Version control system

Git is a version control system

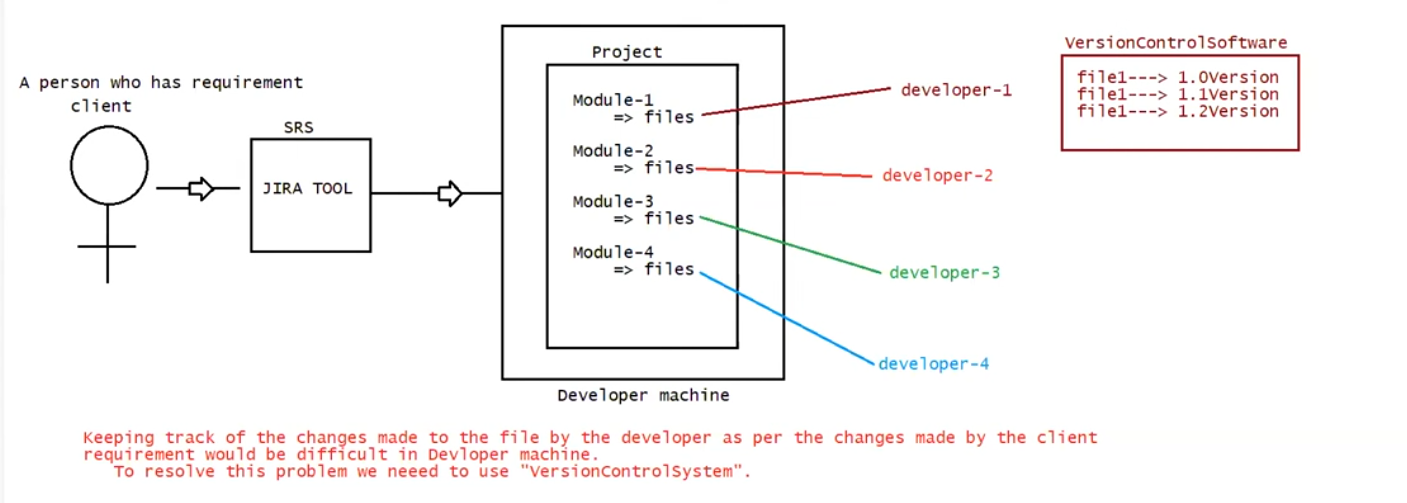
Created by linus Torvalds in 2005 and it is maintained by junio hamano

Git is used for

Tracking code changes

Tracking who made changes like history of files

Making coding collaborations



Srs -> software requirement specification.

Vcs (version control system)

It is a system that records the changes made to a file or a group of files , so that we can recall specific version if we want

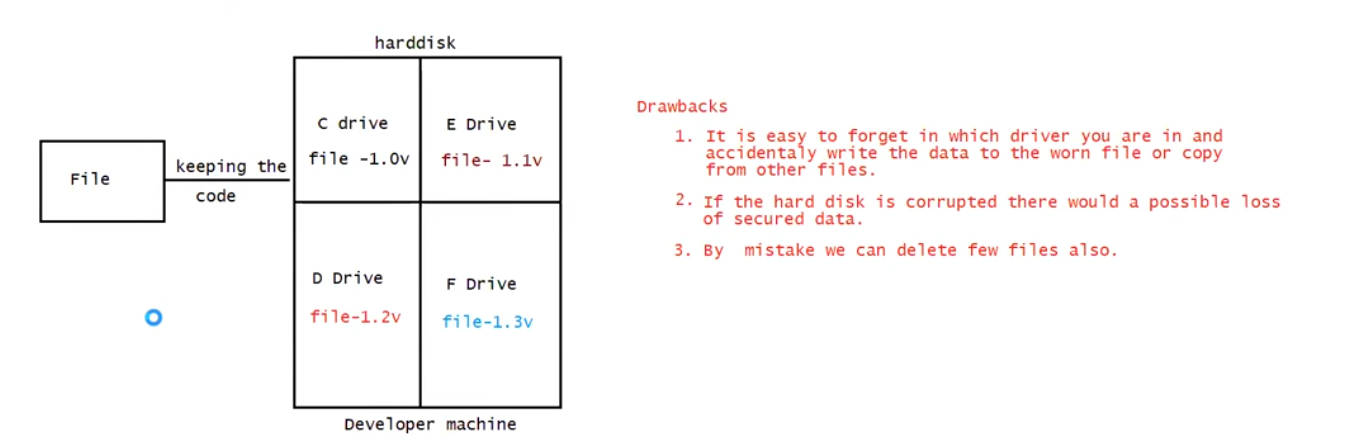
i.e for every source code changes in a file a new version will be created

eg: jdk 1.0 ,1.1,…

Types of version control system

1. Local version control system
2. Central version system
3. Distributed version control system

Local version control system



Centralized version control system

To overcome drawbacks of version control system distributed version control system is used

