1. Explain difference between git and github?

Git is version control system, it’s an application which has to be setup on linux or windows system.

* Git command can create git repo on local box
* Start tracking and commit

Github/bitbucket/gitlab: are the hosting sites which can host git projects. Because we want to share our code across teams

1. What you understand by devops?

DevOps: Developers + Operation

Common factor between them: Dev makes the code changes and operation implements it.

Devops methodology where we use set of tools to automate the task, once developer push the code changes to the git repo.

Jenkins, gitlabci, azuredevops, github actions, circleci

3)Explain the .git directory structure

<https://git-scm.com/docs/gitrepository-layout>

4)Config files

Userrepo/.git/config ( This is specific to repo)

User home directory/.gitconfig (That specifc to user, all the repo for that user will be using that)

5) Jenkins master slave arch:

<https://usercontent.one/wp/www.openwriteup.com/wp-content/uploads/2023/08/Jenkins-Architecuter.pdf?media=1728024675>

6) Agent in Jenkins

Agent are the one where Jenkins will be performing the steps:

A vm (Linux /windows)

Docker container

Dockerfile (basically It will create image, start the container), the perform the Jenkins taks

7) Explain metrics rbac Jenkins?

Rbac: Role based access control

Role: what action a user can perform, you need to install the plugin for matrix based role

<https://plugins.jenkins.io/role-strategy/>

8) What is containers and container life cycles:

Containers are hold the application code, its dependency library, any system tools which is required to run the application, All the application related stuff are package, only we need run the containers and application will be available.

Container life cycle: Creation of container (docker run command)

Start of the container (docker start)

Networking and mapping the storage to the container

Stop a and termination of the container.

Container run time application to control the stuff. (containerd (docker), cri-o(openshfit), runc)

9) Explain docker engine?

Docker client, docker cli and dockerd ,docker api

<https://usercontent.one/wp/www.openwriteup.com/wp-content/uploads/2023/08/Docker-Architecture.pdf?media=1728024675>

10)Git stash usage?

<https://git-scm.com/docs/git-stash>

git add .

git status

git stash save "add work"

git status

git stash list

git stash apply 0

git status

11) Explain kubernetes architecture?

<https://usercontent.one/wp/www.openwriteup.com/wp-content/uploads/2023/08/k8s-intro.pdf?media=1728024675>

12) Kubernetes deployment strategy explain?

<https://harsh05.medium.com/kubernetes-deployment-strategies-recreate-vs-rollingupdate-7b9f868cd197>

13) What you understand by daemon set and jobs in kubernetes

Daemon set create single pod on each node across cluster.

Means: If I have 4 nodes in my cluster, it will creating one pod on each node.

Log collection purpose, monitoring purpose.

<https://github.com/amitopenwriteup/my_proj/blob/master/Daemon%20Set.pptx>

Job/Cronjob: Specific number of time I want to run some pod

<https://github.com/amitopenwriteup/my_proj/blob/master/Jobs.pptx>

<https://github.com/amitopenwriteup/my_proj/blob/master/cronjob.yaml>

14) Explain kube-proxy?

Kube-proxy is for networking purpose, how the traffic will go from services to pod and pod to services will be maintained by kube-proxy

<https://kodekloud.com/blog/kube-proxy/>

15) Difference between terraform plan and apply?

Plan will be save the dry run output, which you can share for review.

terraform plan --out tf.out

terraform show tf.out

apply will go show the dry-run output but it cannot save the dry run output

16)Explain variables in terraform,(lowest to highest priority)

<https://github.com/amitopenwriteup/terraform-ppt/blob/main/Terraform%20variables-5.pptx>

17 ) Explain cicd?

Continuous integration and continuous delivery

18) Explain difference between kubelet,kubectl

<https://usercontent.one/wp/www.openwriteup.com/wp-content/uploads/2023/08/kubeclt.pdf?media=1728024675>

19) What you understand by static pods?

*Static Pods* are managed directly by the kubelet daemon on a specific node, without the [API server](https://kubernetes.io/docs/concepts/architecture/#kube-apiserver) observing them.

https://kubernetes.io/docs/tasks/configure-pod-container/static-pod

20) What is your understanding on kubernetes services?

<https://usercontent.one/wp/www.openwriteup.com/wp-content/uploads/2023/08/Service.pdf?media=1728024675>