**Git** – git information tracker

* It is a central represents using which we can manage our projects service code.
* It is also called as VCS
* It is matches all modifications happening to a specific file

1. Because of versions trouble shooting and fixing bugs is easy
2. If something goes wrong in current version we can rollback to previous versions

* It records the modification when modified (timestamp) and why it is modified
* Git is distribute VCS

Used for two reasons:

1. VCS – version control system
2. Collaboration

Why do we use git?

To monitor multiple versions of same file functionalities of VCS

1. Allows multiple developer to develop the code simultaneously
2. Doesn’t allow over writing each other changes
3. Monitors a history of every version v1(reason1) -🡪 v2(reason1 + resons2) -🡪 v3 (reason1+reson2+reason3) ----- v100
4. Git is fast when compared to the other version controlling tools
5. Multiple developers (or) easily collaborate and work on same project
6. It also works as backing up our project code

Types of VCS:

2 Types:

1. CVCS: centralized version control system -🡪 SVN – sub version control system
2. DVCS: Distributed VCS/ Decentralized VCS – git

* Older version of git is SVN -🡪 SVN – centralized server
* It consists of current version data v1 -🡪 v2
* Each and every developer needs to correct to this server and then need to develop their codes

Dis advantages of SVN:

1. Servers can be accessed by anyone can copy the code
2. If server is destroyed , everything will be lost

Decentralized / Distributed VCS: GitHub 🡪 server

Each and every developer need not want to correct to the github (server) , create a repository in github -remote repository in github we have an option the code – cloning

Cloning: using cloning , we can bring our code from remote repository (server – github) to local repository (own laptops / systems)

Command for cloning

git clone URL

Git:

Git is a client/server architecture git bash – client ---------

github bash -----client -------------------

github – server ----------------- === mirrored copy

Repository:

Group of project files to store in a single area

Each project has one repository

github has many number of repository

local repository:

getting the remote repository to our local repository (our own loops/ systems)

remote repository:

github: server

push: we will send the files to the remote repository

pull: we will bring /extract the file from the github account

Generate new SSH Key: ssh-keygen -t ed25519 -C “[your\_email@example.com](mailto:your_email@example.com)”

Add new SSH Key: $ clip < ~/.ssh/id\_ed25519.pub