Eg: svn , subforce

Centralized version control system contains only one server and maintains all version files

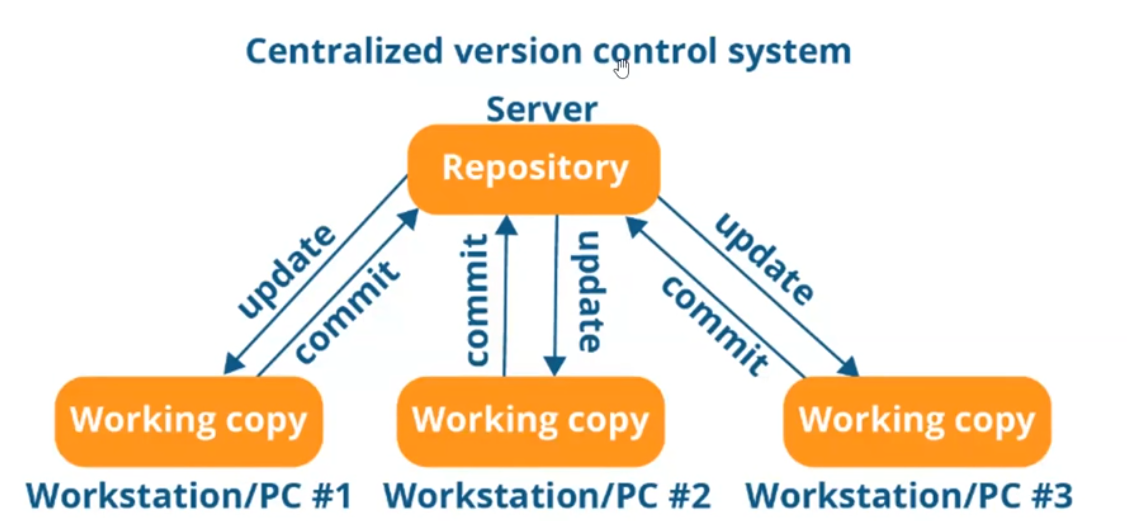
For many years it is a standard version control system

More no of developers would connect to cvs to checkout files

Note :

Checkout : taking code from repository to local machine

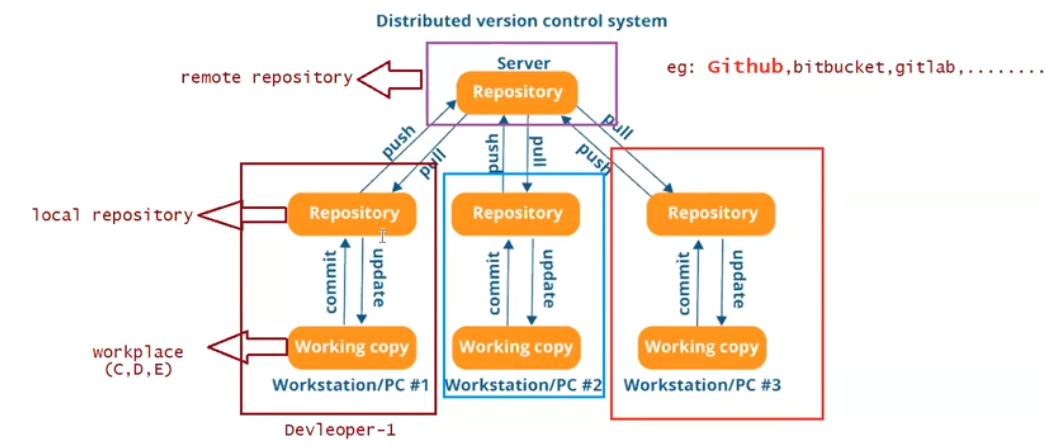
Push : sending code from local machine to server



Drawbacks:

1. All the data will be stored in the computer which is managed by the admin . what if hard disk fails (i.e sever repository ) called as spf single point failure
2. If server goes down then it would be sdifficult to collaborate with the server (or) Save changes

Distributed version control system



Eg: github, gitlab,bit bucket

Eg: git, mercurial , baazar , Darcs

Developers will not only get latest version of files rather but also the compile history of files

Push will not only happen to latest snapshot of files but also they will push old files also

If the remote server is down , there is a local repository where it maintains copy of remote repository (which has same code as server)

