

Docker_Compose

Частина 1

Створити `Docker_compose.yml` файл на основі попереднього ДЗ_13. В даному файлі потрібно налаштувати службу/сервіс під назвою `app` за допомогою образу `Docker` із ДЗ_11. Даний образ має бути створений динамічно за допомогою `docker_compose`.

Створюємо в робочому каталозі файл `docker-compose.yml` для сервісу `app` із наступною конфігурацією

```
docker-compose.yml x
1 |version: '3'
2
3 |services:
4 |  app:
5 |    build:
6 |      context: .
7 |    ports:
8 |      - "8000:8000"
9 |    container_name: homework13-app
10
```

Частина_2

Налаштувати службу `nginx` та налаштувати її як зворотній проксі до сервісу `app`, що обробляє запити на HTTP на порту 8080. Конфігурація `nginx` має бути розташована за `/etc/nginx/conf.d/default.conf` всередині контейнеру.

Створимо конфігураційний файл для `nginx`, що буде розташований за `/etc/nginx/conf.d/default.conf` всередині контейнеру та введемо наступну конфігурацію

```
docker-compose.yml x default.conf
1 |server {
2 |  listen 8080;
3 |
4 |  location / {
5 |    proxy_pass http://app:8000;
6 |    proxy_set_header Host $host;
7 |    proxy_set_header X-Real-IP $remote_addr;
8 |    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
9 |    proxy_set_header X-Forwarded-Proto $scheme;
10 |  }
11 |}
12
```

Додамо оновлення до `docker-compose.yml`, тобто створимо сервіс `nginx` в `docker-compose.yml`

```
docker-compose.yml
1 |version: '3'
2
3 |services:
4 |  app:
5 |    build:
6 |      context: .
7 |    ports:
8 |      - "8000:8000"
9 |    container_name: homework13-app
10 |
11 |  nginx:
12 |    image: nginx:alpine
13 |    ports:
14 |      - "8080:8080"
15 |    volumes:
16 |      - ./nginx/default.conf:/etc/nginx/conf.d/default.conf
17 |    depends_on:
18 |      - app
19 |    container_name: homework13-nginx
20
```

Запускаємо

```
dmytro@ubuntu-server:~/dan_it_homeworks/Homework_14_Docker_Compose/src$ docker compose up --build
WARN[0000] /home/dmytro/dan_it_homeworks/Homework_14_Docker_Compose/src/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 9/9
  ✓ nginx Pulled                                11.1s
  ✓ 43c4264eed91 Pull complete                  1.8s
  ✓ 5b19511a843d Pull complete                  2.2s
  ✓ 652d69a25e85 Pull complete                  2.3s
  ✓ 51676974aef5 Pull complete                  2.3s
  ✓ bb16f69e8876 Pull complete                  2.4s
  ✓ 6fb07faa0055 Pull complete                  2.5s
  ✓ c298c5a0cd21 Pull complete                  2.6s
  ✓ 0c02f601d0ee Pull complete                  7.9s
[+] Building 1.9s (11/11) FINISHED                docker:default
=> [app internal] load build definition from Dockerfile
=> => transferring dockerfile: 877B
=> [app internal] load metadata for docker.io/library/python:3.9-slim
=> [app internal] load .dockerignore
=> => transferring context: 2B
=> [app 1/5] FROM docker.io/library/python:3.9-slim@sha256:2851c06da1fdc3c4
=> [app internal] load build context
=> => transferring context: 19.86kB
=> CACHED [app 2/5] WORKDIR /app
=> CACHED [app 3/5] COPY requirements.txt /app/requirements.txt
=> CACHED [app 4/5] RUN pip install --no-cache-dir -r requirements.txt
=> [app 5/5] COPY . /app
=> [app] exporting to image
=> => exporting layers
=> => writing image sha256:caf2ae1f7e43079f1100be274f0308fd625b60b6d99b5fcc
=> => naming to docker.io/library/src-app
=> [app] resolving provenance for metadata file
[+] Running 3/3
  ✓ Network src_default                        Created      0.1s
  ✓ Container homework13-app                  Created      0.1s
  ✓ Container homework13-nginx                Created      0.1s
Attaching to homework13-app, homework13-nginx
Error response from daemon: driver failed programming external connectivity on endpoint homework13-nginx (c8015e9fb41cbcf541dfc23370f05818135f9d872f8071e9171a4c5063eac699): failed to bind port 0.0.0.0:8080/tcp: Error starting userland proxy: listen tcp4 0.0.0.0:8080: bind: address already in use
dmytro@ubuntu-server:~/dan_it_homeworks/Homework_14_Docker_Compose/src$
```

