -m "<massage given by you>" :- take a snap shot of all staged files OR commit all staged files with given massage.
9. Git log :- all commits with user names and date , time.
10. rm -rf .git :- remove git repository or directory i.e. **.git** folder will delete.
11. Git clone <link> space <your clone name , this is optional> :- It will download repository present in given link. And if you provide a name them it will create a folder with that name and save that repository.
12. Touch <file name with extension> :- used to create file in pwd.

**Git concepts**

1. **.gitignore :- you can write all file that you want to ignore from tracking.**

**Note :- git ignore only all empty folder automatically.**

* 1. **For ignoring particular file, write file name with extension in .gitignore file. Like “error.log”**
  2. **For ignoring all files with particular extension, write \* and the file extension in .gitignore file. Like “\*.log”**
  3. **For ignoring all folder with same name, write folder name and / in .gitignore file. Like “dir/”**
  4. **For ignoring only outer folder, write / and folder name and / in .gitignore file. Like “/dir/”**
  5. **You can ignore particular path by simply writing that path in .gitignore file.**

**Shortcuts of git**

1. (**Ctrl and +** or -) zoom in / out.
2. Open git bash in particular directory without using cd (**change directory**). For this open directory and then right click, then select “**git bash here**”.
3. For copy you did not need to use ctel + c , by just selecting the text it will copy.
4. For past use **shift + insert.**