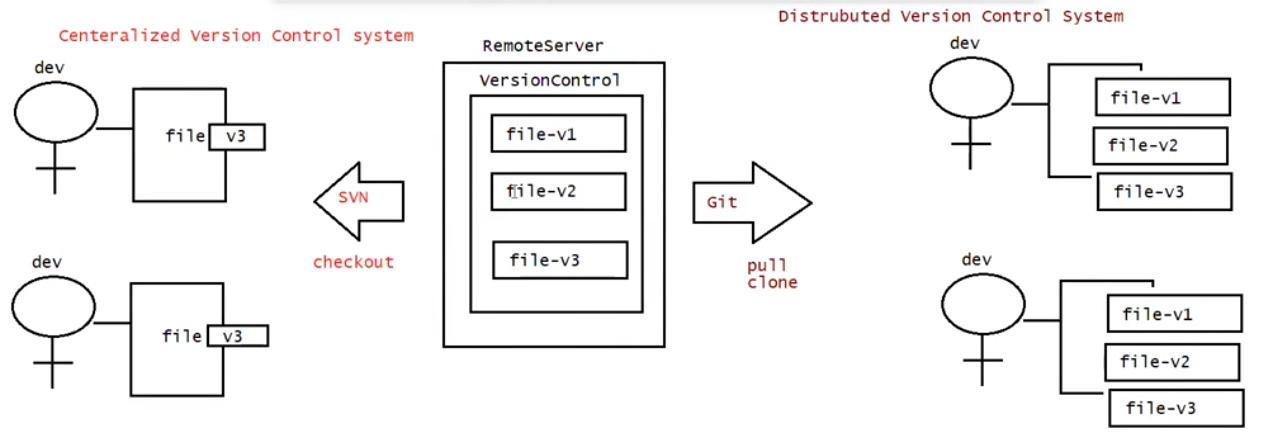
If remote repository is down you can still make changes in the loca repository , whenever the server is up its is pushed into the remote repository.

Note :

In Lvcs , Cvcs complete history of changes is not available

It is possible to only get the latest version but nit the entire history

Push will not happen w.r.t to version , rater push will happen w.r.t changes



There are 2 types of git softwareq

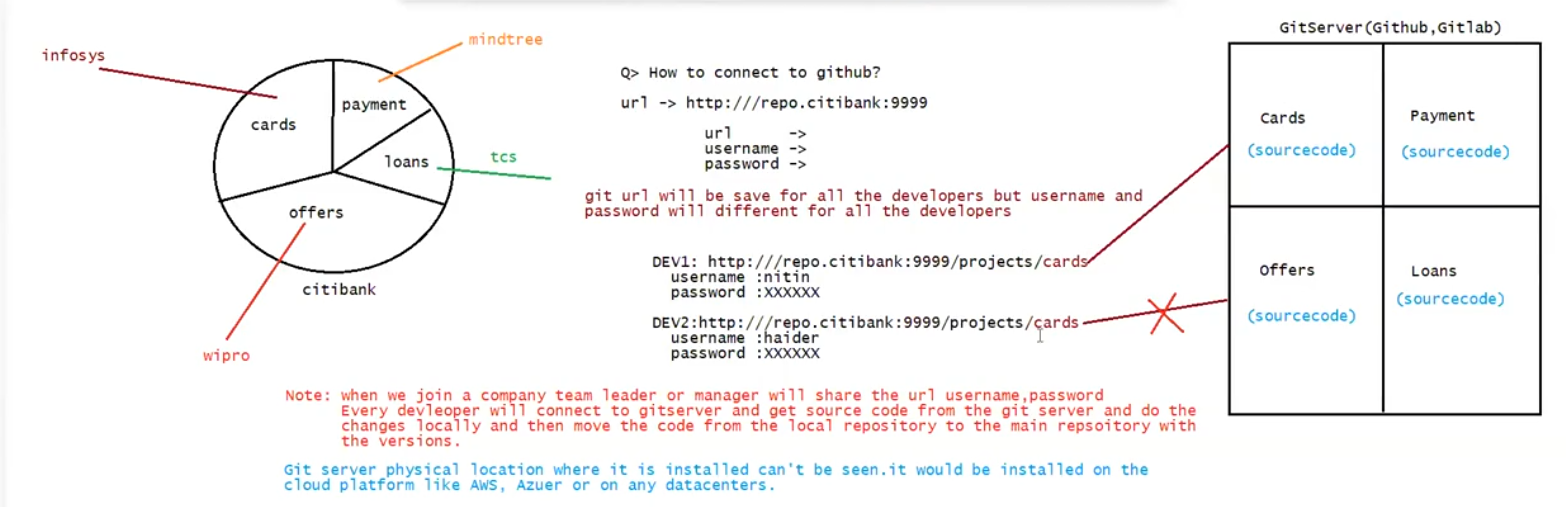
1. Git server (github)
2. Git client (git)

Git server

Its is a repository

It stores large amount of source code around world

Some of git server tools are Eg: github, bitbucket,gitlab



To type username password we need git client

If we install git client we get some tools they are git bash , git gui, git cmd

