

**САНКТ-ПЕТЕРБУРГСКИЙ НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ  
УНИВЕРСИТЕТ ИТМО**

**Дисциплина:** Бэк-энд разработка

Отчет  
по лабораторной работе №4  
«Docker»

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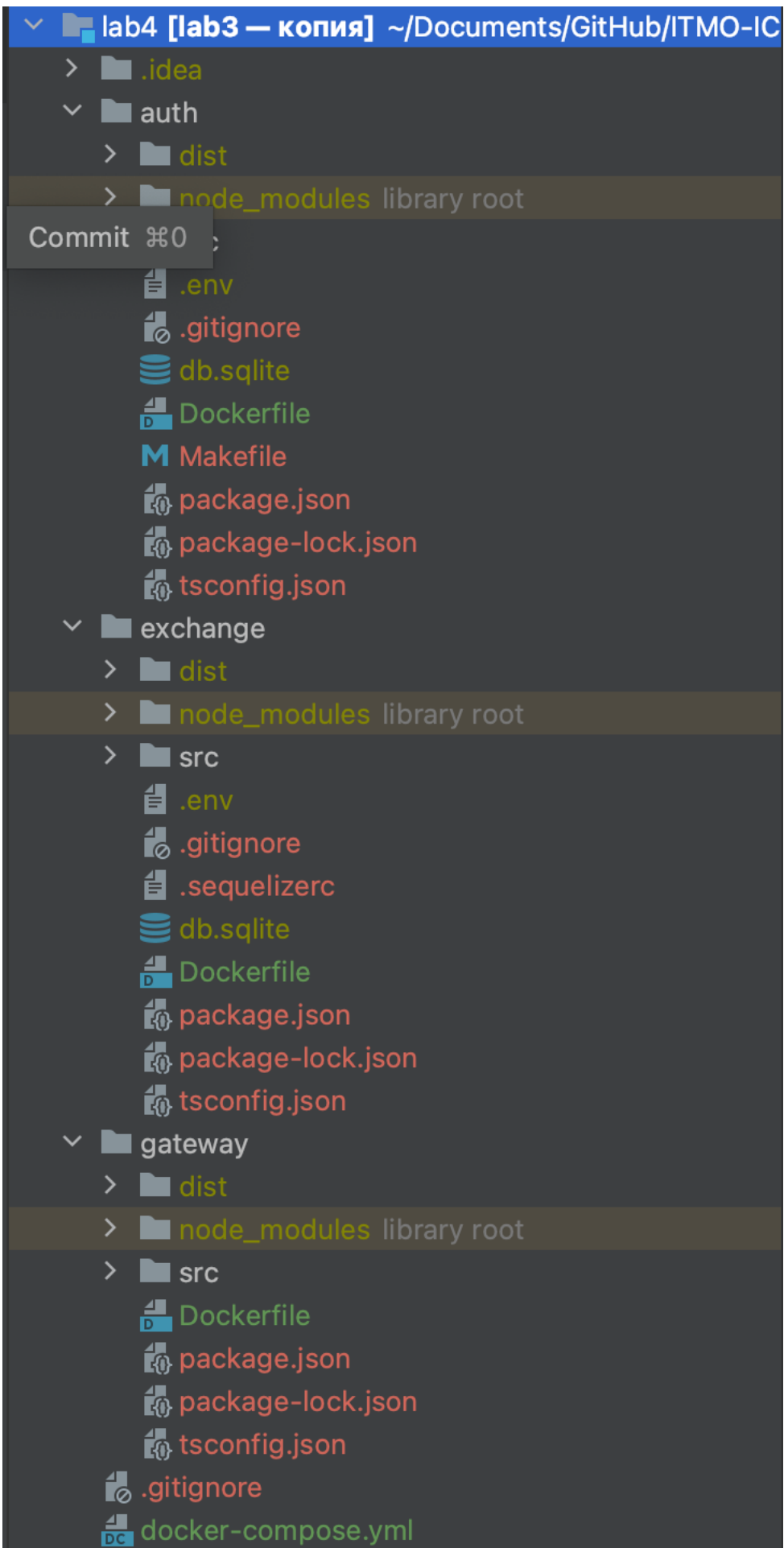
2023 г.

## **Задача**

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

## **Ход работы**

Структура проекта



```
version: '3.8'
```

```
services:
```

```
  gateway:
```

```
    container_name: gateway
```

```
    build:
```

```
      context: ./gateway
```

```
    volumes:
```

```
      - ./gateway:/app
```

```
      - /app/node_modules
```

```
    command: npm run start
```

```
    ports:
```

```
      - 8000:8000
```

```
    restart: always
```

```
    networks:
```

```
      - mynetwork
```

```
  auth:
```

```
    container_name: auth
```

```
    build:
```

```
      context: ./auth
```

```
    volumes:
```

```
      - ./auth:/app
```

```
      - /app/node_modules
```

```
    depends_on:
```

```
      - gateway
```

```
    command: npm run start
```

```
    ports:
```

```
      - 8001:8001
```

```
    restart: always
```

```
networks:
  - mynetwork

exchange:
  container_name: exchange
  build:
    context: ./exchange
  depends_on:
    - gateway
  command: npm run start
  volumes:
    - ./exchange:/app
    - /app/node_modules
  ports:
    - 8002:8002
  restart: always
  networks:
    - mynetwork

networks:
  mynetwork:
    driver: bridge
```

Dockerfile

```
FROM node:14
```

```
WORKDIR /app
```

```
COPY . .
```

```
RUN npm install
```

```
EXPOSE 8002
```

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

```
sudo docker-compose up --build
```

```
gateway |
gateway | > gateway@1.0.0 start /app
gateway | > nodemon ./dist/index.js
gateway |
gateway | [nodemon] 2.0.22
gateway | [nodemon] to restart at any time, enter `rs`
gateway | [nodemon] watching path(s): *.*
gateway | [nodemon] watching extensions: js,mjs,json
gateway | [nodemon] starting `node ./dist/index.js`
gateway | [HPM] Proxy created: / -> http://localhost:8001
gateway | [HPM] Proxy created: / -> http://localhost:8002
gateway | Gateway server is running on port 8000

exchange | Running server on port 8002
exchange | Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Currencies';
exchange | Executing (default): SELECT 1+1 AS result
exchange | Executing (default): PRAGMA INDEX_LIST('Currencies')
exchange | Connection has been established successfully.
exchange | Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Portfolios';
exchange | Executing (default): PRAGMA INDEX_LIST('Portfolios')
exchange | synced models

auth | Running server on port 8001
auth | Executing (default): SELECT name FROM sqlite_master WHERE type='table' AND name='Users';
auth | Executing (default): SELECT 1+1 AS result
auth | Executing (default): PRAGMA INDEX_LIST('Users')
auth | Connection has been established successfully.
auth | Executing (default): PRAGMA INDEX_INFO('sqlite_autoindex_Users_1')
auth | Executing (default): PRAGMA INDEX_INFO('sqlite_autoindex_Users_2')
auth | synced models
```

## Вывод

В ходе данной работы была реализована упаковка микросервисов в docker-контейнеры.