What Is Git and Why Is It Used?

Git is an open-distributed version control system that allows developers to track changes to their codebase and collaborate on projects with other developers. Git is typically used for software development, but it can be used for any type of file.

When a developer makes a change to a code file, they can commit that change to their local Git repository. Then, they can push their changes to a remote Git repository, such as a server hosted by a company or an open-source project. Other developers can then pull the changes down from the remote repository and incorporate them into their code.

And an important thing about Git is that it is a free source and open to anyone.

Basic Git Interview Questions

1. What is Git?

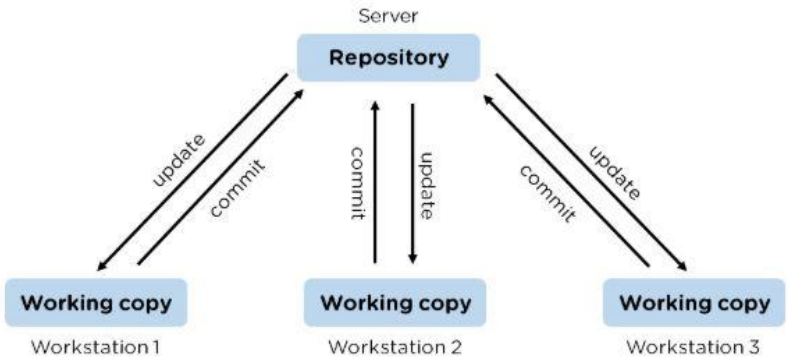
Git is a version control system for tracking changes in computer files and is used to help coordinate work among several people on a project while tracking progress over time. In other words, it's a tool that facilitates source code management in software development.

Git favors both programmers and non-technical users by keeping track of their project files. It enables multiple users to work together and handles large projects efficiently.

2. What do you understand by the term 'Version Control System'?

A version control system (VCS) records all the changes made to a file or set of data, so a specific version may be called later if needed.

This helps ensure that all team members are working on the latest version of the file



3. What is GitHub?

To provide Internet hosting for version control and software development, GitHub makes use of Git.

4. Mention some popular Git hosting services.

GitHub

SourceForge

GitLab

Bitbucket

5. Different types of version control systems

Local version control systems have a database that stores all file changes under revision control on disc in a special format.

Centralized version control systems have a single repository, from which each user receives their working copy.

Distributed version control systems contain multiple repositories, and different users can access each one with their working copy.

6. What benefits come with using GIT?

Data replication and redundancy are both possible.

It is a service with high availability.

There can only be one Git directory per repository.

Excellent network and disc performance are achieved.

On any project, collaboration is very simple.

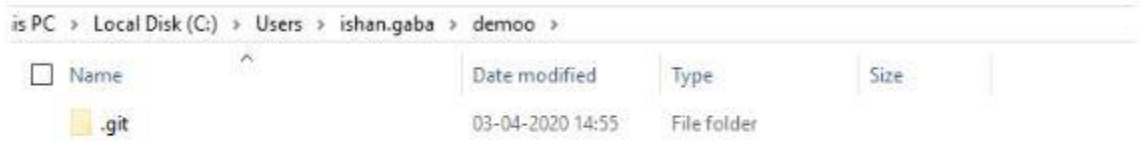
7. What's the difference between Git and GitHub?

Git	GitHub
Git is a software	GitHub is a service
Git can be installed locally on the system	GitHub is hosted on the web
Provides a desktop interface called git GUI	Provides a desktop interface called GitHub Desktop.

It does not support user management features	Provides built-in user management

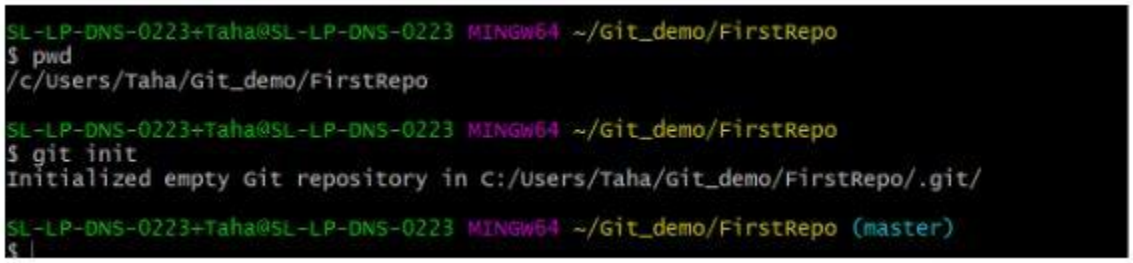
8. What is a Git repository?

Git repository refers to a place where all the Git files are stored. These files can either be stored on the local repository or on the remote repository.



9. How can you initialize a repository in Git?

If you want to initialize an empty repository to a directory in Git, you need to enter the git init command. After this command, a hidden .git folder will appear.



10. How is Git different from Subversion (SVN)?

GIT	SVN
Git is a distributed decentralized version control system	SVN is a centralized version control system.
Git stores content in the form of metadata.	SVN stored data in the form of files.
The master contains the latest stable release.	In SVN, the trunk directory has the latest stable release
The contents of Git are hashed using the SHA-1 hash algorithm.	SVN doesn’t support hashed contents.