Результат через браузер

← → ↻ Не конфіденційний 192.168.0.108:8080/students/all ☆ ✎ 📁 | ⌵ ⋮

Автоматичне форматування ☐

```
[{"age": "23", "first_name": "Ivan", "id": "2", "last_name": "Beh"}, {"age": "30", "first_name": "James", "id": "3", "last_name": "Bond"}, {"age": "21", "first_name": "Michael", "id": "4", "last_name": "Brown"}, {"age": "28", "first_name": "Ivan", "id": "5", "last_name": "Melnyk"}, {"age": "22", "first_name": "David", "id": "6", "last_name": "Williams"}, {"age": "20", "first_name": "Linda", "id": "7", "last_name": "Davis"}, {"age": "19", "first_name": "Robert", "id": "8", "last_name": "Garcia"}, {"age": "21", "first_name": "Karen", "id": "9", "last_name": "Miller"}, {"age": "22", "first_name": "James", "id": "10", "last_name": "Martinez"}, {"age": "25", "first_name": "Anna", "id": "11", "last_name": "White"}, {"age": "30", "first_name": "Dmytro", "id": "12", "last_name": "Vashchuk"}, {"age": "20", "first_name": "Roma", "id": "13", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "14", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "15", "last_name": "Melnyl"}, {"age": "20", "first_name": "Dmytro", "id": "16", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "17", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "18", "last_name": "Melnyl"}, {"age": "20", "first_name": "Dmytro", "id": "19", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "20", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "21", "last_name": "Melnyl"}]
```

Запуск через Postman (Команда GET)

GET http://192.168.0.108:8080/students/all Send

Params Authorization Headers (6) Body Scripts Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL JSON Beautify

1

Body Cookies Headers (5) Test Results 200 OK • 10 ms • 1.42 KB Save Response

Pretty Raw Preview Visualize

```
[{"age": "23", "first_name": "Ivan", "id": "2", "last_name": "Beh"}, {"age": "30", "first_name": "James", "id": "3", "last_name": "Bond"}, {"age": "21", "first_name": "Michael", "id": "4", "last_name": "Brown"}, {"age": "28", "first_name": "Ivan", "id": "5", "last_name": "Melnyk"}, {"age": "22", "first_name": "David", "id": "6", "last_name": "Williams"}, {"age": "20", "first_name": "Linda", "id": "7", "last_name": "Davis"}, {"age": "19", "first_name": "Robert", "id": "8", "last_name": "Garcia"}, {"age": "21", "first_name": "Karen", "id": "9", "last_name": "Miller"}, {"age": "22", "first_name": "James", "id": "10", "last_name": "Martinez"}, {"age": "25", "first_name": "Anna", "id": "11", "last_name": "White"}, {"age": "30", "first_name": "Dmytro", "id": "12", "last_name": "Vashchuk"}, {"age": "20", "first_name": "Roma", "id": "13", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "14", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "15", "last_name": "Melnyl"}, {"age": "20", "first_name": "Dmytro", "id": "16", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "17", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "18", "last_name": "Melnyl"}, {"age": "20", "first_name": "Dmytro", "id": "19", "last_name": "Vashchuk"}, {"age": "22", "first_name": "Roma", "id": "20", "last_name": "TOR"}, {"age": "24", "first_name": "Mykola", "id": "21", "last_name": "Melnyl"}]
```