Git and GitHub Test Questions

1.What is Git and why is it used?
Answer: Git is a distributed version control system (DVCS) that allows multiple developers to collaborate on projects, track changes, and manage different versions of files efficiently , It Keep track of changes made to files over time. Coordinate work among multiple developers on a shared codebase. Facilitate collaboration by providing tools for reviewing changes, merging contributions, and resolving conflicts.

2.Explain the difference between Git pull and Git fetch.
Answer:This command fetches changes from the remote repository and merges them into the current branch.
Commands to do that :git pull <remote> <branch>

Git fetches is the command only retrieves updates from the remote repository, storing them in a separate branch in your local repository. It does not automatically merge these changes into your current working branch.
Command to do that:git fetch <remote>

3.How do you revert a commit in Git?
Answer:git revert <commit_id> by using this command we can revert a commit in Git

4.Describe the Git staging area.
Answer:The Git staging area, also known as the index, is a crucial part of Git's workflow. It serves as an intermediate area between your working directory where you modify files and the Git repository where changes are committed.

5.What is a merge conflict, and how can it be resolved?
Answer:it occurs when Git cannot automatically merge changes from different branches. This typically happens when, The same part of a file has been modified independently in both branches being merged.and Git cannot determine which version of the changes should take precedence.

6.How does Git branching contribute to collaboration?
Answer:it Allowing multiple developers to work on different features concurrently.Providing a clean, isolated environment for each feature or task.Facilitating parallel development and experimentation. And Enabling easy integration of changes through merges or pull requests.

7. What is the purpose of Git rebase?
Answer: It is use to Keeping a clean and linear project history. Incorporating changes from a feature branch into the main branch , it Squashing or rewriting commits to maintain a cleaner commit history before merging

8. Explain the difference between Git clone and Git fork.
Answer:Git clone Creates a local copy of an existing Git repository, including all branches and commit history. It establishes a connection between your local system and the remote repository

Command to do that:git clone <repository_url>.

Git fork A feature of Git platforms like GitHub. It creates a copy of a repository under your own GitHub account. This copy remains independent of the original repository, allowing you to make changes without affecting the original project directly.

9.How do you delete a branch in Git?
Answer: git branch -d <branch_name> by using this command we can delete the git branch

10. What is a Git hook, and how can it be used?
Answer:Git hooks are scripts that Git executes before or after certain actions . They are used to automate tasks or enforce custom workflows within a Git repository
e.g., committing, merging, pushing