11. Name a few Git commands with their function.

Git config - Configure the username and email address

Git add - Add one or more files to the staging area

Git diff - View the changes made to the file

Git init - Initialize an empty Git repository

Git commit - Commit changes to head but not to the remote repository

12. What are the advantages of using Git?

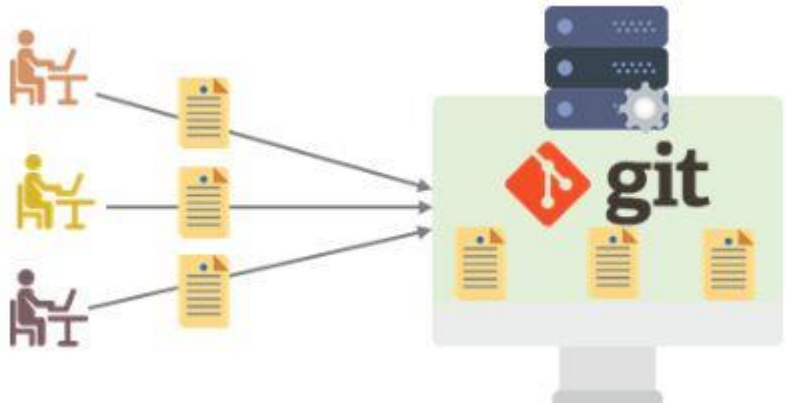
Faster release cycles

Easy team collaboration

Widespread acceptance

Maintains the integrity of source code

Pull requests



13. What language is used in Git?

Git is a fast and reliable version control system, and the language that makes this possible is ‘C.’

Using C language reduces the overhead of run times, which are common in high-level languages.

14. What is the correct syntax to add a message to a commit?

git commit -m "x files created"

15. Which command is used to create an empty Git repository?

git init - This command helps to create an empty repository while working on a project.

16. What does git pull origin master do?

The git pull origin master fetches all the changes from the master branch onto the origin and integrates them into the local branch.

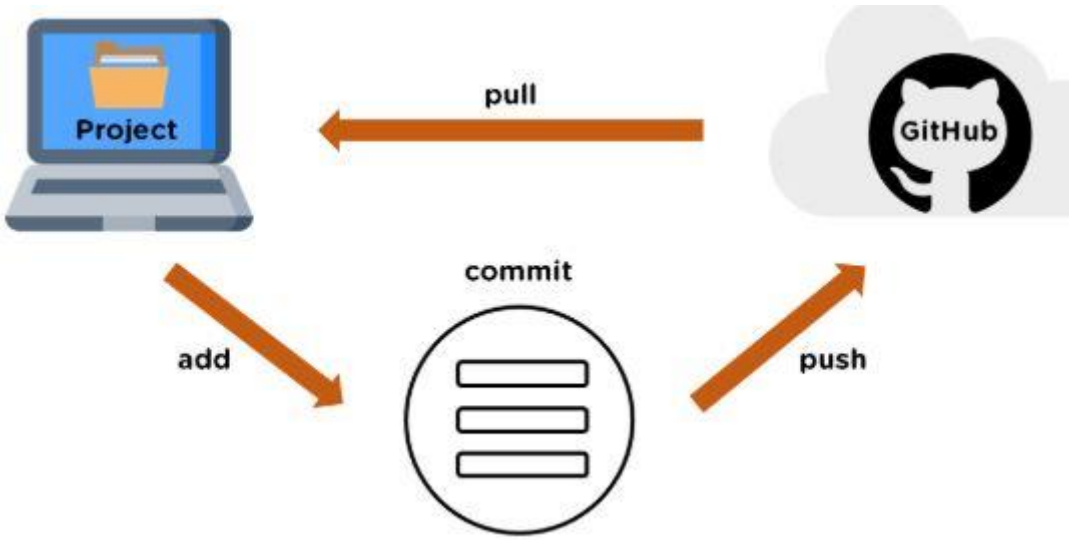
git pull = git fetch + git merge origin/ master

After having gone through the beginner level Git interview questions, let us now look at intermediate GIT interview questions and answers.

Intermediate Git Interview Questions

17. What does the git push command do?

The Git push command is used to push the content in a local repository to a remote repository. After a local repository has been modified, a push is executed to share the modifications with remote team members.



18. Difference between git fetch and git pull.

Git Fetch	Git Pull
The Git fetch command only downloads new data from a remote repository.	Git pull updates the current HEAD branch with the latest changes from the remote server.
It does not integrate any of these new data into your working files.	Downloads new data and integrate it with the current working files.
Command - git fetch origin git fetch --all	Tries to merge remote changes with your local ones. Command - git pull origin master

19. GitHub, GitLab and Bitbucket are examples of git repository _____ function?

hosting. All the three are services for hosting Git repositories

20. What do you understand about the Git merge conflict?

A Git merge conflict is an event that occurs when Git is unable to resolve the differences in code between the two commits automatically.

Git is capable of automatically merging the changes only if the commits are on different lines or branches.