Interview Preparation Questions:

1. What are the different ways to trigger Jenkins pipelines?

2. How to add a new worker node in Jenkins?

3. How to add a new plugin in Jenkins?

4. Where do you find errors in Jenkins?

5. Difference between Docker and Ansible?

6. How to write a Docker file?

7. Explanation about COPY and ADD options in Docker file?

8. Explain about ENTRYPOINT in Docker file?

9. Explain about Docker file structure?

10. What is the purpose of the chmod command in Linux?

11. How do you change the permissions of a file to 777 using the chmod command?

12. What is SSH and how do you use it to connect to remote servers securely?

13. What is a public key and private key in the context of SSH?

14. How do you generate SSH key pairs using the ssh-keygen command?

15. What are some common package managers used in Ubuntu, Amazon Linux, Centos and Red hat Linux distributions?

16. Can you describe your experience using Terraform to create AWS resources and infrastructure?

17. What are some of the key benefits of using Terraform for infrastructure as code, and how have you seen these benefits in your Projects/Assignments?

18. Tell me or write down any two tasks from playbook with its proper format and names.

19. What are ansible roles and its purpose?

20. Activity that we use with ansibles or advantage Functionality or purpose of ansible using in your project?

DevOps Overview

1. What do you understand about DevOps?

2. What are the core principles of DevOps?

3. What is the difference between continuous delivery and deployment.?

4. What is CI/CD?

5. How agile and waterfall methodology differ from DevOps?

AWS Overview

1. What is Cloud Computing?

2. What are Azs and Regions in AWS?

3. What are the various types of Instance types?

4. What is the importance of IAM service by AWS?

5. What do you understand about Load balancers, what are their types ?

AWS DevOps

1. Which service is DNS service in AWS?

2. What is AWS ECR?

3. How can you connect S3 with ec2 Instance ?

4. What is AWS codedeploy service?

5. How can you create infrastructure using only AWS services?

Linux Fundamentals

1. Write a shell script and install Jenkins on ubuntu , show the execution.

2. Demonstrate how to send a file from the local system to ec2-instance?

3. How to create a user in linux.

4. What are package managers in linux?

5. How to resolve permission denied errors while executing a file?

Application Development

1. What do you understand about application development?

2. What is SDLC?

3. What are microservices?

4. Diff between compiled and interpreted languages?

5. What are platform independent languages?

Java Overview

1. What is OOP?

2. Features of OOP? (follow up ques.)

3. Command to install java (version specific)?

4. How to set JAVA_HOME path in ubuntu?

5. What is the difference between JRE, JDK and JVM?

Build tools

1. Name dependencies used in your project?

2. What do you understand about Application building?

3. What is the maven build lifecycle?

4. What are dependencies ?

5. Which AWS service is used for application building?
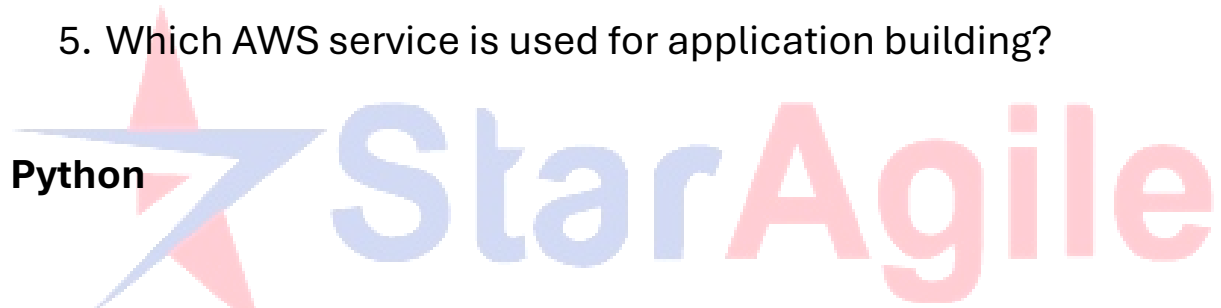
Python

1. Advantages of python?

2. Frameworks in python for web development

3. Write a program to print the value of a variable in python

4. Various Data types in python

5. Why is python used for scripting?

SQL

1. MySql vs Sql

2. Sql Db vs NoSql Db.

3. DML, DDL queries.

4. Why do we use databases?

5. Purpose of using ORDER BY and GROUP BY clauses in sql?

Git and Github

1. What is SCM?

2. What is the purpose of the staging area in git?

3. Diff between git pull and git fetch.

4. Diff between git reset soft and git reset mixed.

5. What is the purpose of git commands like- git rebase, git remote -v.

Jenkins

1. What is Continuous Integration?

2. Write a jenkins pipeline script used in your project.

3. How can you build Jenkins jobs periodically?

4. What is the purpose of using Jenkins Slave/Agents?

5. Demonstrate installation of Jenkins using script.

Docker

1. Container vs VMs.

2. Docker Architecture.

3. Write a docker file to containerise a java based application

4. What is the command in docker to create a container along with port binding.

5. What are Docker volumes, Docker compose etc?

Kubernete

1. What is container orchestration?

2. Components of K8s control plane.

3. Write a deployment file/command to create a deployment.

4. Write a service file/command to expose the deployment to the internet.

5. Command used in K8s for listing pods with images running inside the pods.

Ansible

1. What is configuration management?

2. What are ansible roles?

3. How to create a role?

4. Write Ansible playbook file to configure java and docker on the host.

5. Ansible command to test the connection with the hosts?

Terraform

1. IaC vs IaaS.

2. Write one Tf script to provision Ec2 instance, etc on AWS.

3. Tf plan vs Tf validate

4. Purpose of Tf state file?

5. various commands in Tf.

