

1)What is a version control system?

Ans: Version control systems are a category of software tools that helps in recording changes made to files by keeping a track of modifications done in the code. And we can roll back when it is failed.

2) Why did a version control system develop? What were the necessities?

Ans: Version control is essential to track, organize and control changes over source code and avoid confusion, especially for large, fast-changing projects. Version control systems are essential tools when integrated with a well-defined version management process. Free version control systems are commonplace so there's no reason to not use one.

3) Define the different types of version control systems.

Ans:

Three types

Local Version Control Systems

Centralized Version Control Systems

Distributed Version Control Systems

4) List a few differences between the two version control system types.

Ans:

Centralized Version control System

In centralized source control, there is a server and a client. The server is the master repository that contains all of the versions of the code. To work on any project, firstly user or client needs to get the code from the master repository or server. So the client communicates with the server and pulls all the code or current version of the code from the server to their local machine.

Distributed Version Control System

In distributed version control most of the mechanism or model applies the same as centralized. The only major difference you will find here

is, instead of one single repository which is the server, here every single developer or client has their own server and they will have a copy of the entire history or version of the code and all of its branches in their local server or machine. Basically, every client or user can work locally and disconnected which is more convenient than centralized source control and that's why it is called distributed.

5) What is Git?

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 tracking changes in the source code, enabling multiple developers to work together on non-linear development.

6) List a few features of Git.

Ans: Tracks history, Free and open source, Supports non-linear development, Creates backups, Scalable, Supports collaboration, Branching is easier, Distributed development.

7) Q7 - State any three commands of Git and why we use them.

Ans:

Git config command

This command configures the user. The Git config command is the first and necessary command used on the Git command line. This command sets the author name and email address to be used with your commits. Git config is also used in other scenarios.

Git Init command

This command is used to create a local repository.

Git clone command

This command is used to make a copy of a repository from an existing URL. If I want a local copy of my repository from GitHub, this command allows creating a local copy of that repository on your local directory from the repository URL.

Q8 - Is Git the same as Github? Why or Why not?

Ans: **No**, Git and Github are two separate entities. Git was invented by Linus Torvalds the creator of Linux. Git is open source and free to use.

Q9) What is the command to get the installed version of Git?

Ans: `Git --version`

Q10) What is the command to add all files and changes of the current

Ans: `Git add .` adds all the files in the current directory