50 Github
Interview Q/A

What is GitHub?

- GitHub is a web-based platform that uses Git for version control. It allows developers to host, review, manage, and collaborate on code repositories.

What is Git?

- Git is a distributed version control system that tracks changes in source code during software development.

What is a repository in GitHub?

- A repository, or repo, is a storage space where your project lives. It contains all project files and the history of changes.

How do you create a repository on GitHub?

- Go to your GitHub account, click the "New" button, fill out the repository details, and click "Create repository."

What is a fork in GitHub?

- A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.

What is a pull request?

- A pull request is a method of submitting contributions to a project. It allows others to review your changes before they are merged into the main codebase.

How do you clone a repository?

- Use the git clone <repository_url> command in your terminal or command prompt.

What is a branch in GitHub?

- A branch is a parallel version of a repository. It allows you to work on different features or bug fixes without affecting the main codebase.

How do you create a branch?

- Use the git branch <branch_name> command and then switch to it using git checkout <branch_name>.

What is the difference between git fetch and git pull?

- git fetch downloads changes from the remote repository but does not apply them. git pull fetches and applies changes.

What is a commit?

- A commit is a snapshot of your repository at a specific point in time. It represents a single change or a set of changes.

How do you make a commit?

- Use git add <files> to stage your changes and git commit -m "commit message" to commit them.

What is the purpose of the .gitignore file?

- The .gitignore file tells Git which files (or patterns) it should ignore. This is useful for excluding temporary files, build artifacts, etc.

What is a merge conflict?

- A merge conflict occurs when changes from different branches clash and Git cannot automatically merge them.

How do you resolve a merge conflict?

- Manually edit the conflicting files to resolve the differences, then add and commit the resolved files.

What is a remote repository?

- A remote repository is a version of your project that is hosted on the internet or another network.

How do you add a remote repository?

- Use the git remote add <name> <url> command.

What is git rebase?

- git rebase is a command that allows you to integrate changes from one branch into another by reapplying commits on top of the target branch.

What is a git stash?

- git stash temporarily shelves changes you've made to your working directory so you can work on something else and come back to them later.

How do you apply stashed changes?

- Use git stash apply to reapply stashed changes or git stash pop to reapply and remove them from the stash.

What is a Git tag?

- A Git tag is a reference to a specific commit. It is used to mark important points in the history, such as releases.

How do you create a tag?

- Use the git tag <tag_name> command.

What is the difference between git merge and git rebase?

- git merge combines changes from different branches, creating a merge commit. git rebase reapplies commits on top of another base branch, avoiding a merge commit.

What is the purpose of the git diff command?

- git diff shows the changes between commits, commit and working tree, etc.

What is a GitHub Actions?

- GitHub Actions is a CI/CD platform that allows you to automate workflows for your GitHub projects.

How do you revert a commit?

- Use the git revert <commit> command to create a new commit that undoes the changes from a previous commit.

What is a git cherry-pick?

- git cherry-pick is a command that allows you to apply the changes from a specific commit to your current branch.

How do you squash commits?

- Squashing commits means combining multiple commits into one. This can be done during a rebase with git rebase -i.

What is a Git hook?

- Git hooks are scripts that Git automatically executes before or after events such as commit, push, etc.

What is the difference between git reset and git revert?

- git reset undoes changes by moving the HEAD and optionally modifying the working directory. git revert creates a new commit that reverses changes from a previous commit.

@COMPUTER__PROGRAMMER

How do you set up SSH keys for GitHub?

- Generate an SSH key using ssh-keygen, add it to your GitHub account under SSH and GPG keys.

What is the purpose of a code review?

- Code reviews help ensure code quality, catch bugs, and share knowledge among team members.

How do you create a GitHub Pages site?

- Create a repository with the name <username>.github.io and push an index.html file to it. GitHub will host it as a website.

How do you handle sensitive data in a repository?

- Use environment variables, .gitignore to exclude sensitive files, and GitHub secrets for GitHub Actions.

How do you revert a pushed commit?

- Use git revert <commit> to create a new commit that undoes the changes and push it.

What is a .git directory?

- The .git directory contains all information about the repository, including configuration, branches, and history.

How do you view commit history?

- Use git log to view the commit history.

What is continuous integration (CI)?

- CI is a practice where developers frequently integrate code into a shared repository, verifying each integration with automated builds and tests.

How do you delete a branch?

- Use git branch -d <branch_name> to delete a local branch and git push origin --delete <branch_name> to delete a remote branch.

What is the difference between git pull origin master and git fetch origin master?

- git fetch origin master downloads changes from the remote master branch, while git pull origin master downloads and merges changes.

What is a distributed version control system (DVCS)?

- A DVCS allows all users to have a complete copy of the repository, including history, enabling offline work and more robust collaboration.

What are Git submodules?

- Git submodules allow you to keep a Git repository as a subdirectory of another Git repository.

What is Git Flow?

- Git Flow is a branching model for Git, introduced by Vincent Driessen, that defines a strict branching model to help manage releases.

How do you handle large files in GitHub?

- Use Git Large File Storage (LFS) to manage large files.

What is a Git blame?

- git blame shows the last modification of each line in a file along with the author.

How do you undo the last commit?

- Use git reset --soft HEAD~1 to undo the last commit but keep changes staged, or git reset --hard HEAD~1 to undo the last commit and discard changes.

What is a Git workflow?

- A Git workflow is a branching model that defines how branches are created, used, and merged, e.g., feature branching, Git Flow, GitHub Flow.

What is a rebase conflict?

- A rebase conflict occurs when changes cannot be automatically applied during a rebase due to conflicting changes in the target branch.

How do you resolve a rebase conflict?

- Manually resolve the conflicting files, then use git add <file> and git rebase --continue.

What is a detached HEAD state?

- A detached HEAD state occurs when you are not on any branch, often after checking out a specific commit. You can create a new branch from this state if needed.