task1: use docker compose to create a container from an image flask ( this is what we did in the previous session)

**A screenshot of a computer

Description automatically generated**

**A screen shot of a computer code

Description automatically generated**

**A screen shot of a computer code

Description automatically generated**

Task 2: Create 3 Containers Using Docker Compose

Frontend Container with HTTPD:

Create a container that uses the httpd image.

Configure it so that when you access the container through the exposed port, your name appears in the browser.

Backend Container with Flask:

Create a container that uses a Flask image (e.g., yournameondockerhub/flask-app).

Database Container with MariaDB:

Create a container that uses the mariadb image.

Task 3: Network Configuration and Dependencies

Based on the docker-compose.yml file, perform the following tasks:

Create Networks:

Create one network named frontend.

Create another network named backend.

Attach Containers to Networks:

Attach the frontend container to the frontend network.

Attach the backend container to the backend networks.

Attach the database container to the backend network.

Set Dependencies:

Make the backend container depend on the database container.

Make the frontend container depend on the backend container.

A black background with white text

Description automatically generated

A computer screen with white text

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

task1: - create a docker swarm Cluster with one manager and two worker

nodes

- create a service from your flask application with 5 replicas

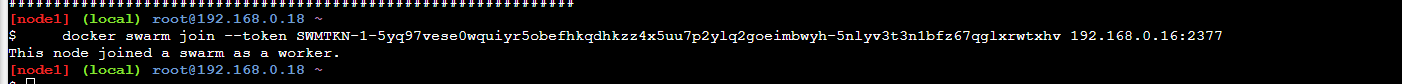
- make sure to make it accessible from the node

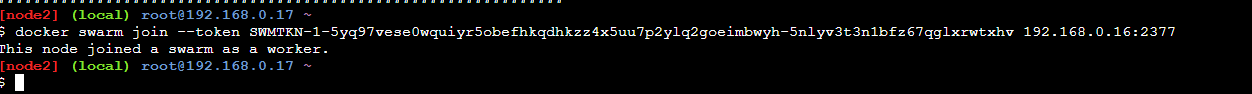
- set Env var name=<your name>

- monitor your cluster nodes using Prometheus ( make sure it is running as a container in each node)

**A screenshot of a computer program

Description automatically generated**

****

****

**A screen shot of a computer

Description automatically generated**

**A screen shot of a computer

Description automatically generated**

**A screen shot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

**A computer screen with white and green text

Description automatically generated**

**A computer screen shot of a code

Description automatically generated**