**1Q: What is Git?**

A: Git is a distributed version control system used to manage source code changes in software development.

**2Q: Why is Git popular among developers?**

A: Git is popular among developers because it is open source, easy to use, and provides powerful branching and merging capabilities.

**3Q: What are the advantages of using Git?**

A: Some advantages of using Git include:

Distributed nature, allowing for easy collaboration

Fast and efficient handling of large projects

Powerful branching and merging capabilities

Built-in mechanisms for undoing changes and recovering lost work

Support for multiple workflows and branching models

**4Q: What is a repository in Git?**

A: A repository is a storage location for code and other files managed by Git. It contains all the versions of the code and its history.

**5Q: What is a commit in Git?**

A: A commit in Git is a snapshot of the changes made to a file or set of files. It represents a logical unit of work and includes a commit message that describes the changes made.

**6Q: What is a branch in Git?**

A: A branch in Git is a separate line of development that allows for experimentation and development without affecting the main codebase. Changes made on a branch can be merged back into the main codebase when they are ready.

**7Q: What is a merge in Git?**

A: A merge in Git combines the changes made on one branch with another branch. It creates a new commit that includes the changes from both branches.

**8Q: What is a pull request in Git?**

A: A pull request is a request to merge changes made on a branch into another branch, usually the main codebase. It allows for code review and collaboration before changes are merged.

**9Q: What is a conflict in Git?**

A: A conflict in Git occurs when two or more changes made to the same file or set of files conflict with each other. Git requires manual intervention to resolve conflicts before changes can be merged.

**10Q: How do you resolve a merge conflict in Git?**

A: To resolve a merge conflict in Git, you need to identify the conflicting changes, decide which changes to keep, and manually edit the affected files to resolve the conflicts. Once the conflicts are resolved, the changes can be committed and merged into the main codebase.

**11Q: What is a repository in Git?**

A: A repository is a collection of files and directories, along with their version history, that is managed by Git.

**12Q: What is a commit in Git?**

A: A commit is a snapshot of changes made to a repository at a specific point in time. Each commit has a unique identifier and includes a commit message describing the changes made.

**13Q: What is a branch in Git?**

A: A branch is a separate line of development in a Git repository that allows developers to work on different features or versions of the code in isolation.

**14Q: What is a merge in Git?**

A: A merge is the process of combining changes from one branch into another.

**15Q: What is a pull request in Git?**

A: A pull request is a feature of Git that allows developers to propose changes to a repository and request that the changes be merged into the main codebase.

**16Q: What is a conflict in Git?**

A: A conflict occurs in Git when changes made to a file in one branch conflict with changes made to the same file in another branch. Resolving conflicts involves manually merging the changes.

**17Q: What is a remote in Git?**

A: A remote is a version of a Git repository that is hosted on a remote server, such as GitHub or Bitbucket.

**18Q: What is the difference between git fetch and git pull?**

A: git fetch downloads changes from a remote repository but does not merge them, while git pull downloads changes and immediately merges them into the current branch.

**19Q: What is git rebase?**

A: git rebase is a Git command that allows developers to modify the commit history of a branch by reapplying commits on top of another branch.