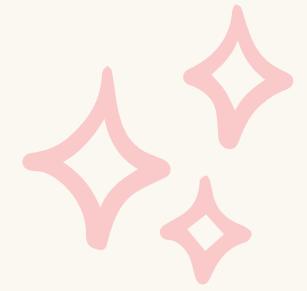


PFC

lec 21

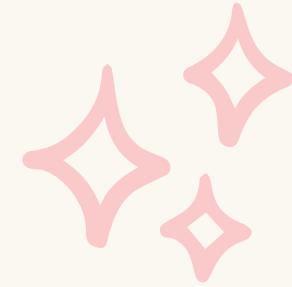
git & github

Lecture Flow



1. what is version control
2. what is git
3. what is github
4. workflow in git/github
5. setup
6. basic commands

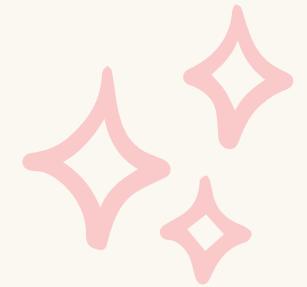
version control



Version control is a system that:

- ✓ Tracks changes in files
- ✓ Helps restore previous versions
- ✓ Supports collaboration among multiple developers

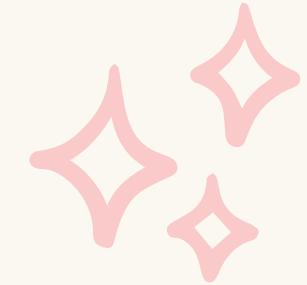
git



Git is a distributed version control system used to track changes in source code. **Must have skill for every developer.** You need to know at least the basics (add commit push etc.)

1. Version Tracking
2. Collaboration
3. Open Source & free
4. Speed

github



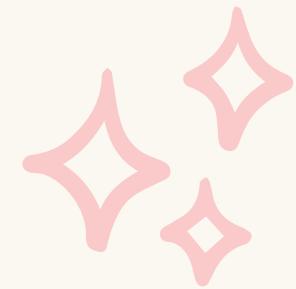
GitHub is a cloud platform that hosts Git repositories and enables sharing, teamwork, and project management.

Git = Tool

GitHub = Storage + Collaboration platform

**HOSTING - STORING IT AT A PLACE WHERE
OTHERS CAN ACCESS IT [ONLINE]**

installing



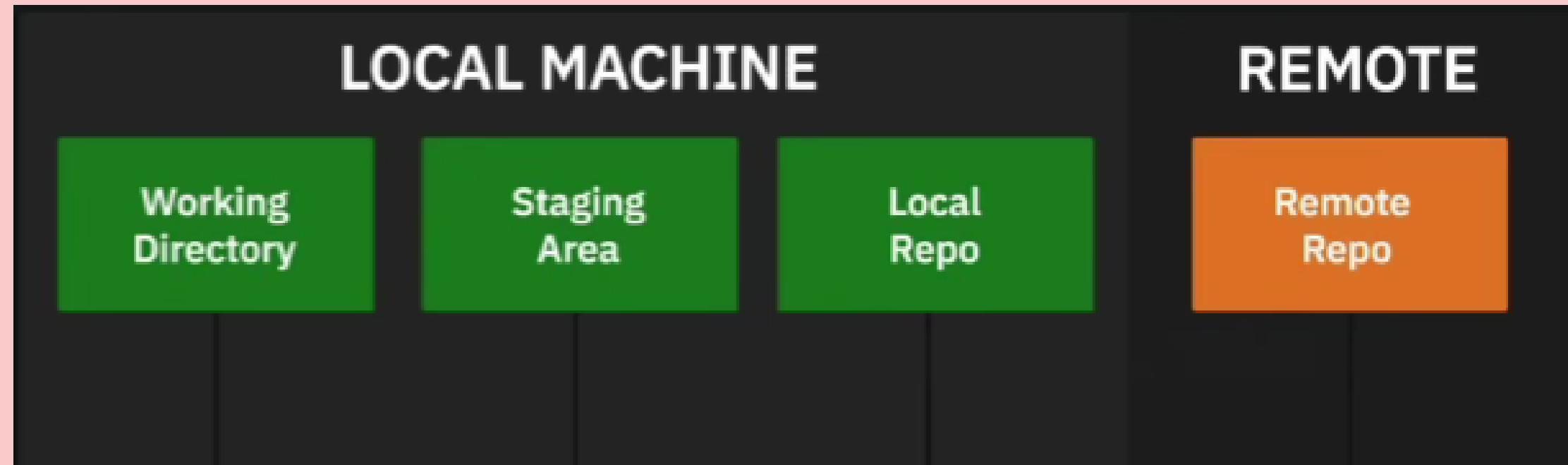
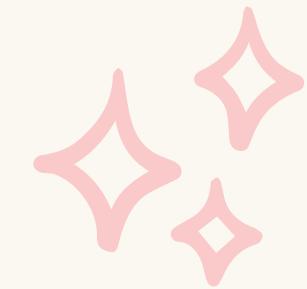
git-scm.com/downloads



