**Git and GitHub Test Questions**

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

Git is a distributed version control tool that supports distributed non-linear workflows by priding data assurance for developing quality software. It lets you and your team of developers work together on the same project from anywhere. Team members can work on files and easily merge their changes into one source.

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

1. Git pull- lets you copy all the files from the master branch of remote repository to your local repository
2. Git fetch-Fetches changes from the remote repository but does not automatically merge them into your current branch.

git pull automatically merges the changes into your current branch, while git fetch only retrieves the changes from the remote repository but does not automatically merge them.

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

git revert <commit-hash>

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

It acts as a middle ground between your working directory and the Git repository. The staging area allows you to selectively choose which changes you want to include in your next commit. The staging area is a file, generally contained in your Git directory, that stores information about what will go into your next commit. It also known as index.

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

A merge conflict in Git occurs when two or more branches we try to merge have conflicting changes in the same section of a file or when Git can't automatically determine the best way to merge changes. We can only resolve merge conflicts on GitHub that are caused by competing line changes locally in command prompt

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

* Each branch in Git represents an independent line of development.
* Team members can work on different features, bug fixes, or improvements in their own branches without affecting the main development line.
* Branching allows multiple team members to work in parallel on different aspects of the project simultaneously.
* Developers can create feature branches to implement new features without interfering with ongoing work in the main branch.

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

It is used when changes made in one branch needs to be reflected in another branch.

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

Git clone- create a copy of the original repository on your local machine

Git fork- create a copy of the original repository on your github account

git clone is used for working on the code locally, while git fork is used in the context of contributing changes to a project hosted on a Git platform.

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

git branch -d <branch-name>

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

Git hooks are scripts that run automatically every time a particular event occurs in a Git repository. They let customize Git's internal behavior and trigger customizable actions at key points in the development life cycle.