Git & GitHub

1.Introduction

Git is a version control system to manage code changes.
GitHub is a platform to host Git repositories and collaborate with others

2.Git Basics

Setup:

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

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

Common Commands:

Initialize - git init

Status - git status

Add file - git add filename

Commit - git commit -m "message"

View history - git log

3.GitHub Basics

Creating a Repo:

-Go to GitHub

-Click "New repository"

-Set name, description, and click "Create"

Push Local Code:

git remote add origin https://github.com/username/repo.git

git branch -M main

git push -u origin main

Some Advanced Git Commands

git add

Stages changes for the next commit.

-git add file.txt   #stage a specific file

-git add .   #stage all changes in the directory

git stash

Temporarily saves uncommitted changes for later use.

-git stash   #save current changes

-git stash list   #see stashes

-git stash pop   #apply and delete the most recent stash

-git stash apply   #apply most recent stash (but keep it)

-git stash drop   #delete the most recent stash

git rebase

Re-applies commits from one branch onto another.

-git checkout feature

-git rebase main # moves feature commits on top of latest main

git cherry-pick

Apply a specific commit from one branch to another.

-git cherry-pick <commit-hash>

Git Workflow

Staging Changes

-git add <filename>   #To stage changes in specific file

-git add .   #To stage all changes (new, modified, and deleted files)

Committing Changes

-git commit -m "Your Message To Commit"

Pushing Changes

-git push   #To send your commit to your repository

Checking Status

-git status   #To check which file is staged, unstaged or untracked

Undoing and Amending Changes

-git restore <filename>   #Undo changes in your working directory

-git restore —staged <filename>   #Unstage the file

-git reset HEAD~   #Undo your last commit

-git commit —amend   #Change the last commit