**Day 1 : 13-10-2025 : Git**

Version Control System: it records changes on files or set of files in a folder or project.

3 types of sub version control

1. Local version control : RCS : Revision control system
2. Centralized version control: centralized directory (server folder)🡪 for this directory or folder n number of client or developer connect. SVN.
3. Destituted version control : git

Git : Git is a distributed sub version control system or tools use to source code management.

Git is an open source tools.

git --version to check the version of the git

git init to make the local folder as repository

git status to check current status of directory or repository

git add filename add the file from file system to stagging area

git commit -m "test1 file created" it pass the file or data from stagging are to local repository.

git config --global user.name=”Your Name”

git config --global user.email=”[youremailid@domain.com](mailto:youremailid@domain.com)”

Git status are

1. Untracked part of OS.
2. tracked part of repository
3. Unmodified file is part of repository (existing file)
4. Modified existing file modified
5. Staged before commit.

**git log :** which provide all commit details

git log --oneline

git log --oneline –graph

git log -p

Cntr + C or Cntr + D or q

**git branch:** git branch is like a pointer which keep the track of more than one commits. Using the git branch we can work of different version or features of a project or file structure without affecting the main code.

**git branch** it show all branches

git branch branchname : it is use to create new branch

switch from one branch to another branch

**git checkout branchname**

merge the branch

git merge brachname it merge user defined or feature branch to current

branch

git branch -d branchname : delete the branch in safe

git branch -D brachbname :delete by force if conflicts present.

git checkout -b sql\_branch

it create the branch and switch new branch

**Remote repository** : it is use to share the data between more than one teams.

Git hub

Git lab

Code commit (aws)

Azure

Private repository provider etc

First you need to create the remote repository ie github

Then local repository connect to remote repository using below command.

git remote add origin URL

if you want to download the public repository in your local machine.

Open the command prompt

**git clone URL (it download from remote to local fresh copy)**

cd repository\_directory

**git pull (it pull new updates from remote repository in existing repository in local machine).**

**Git fork :** Git fork is a personal copy of another user’s repository on a platform in github or gitlab or any other repository providers.

**Using commit undo commit task**

**git reset --soft commit\_id**

**git reset --hard commit\_id**

**Shared repository :** while creating repository we can send the mail or invitation to join the repository we can set the role.