Monitoring

1. Why do we need to monitor our servers?

2. What are prometheus exporters?

3. How to set up alerts in grafana

4. Port Nos - Prometheus, grafana, node exporter and CAdvisor.

5. Installation of Prometheus.

Project

1. Flow of the project and tools used.

2. How the same project can be done by using only AWS DevOps services.

3. What are the security measures we can take to secure our pipeline and application,

4. What problems of the company were solved by this project, as the application was running earlier as well.

5. I ask candidates to write various files and scripts used in projects.

AWS Cloud

1. How Availability Zone is different than a region in AWS?

2. Which service in AWS lets you set up who can do what with your resources?

3. How S3 standard is different than S3 Glacier?

4. If you want to give an EC2 instance access to just one S3 bucket and not others, which AWS service would you use?

5. Lets say a new hire needs access to some AWS resources for a short project. How would you give them temporary access that automatically ends after a certain time?

6. What is elastic IP address?

Devops Overview

1. What is waterfall methodology and discuss the disadvantages of this?

2. What is feedback loop in Devops?

3. How agile methodology fixed the waterfall methodology's issues

4. Why do we need continuous monitoring

5. Difference between continuous delivery v/s deployment?

Linux Fundamentals

1. Which command in Linux would you use to change the permissions of a file?

2. How do you create a new user in Linux?

3. If you want to connect securely to a remote Linux server, which command would you use?

4. How would you edit a file in the terminal using a text editor that comes pre-installed on most Linux distributions?

5. If you need to automate a repetitive task in Linux, what would you write to achieve that?

6. What is the use of grep command?

Overview of Python

1. Which Python feature allows you to handle errors and unexpected situations in your code without crashing the program?

2. How would you open and read a file in Python?

3. If you wanted to create a web application using Python, which framework would you use that's lightweight and easy to start with?

4. What do you use in Python to group related functions, classes, or variables together in a single file or package?

5. How do you define a function in Python, and why is it useful?

Devops on AWS

1. Which service is offered by AWS Devops which is equivalent to SCM tool?

2. What is code build?

3. What is code deploy?

4. What is code pipeline?

5. What is cloud formation?

GIT

1. What's the main difference between a central version control system and a distributed version control system?

2. Which command would you use to check the status of files in your Git repository?

3. How do you set up Git on your local machine for the first time?

4. What command would you use to create a new branch in Git?

5. How can you combine changes from one branch into another branch in Git?

6. What's the purpose of the git rebase command, and how is it different from git merge?

7. How would you temporarily save changes you're not ready to commit yet using Git?

8. How git reset is different than git revert?

MAVEN

1. What is pom.xml file in Maven?

2. Explain the Maven goals? 38. What are Maven artifacts?

3. What is a Maven plugin, and how does it enhance the build process?

4. How would you use Maven archetypes to create a new project?

JENKINS

1. What is a Jenkins file?

2. Can you explain the Jenkins master-slave architecture and its purpose?

3. How do you manage credentials in Jenkins?

4. What is the purpose of post action in Jenkins pipeline?

5. What is the main difference between scripted and declarative pipelines in Jenkins?

6. How Jenkins executor is different than a Jenkins node?

7. How can you trigger builds in Jenkins, and what are some common build triggers?

8. How can you set up email notifications in Jenkins to alert you about build statuses?

DOCKER

1. How do you bind ports in Docker to allow external access to a containerized application?

2. What's the purpose of a Docker file, and how does it help in building Docker images?

3. How would you manage and clean up unused Docker images to free up disk space?

4. What are the benefits of using Docker Compose for managing multi-container applications?

5. A Docker container is not starting, and you see an error related to a missing configuration file. How would you go about diagnosing and fixing this issue?

6. What is the difference between ARG and ENV in docker file?

7. How do you take the shell or terminal of container?

K8s

1. Can you describe the main components of Kubernetes architecture and their roles?

2. What is a Pod in Kubernetes?

3. What is the difference between clusterIP, nodeport and LB?

4. What are the methods available to scale applications up or down in Kubernetes, and how do you apply them?

5. You notice that a Kubernetes Pod is not starting properly, and you're getting an error related to resource allocation. How would you approach troubleshooting and resolving this issue?

6. How do you inspect the log of a pod?

Terraform

1. What is a state file

2. What is the difference between terraform plan and apply?

3. How do you delete a resource in terraform?

4. What is terraform provider?

5. Discuss about the terraform modules that you have worked ever?

Ansible

1. What are the steps involved in installing and configuring Ansible on a new server?

2. Can you give me few examples for ansible module that you may have worked or used?

3. What is an inventory file?

4. You need to configure a set of servers using Ansible, but the playbook fails due to a syntax error. How would you approach troubleshooting and resolving this issue? How do you structure an Ansible playbook to ensure that tasks are executed in a specific order and only if previous tasks are successful?

5. What are Ansible roles, and how do they help in organizing and reusing code in playbooks?

Prometheus and Grafana

1. What is a node exporter in Prometheus?

2. Why do we need alert manager component in Prometheus Architecture?

3. Which query language is used by Prometheus?

4. Your Prometheus server is not collecting data as expected. How would you troubleshoot and resolve issues related to the Prometheus configuration file?

5. How do you install and configure Grafana to work with Prometheus as a data source?

6. How do you create and customize dashboards in Grafana to visualize data collected by Prometheus?

NOTE : Please note that these are intended purely as a preparation resource and **should not be taken as an indication that the mock interview questions will be drawn from this set.**

We strongly recommend that you prepare thoroughly on all the topics covered in the curriculum.