Can you write a Docker file to deploy a React app?

# Use an official Node runtime as a parent image

FROM node:16

# Set the working directory to /app

WORKDIR /app

# Copy the package.json and package-lock.json to the working directory

COPY ./package\*.json ./

# Install the dependencies

RUN npm install

# Copy the remaining application files to the working directory

COPY . .

# Build the application

RUN npm run build

# Expose port 3000 for the application

EXPOSE 3000

# Start the application

CMD [ "npm", "run", "start" ]

1.how to check logs in docker and filter only last 200 lines

Ans:docker logs --tail 200 container-name/id

2.will the docker logs be lost if contianer is restarted or stopped.

Ans: Logs will be lost if container is stopped or restarted but we won't find logs if it got deleted.

To persist Docker logs, you can use a logging driver such as json-file or syslog. These drivers will store the logs in a location on the host machine, which will persist even after the container is stopped or restarted.

You can also use a third-party logging service such as Splunk or Elasticsearch to store Docker logs. These services will collect and store the logs from all of your containers, and provide you with a centralized view of your logs.

3.You encounter a docker image of size 2.7gb will this be a cause of concern and how you will tackle this?

Ans:Bigger images will result in longer built time

docker image download or API limit error

application will also be bulkier or heavy

4.What is the difference between docker image and docker layer?

Ans:docker image a packaged application or a bundle of packaged layers where it contains all the code and dependencies to run an application.

5.Explain CMD and entrypoint in Docker and are these two same?

ans:CMD Sets default parameters that can be overridden from the Docker command line interface (CLI) while running a docker container while

Sets default parameters that cannot be overridden while executing Docker containers with CLI parameters.

FROM nginx:latest

ENTRYPOINT ["echo", "Biken"]

The above entrypoint cannot be overriden and if we try to override it won't work

docker build -t hell-biken

docker run hello-biken biken

Biken biken

FROM ubuntu

ENTRYPOINT ["echo", "Hello"]

CMD ["Abhinav"]

if we don't give any name in cmd it will print hello only

FROM ubuntu

ENTRYPOINT ["echo", "Hello World"]

FROM ubuntu

CMD ["echo", "Hello World"]

What are the different components of Docker?

Docker clinet, docker-daemon, docker-registry,docker-image,docker-swarm.

What are Docker volumes?

a volume is a persistent storage location that exists outside of the container. Volumes are useful for storing data that needs to persist even if the container is stopped or removed.

VOLUME /var/log

VOLUME /my/data

or we can specify volume while running a docker container

docker run -v /host/log:/var/log myimage this will be managed by docker-engine itself and this type is of Volume.

docker volume create my-volume

docker volume create --name shared-data

we must mount the created volume inside the container

docker run -it --name my-container -v my-volume:/data ubuntu:latest

\* can we use same volume with multiple containers

Ans: There are two ways to share a single volume with multiple Docker containers:

Using the volumes-from flag: This flag allows you to mount the volumes of one container to another container. For example, to mount the volumes of the container named container1 to the container named container2, you would run the following command:

docker run -it --name container2 -v my-volume:/data ubuntu

What is the difference between docker and virtual machine?

Ans: Docker is a light weight mean to host application and VM is a whole Os which is heavy and requires more cpu,Ram to function properly

How can you enable a container to start a docker container when host machine is restarted?

Ans: yeah we can enable to start container when host restared by updating restart policy.

docker update --restar=always container\_id

To create a systemd unit file for a docker container, you would create a file with the .service extension in the /etc/systemd/system directory. The file would contain the following information:

[Unit]

Description=My Docker Container

After=network.target

[Service]

Type=simple

ExecStart=/usr/bin/docker start my-container

ExecStop=/usr/bin/docker stop my-container

[Install]

WantedBy=multi-user.target

sudo systemctl enable my-container.service

sudo systemctl start my-container.service

What is docker compose?

Ans: Compose is a tool for defining and running multi-container Docker applications. With Compose, you use a YAML file to configure your application's services.

What are different types of Docker network how they are different form one other?

docker run --network my-network my-image // This is how we can run contaienr in different network

Ans: Bridge network, overlay and vlan network:

Overlay: Overlay is a network wherein it enables communcation between the containers hosted in different hosts.

Bridge: Beidge is a netwrok which enables communication amongs the containers in same host.

vlan: Macvlan networks allow containers to connect directly to the physical host network. This makes them ideal for applications that need to be able to access the physical host network.

What is a docker image vs docker container?

Ans: Docker image basically is a package of code where it is mean to run a container later.

What do you understand by docker volume and why they are used for data persistent?

Ans: dokcer volume are used to persist data when container are restarted or stopped

HOw do you torubleshoot container no starting?

Ans: Docker logs will be the first point, docker inspect,docker events,

docker logs container\_id or container\_name, docker inspect --type=container my\_container

how to secure docker contianers?

Ans: The best wasy to protect containers are we should never run docker as root user and scan the images and use ssl singed dockr images.

What command can you run to export a docker image as an archive?

Ans: docker export red\_panda > latest.tar

docker export --output="latest.tar" red\_panda

docker export red\_panda > latest.tar

how to mount volume in docker?

Ans: we can mount volumes in docker at the runtime

Basically, there are 3 types of mounts which you can use in your Docker container viz. Volumes, Bind mount and tmpfs mounts.

Volumes:

bind Mount:

Tmpfs:

How do you exec a command inside a container?

Ans: docker exec container\_id ls

How can you create a docker image from a running container?

Ans: yes we can create image from a running container.

now let's modify the previous docker conatiner running and update a new index.html file.

index.html is the file that is in the current path.

docker cp index.html image\_name:/usr/share/nginx/index.html

docker commit container\_id image\_name :tag or we can also give here itself "docker commit image\_name new\_image\_name

docker tag image\_id new\_image\_name

#!/bin/bash

# Get the list of all running containers

CONTAINERS=$(docker ps -a)

# Loop through the list of containers

for CONTAINER in $CONTAINERS; do

# Get the name of the container

NAME=$(echo $CONTAINER | awk '{print $1}')

# Get the status of the container

STATUS=$(docker inspect --format='{{.State.Running}}' $CONTAINER)

# Check if the container is running

if [ "$STATUS" = "true" ]; then

echo "$NAME is running"

else

echo "$NAME is not running"

fi

done

write a simple shell script to monitor docker containers.

#!/bin/bash

containers=$(docker ps -a)

for continaer in $containers; do

name=$(echo $container | aws '{print $1}')