git

why git

Git is a popular version control system used for tracking changes in software projects and managing collaboration between multiple developers. Some of the reasons why Git is widely used include:

1.Distributed architecture: Git allows multiple developers to work on the same project independently, without relying on a central repository. This enables efficient collaboration, as developers can make changes to the code, merge their changes with others, and resolve conflicts in a decentralized manner.

2.Branching and merging: Git provides a powerful branching and merging model, allowing developers to easily create and switch between different branches, merge changes from one branch into another, and maintain multiple versions of a project in parallel.

advantages :

* a system that keeps records of your changes
* allow for collabrative development
* allows you to know who made what changes and when
* allows you to revert any changes

version control types

* local
* centralized
* distributed

centralized version control system



Distributed version control system



the usual commands we used git are

Here are some of the most commonly used Git commands:

* git init: Initialize a new Git repository in the current directory.
* git clone <repo>: Clone an existing Git repository from a remote source.
* git add <file>: Add a file to the staging area, preparing it for inclusion in the next commit.
* git commit -m "message": Commit the changes in the staging area with a message describing the changes.
* git diff: Show the differences between the latest version of the code and the version in the staging area.
* git status: Check the status of the repository, including the files in the staging area and the current branch.
* git log: View the history of the repository, including a list of all commits and their details.
* git branch: List all branches in the repository and show the current branch.
* git checkout <branch>: Switch to another branch or create a new branch.
* git merge <branch>: Merge changes from one branch into another branch.
* git push <remote> <branch>: Push changes from a local branch to a remote repository.
* git pull <remote> <branch>: Fetch changes from a remote repository and merge them into the local branch.

These are just a few of the many Git commands available, and there are many more advanced commands you can use as you become more familiar with Git.