

DOCKER COMPOSE DOCUMENTATION

- **Difference between docker and docker compose**

Docker is a platform used to build, ship, and run containers. A container is an isolated environment that includes everything needed to run an application, including code, runtime, libraries, and system tools.

Docker Compose is a tool that helps you define and manage **multi-container applications**. It allows you to define the services (containers), networks, and volumes for your application in a single file (`docker-compose.yml`) and manage them together.

- **Create a Docker Network**

```
PS D:\Docker_compose> docker network create --driver bridge docker-compose-network
df110337d473c90a5b5ddfd3bf335beb05cf62991b79707ee4649988f831778d
```

- **Run the Containers Individually**

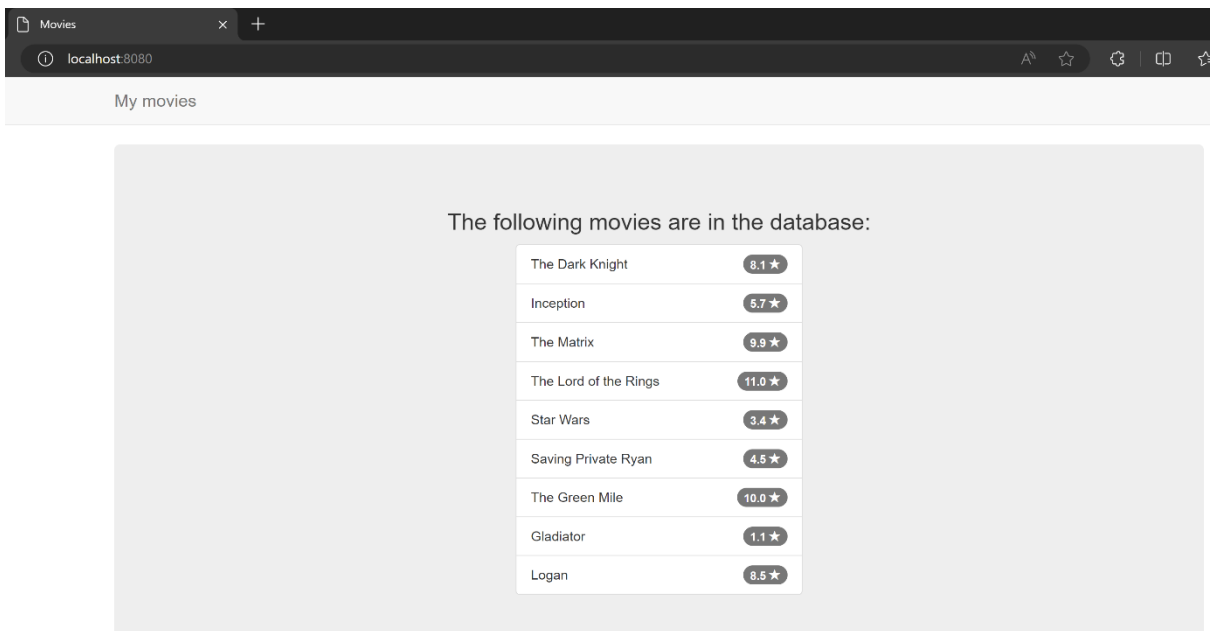
MySQL database container:

```
PS D:\Docker_compose> docker run -d --name database --net=docker-compose-network -e MYSQL_ROOT_PASSWORD=movie123 koenkk/docker-compose-exercise-database
PS D:\Docker_compose>
```

Run the Flask webapp container:

```
PS D:\Docker_compose> docker run -d --name webapp --net=docker-compose-network -p 8080:80 koenkk/docker-compose-exercise-webapp
Unable to find image 'koenkk/docker-compose-exercise-webapp:latest' locally
latest: Pulling from koenkk/docker-compose-exercise-webapp
bd8f6a7501cc: Pull complete
44718e6d535d: Pull complete
```

check if the webapp is running



- Create a docker-compose.yml file that defines both the MySQL database and the webapp

```

1  version: '1'
2  services:
3    database:
4      image: koenkk/docker-compose-exercise-database
5      container_name: mysql
6      environment:
7        MYSQL_ROOT_PASSWORD: movie123
8      networks:
9        - docker-compose-network-250
10
11   webapp:
12     image: koenkk/docker-compose-exercise-webapp
13     container_name: mywebapp
14     ports:
15       - "8081:80"
16     depends_on:
17       - database
18     networks:
19       - docker-compose-network-250
20
21   networks:
22     docker-compose-network-250:
23       driver: bridge
24

```

- Start both the MySQL database and the webapp containers using Docker Compose

```

PS D:\Docker_compose> docker-compose up -d
[*] Building 0.0s (0/0)
[*] Running 3/3
✓ Network docker_compose_docker-compose-network-250 Created 0.0s
✓ Container mysql Started 0.0s
✓ Container mywebapp Started 0.0s
PS D:\Docker_compose>

```

- Check if the web app is running

localhost:8081

My movies

The following movies are in the database:

The Dark Knight	8.1 ★
Inception	8.7 ★
The Matrix	9.9 ★
The Lord of the Rings	11.0 ★
Star Wars	3.4 ★
Saving Private Ryan	4.5 ★
The Green Mile	10.0 ★
Gladiator	1.1 ★
Logan	8.5 ★