

Docker Homework: Writing a Dockerfile and Running with Docker Compose

Objective:

The purpose of this homework is to get hands-on experience with Docker, including creating a Dockerfile and using docker-compose to manage multi-container applications.

Task 1: Write a Dockerfile

1. Create a Dockerfile for a simple web application that serves a static HTML page.

- Use an official `nginx` image as the base image.
- Create an `index.html` file with any content of your choice (e.g., 'Hello from Docker!').
- Add this `index.html` file to the container's web server location (`/usr/share/nginx/html`).
- Expose port `80` on the container.

Deliverables:

- `Dockerfile`
- A screenshot showing that your web application is running when you visit `http://localhost:8080`.

Task 2: Run Multi-Container Application Using Docker Compose

1. Create a `docker-compose.yml` file that runs:

- The `nginx` container you built in Task 1.
- A `redis` container that will act as a simple cache service.

Task:

Use Docker Compose to run both containers together.

Deliverables:

- `docker-compose.yml`
- A screenshot showing that both the `web` and `redis` containers are running via `docker ps` and the web application is accessible.

Please submit the following files on your git in a folder name homework-2:

- `Dockerfile`
- `docker-compose.yml`
- Screenshots showing the application running successfully.