



50 Jenkins & GitHub Interview Questions For Freshers





- **What is Jenkins?**

Jenkins is an open-source automation tool used for Continuous Integration (CI) and Continuous Delivery (CD), which helps developers automate the process of building, testing, and deploying applications.

- **What are the key features of Jenkins?**

Some key features are:

- Easy installation and configuration
- Extensibility through plugins
- Distributed builds
- Integration with version control systems

- **What is Continuous Integration (CI)?**

Continuous Integration is a development practice where developers integrate code into a shared repository frequently, and each integration is automatically tested and built.

- **How does Jenkins achieve Continuous Integration?**

Jenkins automates the process of code integration by fetching the latest changes from the repository, building the code, and running tests to ensure the changes work well with the existing codebase.

- **What is a Jenkins pipeline?**

A Jenkins pipeline is a suite of plugins that supports implementing and integrating continuous delivery pipelines into Jenkins. It defines the entire build process from code commit to deployment.



- **What are the two types of Jenkins pipelines?**
- Declarative Pipeline: It is a more simplified syntax that focuses on readability.
- Scripted Pipeline: It uses more programmatic Groovy scripting and provides maximum flexibility.
- **What are Jenkins jobs?**

A Jenkins job represents a task or a process like pulling code from a repository, building the application, running tests, and deploying to production.

- **What is a Jenkins slave node?**

A Jenkins slave (or agent) is a machine that runs builds in a distributed Jenkins architecture. The master assigns tasks to the slaves.

- **How can you trigger a build in Jenkins?**

Builds can be triggered by:

- SCM changes (Git commit)
- Manual trigger
- Scheduled builds (Cron jobs)
- Post-build actions from other jobs

- **How does Jenkins handle notifications?**

Jenkins can send notifications via email, Slack, or other channels through post-build actions or plugins when a build succeeds or fails.





- **What is a Jenkinsfile?**

A Jenkinsfile is a text file that contains the definition of a Jenkins pipeline. It allows version control and sharing of pipeline configuration.

- **What are the benefits of using a Jenkinsfile?**

Version control of the CI/CD process, consistency across environments, and better visibility of the pipeline configuration.

- **What is Blue Ocean in Jenkins?**

Blue Ocean is a user interface for Jenkins that simplifies the job configuration and visualization of the CI/CD pipeline.

- **How do you install Jenkins plugins?**

You can install plugins via Jenkins's web interface by going to "Manage Jenkins" -> "Manage Plugins" and selecting the plugin from the available options.

- **What are some commonly used Jenkins plugins?**

Some popular plugins include:

- Git plugin
- Maven plugin
- Docker plugin
- Pipeline plugin
- Slack notification plugin

- **What is Jenkins Matrix Job?**

A matrix job allows you to run the same build on multiple configurations like different operating systems, JDK versions, or hardware architectures.





- **How do you secure Jenkins?**

Jenkins can be secured by:

- Enabling authentication (username/password, LDAP)
- Configuring authorization strategies
- Using role-based access control
- Enabling HTTPS for secure communication

- **What is a Jenkins agent?**

A Jenkins agent is any machine configured to run jobs under the direction of the Jenkins master.

- **How do you handle parallel execution in Jenkins?**

Parallel execution in Jenkins can be achieved by defining parallel stages in a pipeline or by configuring matrix jobs.

- **What is the use of 'build triggers' in Jenkins?**

Build triggers define how and when a Jenkins job will be initiated, such as via SCM changes, scheduled times, or upstream projects.

- **What is artifact management in Jenkins?**

Artifact management refers to the handling of files generated during the build process. Jenkins can archive and store artifacts for future use.

- **What is the difference between freestyle jobs and pipeline jobs?**

Freestyle jobs are simple, predefined steps configured through the UI, while pipeline jobs are more flexible and defined as code using a Jenkinsfile.





- **What is the use of 'build now' in Jenkins?**

The "Build Now" option allows you to manually trigger a Jenkins job.

- **What is post-build action in Jenkins?**

Post-build actions are tasks performed after a build is complete, like sending notifications, archiving artifacts, or triggering other jobs.

- **How do you schedule a job in Jenkins?**

Jobs can be scheduled using cron syntax in the "Build Triggers" section.

- **What is GitHub?**

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

- **What is the difference between Git and GitHub?**

Git is a version control system that manages source code history locally, while GitHub is a platform for hosting and collaborating on Git repositories online.

- **What is a repository in GitHub?**

A repository (repo) in GitHub is a place where your project's files are stored, including the code and version history.

- **What are GitHub Issues?**

GitHub Issues is a tool for tracking bugs, enhancements, tasks, and more within a repository.





- **What is a pull request in GitHub?**

A pull request (PR) allows a user to propose changes to a repository, and these changes can be reviewed, discussed, and merged into the main branch.

- **How do you create a new repository in GitHub?**

To create a repository, click on the "New" button under the "Repositories" tab in GitHub, name the repo, and choose whether to make it public or private.

- **What is GitHub Fork?**

Forking is creating a copy of another repository under your GitHub account, which allows you to make changes independently.

- **How do you clone a GitHub repository?**

You can clone a GitHub repository using the git clone command with the repository's URL.

- **What is GitHub Actions?**

GitHub Actions is an automation tool for CI/CD that allows you to build, test, and deploy applications directly from GitHub.

- **What is a GitHub gist?**

A gist is a way to share snippets of code or text. It is a simple repository hosted on GitHub.

- **What is the difference between a branch and a tag in GitHub?**

A branch is used for development, allowing multiple versions of code, while a tag is a reference to a specific commit, often used for releases.





- **How do you create a branch in GitHub?**

You can create a branch using the git branch <branch-name> command or through the GitHub interface under the "Branches" tab.

- **What is GitHub Pages?**

GitHub Pages is a feature that allows you to host static websites directly from a GitHub repository.

- **What is the purpose of .gitignore file?**

The .gitignore file specifies which files or directories should be ignored by Git and not tracked in the repository.

- **How do you revert a commit in GitHub?**

You can revert a commit using the git revert command to create a new commit that undoes the changes.

- **What is GitHub Enterprise?**

GitHub Enterprise is a self-hosted version of GitHub, designed for companies that require private, on-premises GitHub hosting.

- **What is a GitHub webhook?**

Webhooks are used to notify external services when certain events happen in a repository, such as pushes or pull requests.

- **What are GitHub milestones?**

Milestones group issues and pull requests that are associated with a specific goal or deadline.

- **What is the difference between 'fetch' and 'pull' in Git?**

git fetch retrieves changes from the remote without merging them, while git pull retrieves changes and merges them into your current branch.



- **How do you squash commits in Git?**

Squashing combines multiple commits into a single commit. This can be done using the git rebase command.

- **What is the use of GitHub Wiki?**

GitHub Wiki allows you to create and manage project documentation within your repository.

- **What are GitHub Discussions?**

GitHub Discussions is a feature that enables collaborative conversations about a project outside of issues and pull requests.

- **How do you protect a branch in GitHub?**

You can protect a branch by enabling branch protection rules under the repository settings, such as preventing force pushes or requiring PR reviews.

- **What is GitHub CodeSpaces?**

GitHub CodeSpaces is a cloud-based development environment integrated with GitHub to help developers write and test code directly from their browser.

- **What is the difference between public and private repositories?**

Public repositories are visible to anyone on GitHub, while private repositories are only visible to users who have been granted access.





Thank
you!

FOLLOW FOR MORE

