Docker compose

What is Docker compose and its purpose?

Docker Compose is a tool that was developed to help define and share multi-container applications. With Compose, we can create a YAML file to define the services and with a single command, can spin everything up or tear it all down.

Advantages of docker compose

- Single host deployment This means you can run everything on a single piece of hardware
- Quick and easy configuration Due to YAML scripts
- High productivity Docker Compose reduces the time it takes to perform tasks

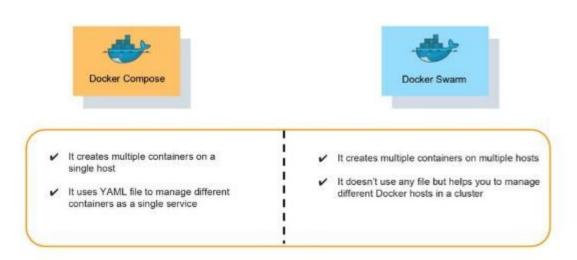
Example

```
services:
  app:
    image: node:18-alpine
    command: sh -c "yarn install && yarn run dev"
    ports:
      - 3000:3000
    working dir: /app
    volumes:
      - ./:/app
    environment:
     MYSQL_HOST: mysql
     MYSQL USER: root
     MYSQL_PASSWORD: secret
     MYSQL DB: todos
  mysql:
   image: mysql:8.0
    volumes:
      - todo-mysql-data:/var/lib/mysql
    environment:
      MYSQL_ROOT_PASSWORD: secret
     MYSQL DATABASE: todos
volumes:
 todo-mysql-data:
```

Basic docker compose commands

- Start all services: docker-compose up
- Stop all services: docker-compose down
- Check the version of Docker Compose: docker-compose -v
- Run Docker Compose service in daemon mode: docker-compose up -d
- **List the running services:** docker-compose ps
- Scale a service docker-compose scale <service name> = <no of instances>

Difference between docker compose & docker swarm



Assignment

Step 1: Install docker compose (Install docker as well if not already installed)

Step 2: Create a simple docker compose file with 2 services (preferably a backend and DB service)

Step 3: Run the docker-compose up -d command

Step 4: Finally run docker-compose ps command to show the list of services stood up by docker compose

Step 5: Upload the docker compose file along with the screenshot of docker-compose ps command output