

Лабораторная работа 9

реализовать локальное развертывание проекта на FastAPI и
продемонстрировать это развертывание

Шаги реализации:

1. Создание файла "main.py" со следующим содержимым:

```
main.py •
Users > mac > Desktop > fastapi-project > main.py > ...
1  from fastapi import FastAPI
2
3  app = FastAPI()
4
5  @app.get("/")
6  def read_root():
7      return {"Hello": "World"}
8
9
```

2. Создание Dockerfile со следующим содержимым:

```
Dockerfile •
Users > mac > Desktop > fastapi-project > Dockerfile
1  FROM python:3.9
2
3  WORKDIR /app
4
5  COPY requirements.txt .
6  RUN pip install --no-cache-dir -r requirements.txt
7
8  COPY . .
9
10 CMD ["uvicorn", "main:app", "--host", "0.0.0.0", "--port", "8000"]
11
```

3. Создание файла “requirements.txt” со следующим содержимым:

```
≡ requirements.txt ●

Users > mac > Desktop > fastapi-project > ≡ requirements.txt
1     fastapi
2     uvicorn
```

4. Сборка Docker-образа

```
→ fastapi-project docker build -t fastapi-project .
[+] Building 96.4s (10/10) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile                0.0s
=> => transferring dockerfile: 222B                                0.0s
=> [internal] load metadata for docker.io/library/python:3.9      2.5s
=> [internal] load .dockerignore                                   0.0s
=> => transferring context: 2B                                       0.0s
=> [1/5] FROM docker.io/library/python:3.9@sha256:1446afd121c574b13077f 22.9s
=> => resolve docker.io/library/python:3.9@sha256:1446afd121c574b13077f4 0.0s
=> => sha256:15856ca26414127b85cee6d10acbc4cee6eba9070 23.59MB / 23.59MB 3.6s
=> => sha256:30ed4c12791345d3f20f66024e1f22275ce507868 63.99MB / 63.99MB 6.9s
=> => sha256:22851f477e0ba5eeda6a732dc7730318beb46198d6c 2.01kB / 2.01kB 0.0s
=> => sha256:9eff237c886f0e41dde81249381ebf9d743d0414c75 7.33kB / 7.33kB 0.0s
=> => sha256:1446afd121c574b13077f4137443114cd8085f1dade 1.86kB / 1.86kB 0.0s
=> => sha256:91e301773f03e9e0fab5c177fe6bfe8daf14e992 49.61MB / 49.61MB 4.5s
=> => sha256:feb30c5ba2d151512d29ff4b92109a74055950 202.59MB / 202.59MB 16.5s
=> => sha256:91e301773f03e9e0fab5c177fe6bfe8daf14e992ab816f1 2.7s
=> => sha256:228270bb5dc5207f6bbf31f0728807c55124238c0b5 6.47MB / 6.47MB 5.9s
=> => sha256:187f660aca77390198af6b5a99675b73370241451 15.54MB / 15.54MB 8.0s
=> => sha256:e09f3b262520c825c821b780f4b95f0d5b9644e3a0d0188 244B / 244B 7.3s
=> => sha256:c20d0b38a7c619a5586d882014c8b57066a6b92b5c1 2.85MB / 2.85MB 7.9s
=> => extracting sha256:15856ca26414127b85cee6d10acbc4cee6eba9070f3f5a04 0.6s
=> => extracting sha256:30ed4c12791345d3f20f66024e1f22275ce507868c508509 2.8s
=> => extracting sha256:feb30c5ba2d151512d29ff4b92109a740559509ef6f3072a 5.4s
=> => extracting sha256:228270bb5dc5207f6bbf31f0728807c55124238c0b5e44dc 0.2s
=> => extracting sha256:187f660aca77390198af6b5a99675b73370241451f974342 0.4s
=> => extracting sha256:e09f3b262520c825c821b780f4b95f0d5b9644e3a0d0188a 0.0s
=> => extracting sha256:c20d0b38a7c619a5586d882014c8b57066a6b92b5c137420 0.2s
=> [internal] load build context                                   0.0s
=> => transferring context: 6.81kB                                    0.0s
=> [2/5] WORKDIR /app                                             0.1s
=> [3/5] COPY requirements.txt .                                  0.0s
=> [4/5] RUN pip install --no-cache-dir -r requirements.txt      70.4s
=> [5/5] COPY . .                                                 0.0s
=> exporting to image                                             0.3s
=> => exporting layers                                              0.3s
=> => writing image sha256:e85d0ed88bb4abddcd6b6082f25f687b6be0b62b85f04 0.0s
=> => naming to docker.io/library/fastapi-project                 0.0s
```

5. Запуск Docker-контейнера

```
→ fastapi-project docker run -d --name fastapi-container -p 8000:8000 fastapi-project 833004f351657fc2fd71589378522437ad20ccdefcedeeabb8289da925b2f3d2
```

fastapi-container

fastapi-project

833004f35165

8000:8000

STATUS

Running (18 minutes ago)

Logs

Inspect

Bind mounts

Exec

Files

Stats

2024-06-08 20:07:55 INFO: Started server process [1]

2024-06-08 20:07:55 INFO: Waiting for application startup.

2024-06-08 20:07:55 INFO: Application startup complete.

2024-06-08 20:07:55 INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)

2024-06-08 20:08:11 INFO: 192.168.65.1:46614 - "GET / HTTP/1.1" 200 OK

2024-06-08 20:08:11 INFO: 192.168.65.1:46614 - "GET /favicon.ico HTTP/1.1" 404 Not Found

2024-06-08 20:11:59 INFO: 192.168.65.1:46848 - "GET / HTTP/1.1" 200 OK

Containers

Give feedback

Container CPU usage

0.17% / 800% (8 CPUs available)

Container memory usage

38.59MB / 3.74GB

Show charts

Search

Only show running containers

	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
	<div>fastapi-container</div> <div>833004f35165</div>	fastapi-project	Running	0.17%	8000:8000	19 minutes ago	<div></div> <div></div> <div></div>

Showing 1 item

Walkthroughs

1 FROM node

2 RUN mkdir -p

3 WORKDIR /app

4 COPY packa

How do I run a container?

2 of 7 completed

Multi-container applications

8 mins