

# Git

## What is Git?

Git is a Version Control System of distributed nature that is used to track changes in the Source Code during Software development.

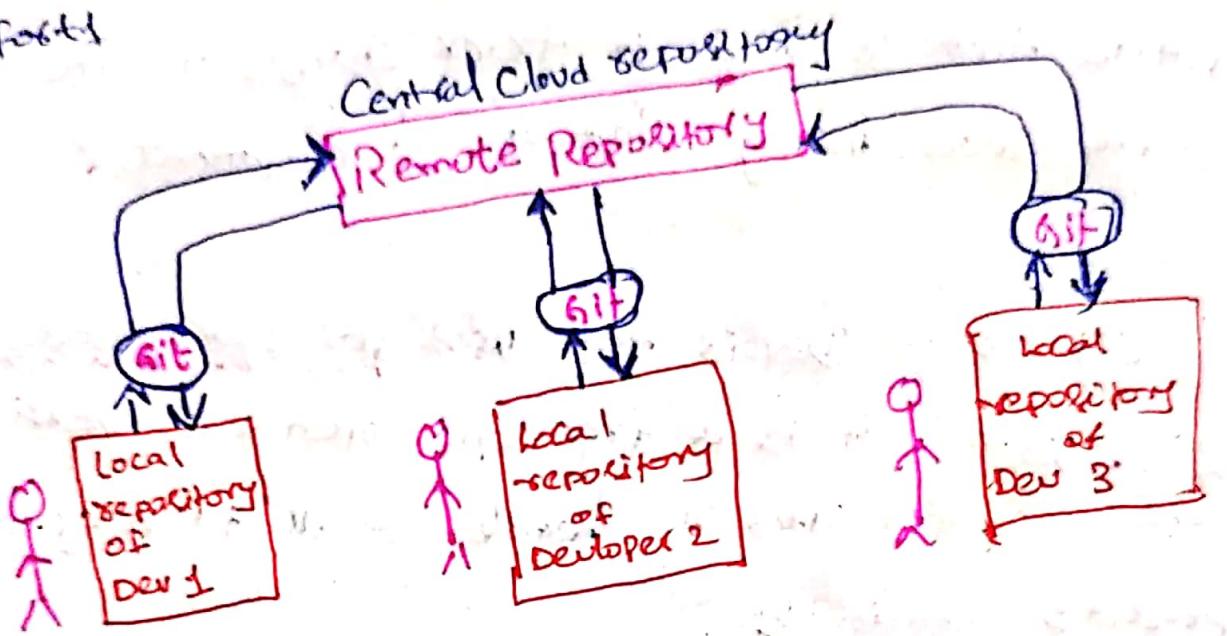
• Git is a DevOps tool used for Source Code management. It is a free and open source Version Control System used to handle small to very large projects efficiently.

"Git is used to track changes in the source code, enabling multiple developers to work together on non-linear development.

Git is most popular open source widely used and example of Distributed Version Control System (DVCS). used for handling the development of small and large projects in more efficient & neat manner.

→ With the help of Versioning system, the developer can track or identify who has made what changes and then run tests and fix bugs if any and then do necessary feature implementation.

In case of any unforeseen circumstances the code can be reverted to any of the previously working versions thereby saving huge efforts.



## → What is Version Control System (VCS)

VCS keeps track of the contributions of the developers working as a team on projects. They maintain the history of code changes done and with project evolution.

It gives an upper hand to the developers to introduce new code, fixes bugs, and run tests with confidence that their previously working copy could be restored at any moment in case things go wrong.

Version Control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

### DVCS:

- Git is a DVCS that enables the developers to manage the changes offline and allows you to branch and merge whenever required, giving them full control over the local code base.

A DVCS allows users to work productively

when not connected to a network.

→ What is difference between git and Github.

Git is a Version Control System of distributed nature that is used to track changes in the source code during software development.

It can be used to track changes in any set of files. The main objectives of Git are:

Speed

data integrity

non linear workflows

support for distributed.

Github is a Git repository hosting service, plus it adds many of its own features.

Git hub provides a web-based graphical interface. It also provides access control and several collaboration features, basic task management tools for every project.

## Git

- Git is a Software
- Git is a Command line tool
- Git is installed locally
  - on the System.
- Git is maintained by Linux
- Git is a Version Control system used to manage the Source code history.
- Git is focused on Version Control and Code sharing.

## GitHub

- GitHub is a Service
- GitHub is a graphical user interface
- GitHub is hosted on the web.
- GitHub is maintained by Microsoft
- GitHub is a (a web-based) hosting service for Git repositories.
- GitHub is focused on centralized Source code hosting.

## What is Repository

Repository in Git is a place where Git stores all the files. Git can store the files either on the local repository or on the remote repository.

To create an Repository, Create a directory for the project if it does not exist, then run the Command "git init".

By running this command, git directory will be created in the project directory.