

**САНКТ-ПЕТЕРБУРГСКИЙ НАЦИОНАЛЬНЫЙ
ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО**

Дисциплина: Бэк-энд разработка

Отчет

Лабораторная работа 3
“Микросервисы”

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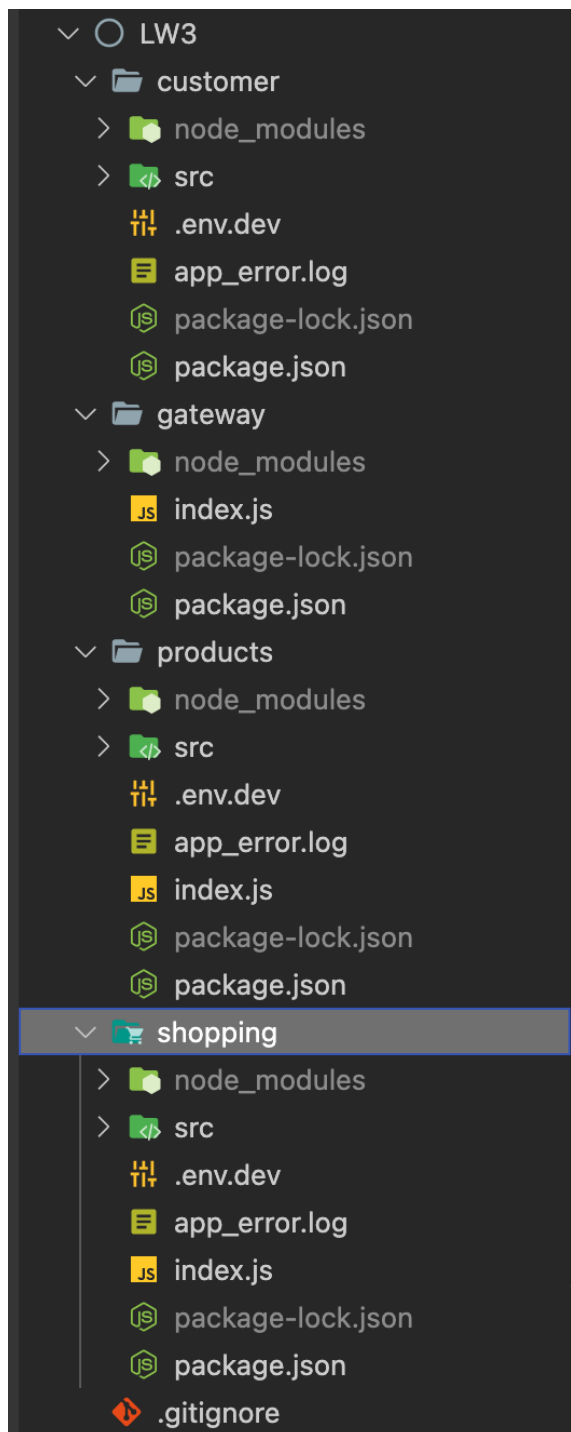
2022 г.

Задача

Реализовать отдельный микросервис, выполняющий содержательную функцию из всего арсенала функций приложения.

Ход работы

1. Структура приложения



2. api/customer.js

```
const CustomerService = require('../services/customer-service');
const UserAuth = require('../middlewares/auth');

module.exports = (app) => {
  const service = new CustomerService();
  app.post('/signup', async (req,res,next) => {
    try {
      const { email, password, phone } = req.body;
      const { data } = await service.SignUp({ email, password, phone});
      return res.json(data);
    } catch (err) {
      next(err)
    }
  });

  app.post('/login', async (req,res,next) => {
    try {
      const { email, password } = req.body;

      const { data } = await service.SignIn({ email, password});

      return res.json(data);
    } catch (err) {
      next(err)
    }
  });

  app.get('/profile', UserAuth ,async (req,res,next) => {

    try {
      const { _id } = req.user;
      const { data } = await service.GetProfile({ _id });
      return res.json(data);

    } catch (err) {
      next(err)
    }
  });
}
```

3. utils/index.js

```
const bcrypt = require('bcryptjs');
const jwt = require('jsonwebtoken');

const { APP_SECRET } = require('../config');

module.exports.GenerateSalt = async() => {
    return await bcrypt.genSalt()
},

module.exports.GeneratePassword = async (password, salt) => {
    return await bcrypt.hash(password, salt);
};

module.exports.ValidatePassword = async (enteredPassword, savedPassword, salt) => {
    return await this.GeneratePassword(enteredPassword, salt) === savedPassword;
};

module.exports.GenerateSignature = async (payload) => {
    return await jwt.sign(payload, APP_SECRET, { expiresIn: '1d' } )
},

module.exports.ValidateSignature = async(req) => {

    const signature = req.get('Authorization');

    if(signature){
        const payload = await jwt.verify(signature.split(' ')[1], APP_SECRET);
        req.user = payload;
        return true;
    }

    return false
};

module.exports.FormateData = (data) => {
    if(data){
        return { data }
    }else{
        throw new Error('Data Not found!')
    }
}
```

