

Github

classmate

Date _____

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git: Version Control System is a tool that helps to track changes in code.

popular

free and Open source
fast and scalable.

Used to:

- 1) Track the history.
- 2) collaborate.

Github: Website that allows developers to store and manage their code using Git.
folder(Repository).

Github account:

- Create a new repository
- Make our first commit.

Readme: file : contains details about project.

md = markdown.

changes + final keys = commit.

add → commit. ↗ 2 step process?

Setting Up git:

VS Code.

git --version.

↗ root directory
folder

- Configuring git

local level

git config --global user.name "My Name"

git config --global user.email "someone@gmail.com"

git config --list.

credentials.helper saves credentials, username, age etc.

Clone & Status

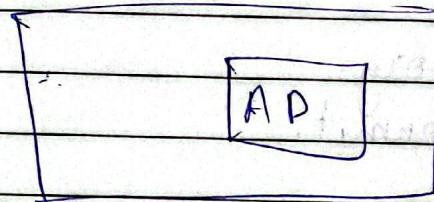
Clone - Cloning a repository on our local machine.

git clone ~~link~~

Status - display the state of the code
git status

remote [GitHub] local (laptop/pc)

cd → change directory



cd `ophalcollege-demos`

clear → to clear terminal

ls → list files

ls -a → show all files including hidden files

git status :

untracked :

new files that git doesn't yet track.

modified : changed.

staged :

file is ready to be committed.

unmodified :

unchanged.

Add & Commit

add - adds new or changed files in your working directory to the git staging area.

git add <- file name ->

git add. → add multiple files.

commit - it is the ^{spare} record of change.

git commit -m "Some message"

Push Command: Upload local repo content to remote repo.

git push origin main
 () branch Remote ~~push~~ local
 name of default remote location default.

To move out of directory, cd ..

mkdir <folder> make new directory

git init : to make git repo.

first check using ls -a

not .git so not a git repository.

... .git git repo.

Init Command.

init - used to create a new git repo.

git init

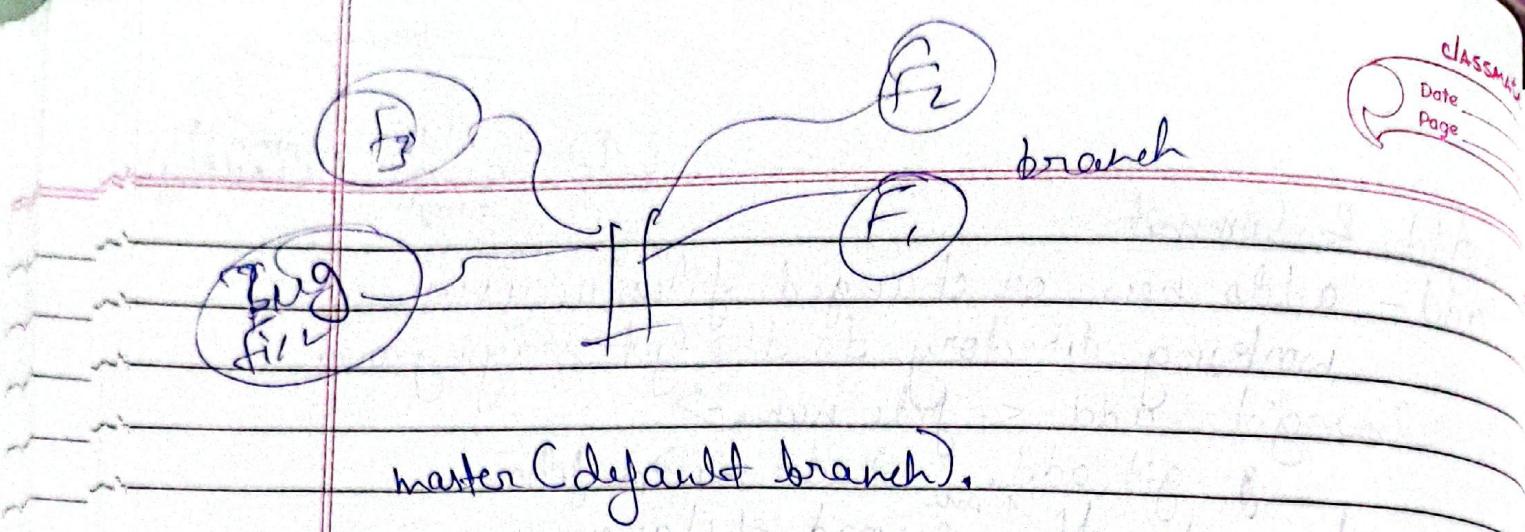
git remote add origin <- link ->

git remote -v (to verify remote)

git branch (to check branch)

git branch -M main (to rename branch)

git push origin main ⇒ git push -u origin main
 set upstream



master (default branch).

Workflow

Local Git

github repo

clone

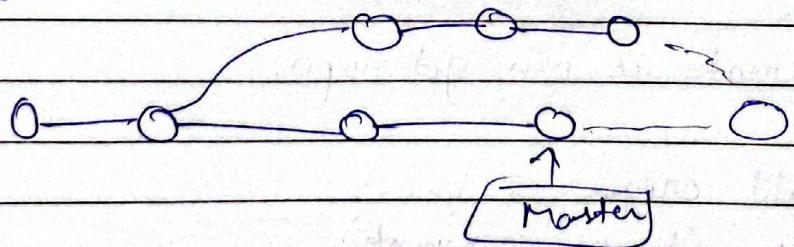
Changes
+
add

Commit

Push

git Branches

[Feature]



Branch Commands

git branch (to check branch)

git branch -M main (to rename branch)

git checkout <branch name> (to navigate)

git checkout -b <-new branch name-> (to create new branch)

git branch -d <-branch name-> (to delete branch)

we can't delete a branch if we are on it.

Merging Code

Way 1

git diff <-branch name-> (to compare commits, branches, files & more)

git merge <-branch name-> (to merge 2 branches)

Way 2

Create a PR (Pull Request)

It lets you tell others about changes you've pushed to a branch in a repository on GitHub.

Pull Command: git pull origin main
used to fetch and download content from a remote repo and immediately update the local repo to match that content.

Resolving Merge Conflicts: An event that take place when Git is unable to automatically resolve differences in code between two commits.

git log → To display all commits

Undoing Changes:

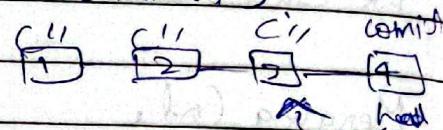
Case 1: staged changes (add)

git reset <file name>

git reset --for multiple files

Case 2: committed changes (for one commit)

git reset HEAD~1



Case 3: committed changes (for many commits)

git reset <commit hash>

git reset --hard <commit hash>



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kone k liye.

Fork:

A fork is a new repository that shares code and visibility settings with the original upstream repository.

Fork is a rough copy