

Journal for Docker Challenges Project

Introduction

This journal documents my experiences and learning while completing the Docker challenge. It includes detailed steps taken, errors encountered, and solutions applied to resolve issues during the project.

Setup and Initial Configuration

Steps Taken:

1. Downloaded the zip file and opened on visual studio code.
2. Installation of Docker: Ensured Docker was installed and running on my machine.
3. Building Docker Images:
 - Ran docker-compose build to build the images required for the Node.js application and MariaDB database.

Challenges and Resolutions:

Issue: Initially had trouble understanding Docker commands.

Resolution: Reviewed Docker documentation and tutorials linked in the course materials.

Running the Application

Steps Taken:

1. Starting Docker Compose:
 - Command used: `docker-compose up -d` to start the services defined in the `docker-compose.yml`.
2. Database Initialization Check:
 - Accessed MariaDB using `docker exec -it challenge3-db-1 mysql -u root -p` to check if the database was initialized correctly.

Challenges and Resolutions:

Issue: Received an error indicating that the database table books did not exist.

Resolution: Checked the Docker logs and found that the `init.sql` script was not executed.

Manually created the table and inserted data as specified in the script.

Scaling the Application

Steps Taken:

1. Modifying Docker Compose for Scaling:
 - Removed specific port bindings for node-service to avoid port conflict when scaling the service.
2. Scaling the Service:
 - Command used: `docker-compose up -d --scale node-service=3`.
3. Verifying Scaling:
 - Checked running instances using `docker-compose ps`.

Challenges and Resolutions:

Issue: Encountered port allocation errors when trying to scale the service.

Resolution: Modified the docker-compose.yml to remove port bindings and successfully scaled the service.

Hostname Checks:

<http://localhost:8080/api/stats>.

First Check: ("hostname":"0272f26780d0")

Second Check: ("hostname":"3b0b7e6fb795")

Third Check: ("hostname":"185c9089fa8b")