Docker Assignment 2

1. Difference between virtualization and containerization?

Virtualization allows organizations to partition a single physical computer or server into several virtual machines (VM).

Whereas in containerization, container is an executable package of software that runs on top of a host OS. A host can support many containers concurrently.

2. What is a Docker hub?

Docker Hub is a service provided by Docker for finding and sharing container images with your team.Docker Hub is the world's largest library and community for container images.

3. Tell us something about docker-compose?

Docker Compose is used for running multiple containers as a single service. Each of the containers here run in isolation but can interact with each other when required.Docker compose is written in YAML language.

4. What is the docker swarm?

Docker Swarm is an orchestration management tool that runs on Docker applications. It helps end-users in creating and deploying a cluster of Docker nodes.

5. Explain the lifecycle of the docker container?

The complete lifecycle of a docker container revolves around five phases:

Create phase: The docker container is created in the create phase.

Run phase: In the running phase, the docker container starts executing the commands mentioned in the image.

Pause phase/unpause phase: In pause phase the current executing command in the docker container is paused.

Stop phase: The docker container stops executing the commands.

Kill phase: kills the container in kill phase.

6. How to check the docker client and docker server version?

We can use **docker version** command to check the docker client and docker server version.

7. How do you get the number of containers running, paused, and stopped?

docker container ls -a

or

docker container ls -all

Any one of the above command tells us the info about all the details about running,paused and stopped containers.

8. If you vaguely remember the command and you'd like to confirm it, how will you get help on that particular command?

To list available commands, we can either run **docker** with no parameters or execute **docker help.**

9. How to log in to the docker repository?

We can login using

docker login

Command, and enter id and password through CLI.

10. How do you create a docker container from an image?

- Create a Dockerfile for our application.
- Build the image with docker build command.
- Host our Docker image on a registry.
- Pull and run the image on the target machine.