

**САНКТ-ПЕТЕРБУРГСКИЙ НАЦИОНАЛЬНЫЙ
ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО**

Дисциплина: Бэк-энд разработка

Отчет

Лабораторная работа 4
“Docker”

Выполнил:

До Ван Тхиен

К33402

Проверил:

Добряков Д. И.

Санкт-Петербург

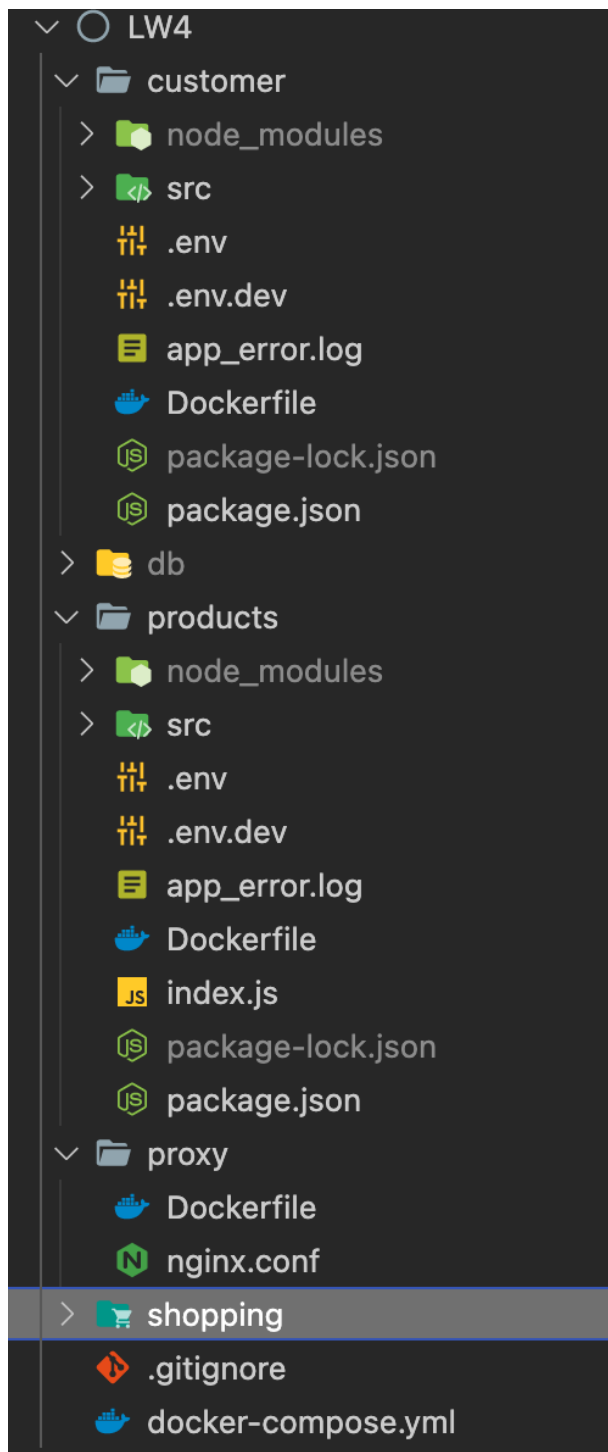
2022 г.

Задача

Упаковать приложение в docker-контейнеры и обеспечить сетевое взаимодействие между различными частями вашего приложения.

Ход работы

1. Структура приложения



2. customer/Dockerfile

```
FROM node

WORKDIR /app/customer

COPY package.json .

RUN npm install

COPY . .

EXPOSE 8001

CMD ["npm", "start"]
```

3. products/Dockerfile

```
FROM node

WORKDIR /app/products

COPY package.json .

RUN npm install

COPY . .

EXPOSE 8002

CMD ["npm", "start"]
```

4. proxy/Dockerfile

```
FROM nginx

RUN rm /etc/nginx/nginx.conf

COPY nginx.conf /etc/nginx/nginx.conf
```

5. proxy/nginx.conf

```
worker_processes 4;

events { worker_connections 1024; }
```

```
http {

    server {

        listen 80;
        charset utf-8;

        location / {
            proxy_pass http://products:8002;
            proxy_http_version 1.1;
            proxy_set_header Upgrade $http_upgrade;
            proxy_set_header Connection 'Upgrade';
            proxy_set_header Host $host;
            proxy_cache_bypass $http_upgrade;
        }

        location ~ ^/shopping {
            rewrite ^/shopping/(.*) /$1 break;
            proxy_pass http://shopping:8003;
            proxy_http_version 1.1;
            proxy_set_header Upgrade $http_upgrade;
            proxy_set_header Connection 'Upgrade';
            proxy_set_header Host $host;
            proxy_cache_bypass $http_upgrade;
        }

        location ~ ^/customer {
            rewrite ^/customer/(.*) /$1 break;
            proxy_pass http://customer:8001;
            proxy_http_version 1.1;
            proxy_set_header Upgrade $http_upgrade;
            proxy_set_header Connection 'Upgrade';
            proxy_set_header Host $host;
            proxy_cache_bypass $http_upgrade;
        }

    }

}
```

6. Connection



Overview **Connections** Channels Exchanges Queues Admin

Connections

▼ All connections (3)

Pagination

Page 1 of 1 - Filter: ☐ Regex ?

Overview			Details			Network		+/-
Name	User name	State	SSL / TLS	Protocol	Channels	From client	To client	
77.234.193.84:64450 ?	pgoymssj	running	•	AMQP 0-9-1	1	57 B/s	46 B/s	
77.234.193.84:64451 ?	pgoymssj	running	•	AMQP 0-9-1	1	18 B/s	14 B/s	
77.234.193.84:64452 ?	pgoymssj	running	•	AMQP 0-9-1	1	57 B/s	46 B/s	

[HTTP API](#) [Server Docs](#) [Tutorials](#) [Community Support](#) [Community Slack](#) [Commercial Support](#) [Plugins](#) [GitHub](#) [Changelog](#)

lw4

/Users/thiend/Russia/semester_6/ITMO-ICT-Backend-2022/labs/K33402/Do_Thien/LW4

CONTAINERS

customer lw4_customer

RUNNING PORT: 8001

shopping lw4_shopping

RUNNING PORT: 8003

products lw4_products

RUNNING PORT: 8002

lw4-nginx-proxy-1 lw4_nginx-proxy

RUNNING PORT: 80

nosql-db mongo

RUNNING PORT: 27018

customer

> customer@1.0.0 start

customer

> NODE_ENV=prod nodemon src/index.js

customer

|

customer

| [nodemon] 2.0.16

customer

| [nodemon] to restart at any time, enter `rs`

customer

| [nodemon] watching path(s): *.*

customer

| [nodemon] watching extensions: js,mjs,json

customer

| [nodemon] starting `node src/index.js`

customer

| Db Connected

customer

| listening to port 8001

lw4-nginx-proxy-1

/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration

lw4-nginx-proxy-1

/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/

lw4-nginx-proxy-1

/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh

lw4-nginx-proxy-1

| 10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf

lw4-nginx-proxy-1

| 10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf

lw4-nginx-proxy-1

/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh

lw4-nginx-proxy-1

/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh

lw4-nginx-proxy-1

/docker-entrypoint.sh: Configuration complete; ready for start up

Вывод

Узнал как Упаковать приложение в docker-контейнеры и обеспечить сетевое взаимодействие между различными частями вашего приложения.