Git

Version Control System is a tools that helps to track changes in code
Git is a Version Control System It is :

Popular

Free & Open Source

Fast & scalable

1. Track the History
2. Collaborate

Github

Website that allows developers to store and manage their code using Git.

https://github.com

Folder (Repository)

Github Account

Create a new repository : acpinstitute

Make our first commit

Add ⟶ Commit

Step 1   Step 2

Setting up Git

Visual Studio Code

Git --version

Configuring Git

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

git config --global user.email "username@email.com

git config --list

global   local

Clone & Status

Clone – Cloning a repository on our local machine

        git clone <- some link ->

Status – Display the state of the code

        git status

remote   local

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 ->

Commit – it is the record of change

     git commit –m "some message"

Push Command

push – upload local repo content to remote repo.

git push origin main

or

git push <- repo link ->

Init Command

Init – used to create a new git repo

git init

git remote add origin <- repo link ->

git remote –v   (to verify remote)

git branch   (to check branch)

git branch –m main (to rename branch)

git push origin main

Branch Command

git branch (to check branch)

git branch –M main (to rename branch)

git checkout <-branch name-> (change branch)

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

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

Merging Code

Way 1

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

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

Way 1

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 takes place when Git is unable to automatically resolve differences in code between two commits.

Check Commit and hash

git log

Undoing Changes

Case 1 : staged changes

        git reset <-file name->
        git reset

Case 2 : command changes (for one commit)
        git reset HEAD~1

Case 3 : Commited changes (for many commits)
        git reset <-commit hash->
        git reset –hard <-commit hash->