



- `git config --global user.name "your-username"`
- `git config --global user.email "blahblah@email.com"`
- `git config --list`
- `git config user.name` - gives the specific setting, here it's the username
- `git config --global core.editor "vim"` - set default editor
- `gh auth login`
- `git init` - converts a dir into a git repo, will create a `.git` folder (which stores all the version control data) in my folder
- `.gitignore` file - Specifies files/folders to exclude from tracking (eg: temporary files(.o files))
- `gh repo list`
- Pull is used more often than fetch
- Origin repos are hosted in GitHub.
- `git remote -v`
- Git saves the remote repository info in the local config file (`.git`)  
`cat .git/config`
- Cloning creates a local repository and a working directory  
`git clone repo_url`
- `git status` - will print a list of all files in your local repository that have been changed, created or deleted. It will also list which of these have been staged for the next commit, will ignore files that are listed in your `.gitignore` file.
- `git diff path-to-file` - will show you the differences between the current contents of that file and the last-committed contents.
- `git remote add origin https://github.com/user-name/blahblahblah/`
- `git add path-to-file-1 path-to-file-2 path-to-file-3 ...`
- `git commit -m "Brief description of the commit"`
- `git add -A` : to stage all changes, including deletions
- `git add .` : stages all modified and new files, doesn't include deleted files.
- `git push` - will send the commits to the origin repo on GitHub.

- git log - lists the history of commits made in the project.

```
commit 84b35e905550fad758fe33c3090725b0c71893d8 (HEAD -> master, origin/master)
Author: aradhana148 <nira.aradhana7@gmail.com>
Date:   Wed Mar 5 00:42:39 2025 +0530

    after modifying txt

commit 383919f7391554d0170c375cfc7376964c38dbd2
Author: aradhana148 <nira.aradhana7@gmail.com>
Date:   Wed Mar 5 00:40:02 2025 +0530

    ignoree

commit a2911b1f2ddf2ac026d7dc735c299ff69ed48bce
Author: aradhana148 <nira.aradhana7@gmail.com>
Date:   Tue Mar 4 20:01:23 2025 +0530

    first commit
```

Hexadecimal number, called as commit's hash

git log *first 5 digits of hash* - gives log of that commit and all commits made before it.

git log *file* - gives log of all the commits of that file

- Git checkout *first 5 digits of hash* - moves HEAD to *first 5 digits of hash*.

Goes back in time, so if i do git log, it will show the log of all the commits before that commit, if i do ls, it will give the files at that time in the past.

- git checkout . ??? 4.3.4
- git log --oneline
- git show :filename - shows content of file in staging area
- git show commit:filename
- git diff --name-status commit1 commit2

A - Added

M - Modified

D - Deleted

```

root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git log --oneline
3d510c3 (HEAD -> master) Added sieve of eratosthenes
ff20399 Added matrix multiplication
0c3be97 Added BFS
2a07d13 Added Binary Search
260451c Added DFS
5fcb6a5 Added main.cpp for testing
280327b Added README
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status 280327b 5fcb6a5
A    main.cpp
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status 5fcb6a5 260451c
A    dfs.cpp
M    main.cpp
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status 260451c 2a07d13
A    binary_search.cpp
M    main.cpp
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status 2a07d13 0c3be97
A    bfs.cpp
M    dfs.cpp
M    main.cpp
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status 0c3be97 ff20399
M    bfs.cpp
A    matrixmul.cpp
root@5fba9827640a:/home/labDirectory/working_directory/big_repo# git diff --name-status ff20399 3d510c3
M    binary_search.cpp
M    main.cpp
M    matrixmul.cpp
A    sieve.cpp

```

- git log --name-status --oneline --all or dont do all
- Git branch - lists all the branches
- Git branch name\_of\_branch - creates new branch
- Git switch branch\_name - goes to different branch