

## **1. What is Git and why is it used?**

Git is a free, open-source version control system that tracks changes to source code and files. It is used by developers to manage source code and work together on projects

## **2. Explain the difference between Git pull and Git fetch.**

The main difference between Git fetch and Git pull is that Git fetch only downloads the latest changes from the remote repository, while Git pull downloads the latest changes and merges them into your current branch.

Git fetch is a good way to update the local repository with the latest changes from the remote repository, but we will still need to merge the changes into the current branch before we can start working on them. Pull is a convenient way to both update the local repository and merge the changes into the current branch in one step.

## **3. How do you revert a commit in Git?**

By using the git revert or git reset command in git.

## **4. Describe the Git staging area.**

The Git staging area is a file, generally contained in the Git directory, that stores information about what will go into the next commit.

## **5. What is a merge conflict, and how can it be resolved?**

A merge conflict occurs when two branches with competing commits are merged. Merge conflicts happen when people make different changes to the same line of the same file, or when one person edits a file and another person deletes the same file.

We can resolve the conflict by editing the file, by adding a command to the git or by creating a new commit.

## **6. How does Git branching contribute to collaboration?**

## **7. What is the purpose of Git rebase?**

The purpose of Git rebase is to change the history of a Git repository. This can be done by reordering, editing, or squashing commits together. Git rebase can be used to edit previous commit messages, combine multiple commits into one, delete or revert commits that are no longer necessary.

## **8. Explain the difference between Git clone and Git fork.**

## **9. How do you delete a branch in Git?**

To delete a local branch in Git, you can use the `git branch -d` command.

## **10. What is a Git hook, and how can it be used?**

Git hooks are shell scripts that Git can automatically execute when certain events occur. It can be used to automate actions, customize git's internal behavior and allow notifications.