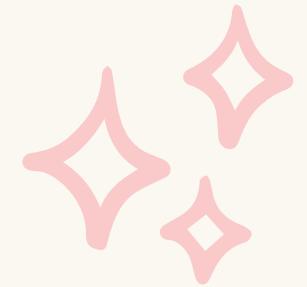
```
git config --global user.name "Your Name"
```

```
git config --global user.email "your.email@example.com"
```

WORKFLOW

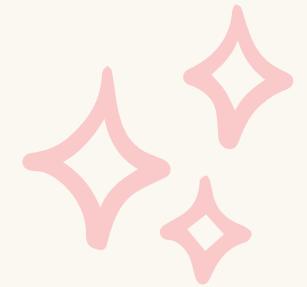


imp. terms



- 1. Repository** - folder where git tracks project files
- 2. Working Directory** - your project files on your computer
- 3. Staging Area** - safe checkpoint for your code, prepares your code for commit step
- 4. Commit** - staging area to local repository
- 5. Remote Repository** - online repository like github

git init

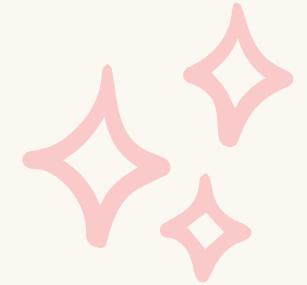


Initializes a new Git repository in your project folder. It tells Git to start tracking this folder.

eg- Mera project ready hai, ab ise track karo ki mai kya changes ya karta jaa rha hu

command - git init

git add



Moves files from working directory to staging area.
It prepares them for commit.

eg- Yeh homework final ho gaya, ab notebook me chipka do.

command - git add index.html [single file add karne ke liye]

command - git add . [multiple files add karne ke liye]

git status



Shows the current state of the repository —
Which files are **modified**, **untracked**, or **staged**.

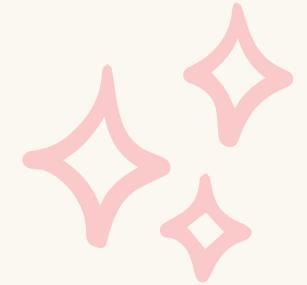
eg- *Abhi project ki kya condition hai? Kaunse files pending hain? Kaunse ready hain?*

command - git status

red - *unstaged*

green - *staged*

git commit

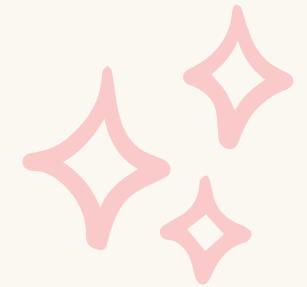


Saves tracked/staged changes permanently in the local repository with a message.

eg- “Aaj ka kaam complete hua.” [diary entry bana di ki aaj kya kya hua hai].

command - git commit -m "homepage completed" [“Message likh kar save kar diya — homepage complete.”] [inside “ we write the message“]

git push



Uploads your local commits to a **remote repository** (e.g., GitHub).

eg- Assignment/Lab Record ki photocopy teacher ko submit kardo

command - git push origin main [“mera project github pe upload ho gaya”]