4. Postman

The screenshot displays the Postman REST client interface. On the left, a sidebar shows a collection of REST API endpoints under the 'Shopping' folder. The 'POST Customer_Signup' endpoint is selected. The main panel shows the details of this request:

- Method:** POST
- URL:** `{{CUSTOMER_BASE}}/customer/signup`
- Body:** The request body is in JSON format, containing the following fields:

```
{  "email": "thien2@test.com",  "password": "123456",  "phone": "123456789",  "address": "Viet Nam"}
```
- Response:** The response status is 200 OK. The response body is in JSON format, containing the following fields:

```
{  "id": "6290b728bbe25b82502e8b5",  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1bmFpbCI6InRoYWVudk80ZXN0LmNvbSIsImlpZCI6IjYyOTBiNzI4YmZmZTI1YjgyNTAyZThiNSIsIm1ldhCI6MTY1MzY1MTI0MCwiZXhwIjoxNjUzNzY1NjQwLCJ1aWQiOiJ1bmFpbCJ9.uae8R1X1F0Mm1opd3E7cSzP62c-9VuFPMPYeMUigz4"}
```

The interface also includes tabs for Params, Authorization, Headers, Body, Pre-request Script, Tests, and Settings. The 'Body' tab is currently active, and the response is displayed in the 'Pretty' view.

GET

{{CUSTOMER_BASE}}/customer/profile

Send

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
	Key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK Time: 28 ms Size: 504 B Save Response

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "_id": "6290b728bbe25b82502e8b5",
3   "email": "thien2@test.com",
4   "phone": "123456789",
5   "cart": [],
6   "orders": [
7     {
8       "_id": "6290b7a67a928403921a548a",
9       "amount": "800",
10      "date": "2022-05-27T11:05:30.480Z"
11    }
12  ],
13  "createdAt": "2022-05-27T11:34:00.157Z",
14  "updatedAt": "2022-05-27T11:37:24.300Z"
15 }
```

GET

{{PRODUCTS_BASE}}/

Send

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
	Key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK Time: 16 ms Size: 2.21 KB Save Response

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "products": [
3     {
4       "_id": "628fa0af84f62aeaa9eb5f20",
5       "name": "Olive Oil",
6       "desc": "great Quality of Oil",
7       "banner": "http://codergogoi.com/youtube/images/oliveoil.jpg",
8       "type": "oils",
9       "unit": 1,
10      "price": 400,
11      "available": true,
12      "supplier": "Golden seed firming",
13      "__v": 0
14    },
15    {
16      "_id": "628fa0be84f62aeaa9eb5f22",
17      "name": "alphonso mango",
18      "desc": "great Quality of Mango",
19      "banner": "http://codergogoi.com/youtube/images/alphonso.jpeg",
20      "type": "fruits",
21      "unit": 1
22    }
23  ]
24 }
```

PUT

{{PRODUCTS_BASE}}/cart

Send

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

Cookies

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

Beautify

```
1 {
2   ... "_id": "628fa0af84f62aeaa9eb5f20",
3   ... "qty": 2
4 }
```

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 18 ms

Size: 498 B

Save Response

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "product": {
3     "_id": "628fa0af84f62aeaa9eb5f20",
4     "name": "Olive Oil",
5     "desc": "great Quality of Oil",
6     "banner": "http://codergogoi.com/youtube/images/oliveoil.jpg",
7     "type": "oils",
8     "unit": 1,
9     "price": 400,
10    "available": true,
11    "supplier": "Golden seed firming",
12    "__v": 0
13  },
14  "unit": 2
15 }
```

GET

{{SHOPPING_BASE}}/shopping/cart

Send

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
	Key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 34 ms

Size: 671 B

Save Response

Pretty

Raw

Preview

Visualize

JSON

```
1 [
2   {
3     "_id": "6290b7837a928403921a5485",
4     "customerId": "6290b728bbfe25b82502e8b5",
5     "items": [
6       {
7         "product": {
8           "_id": "628fa0af84f62aeaa9eb5f20",
9           "name": "Olive Oil",
10          "desc": "great Quality of Oil",
11          "banner": "http://codergogoi.com/youtube/images/oliveoil.jpg",
12          "type": "oils",
13          "unit": 1,
14          "price": 400,
15          "supplier": "Golden seed firming"
16        },
17        "unit": 2,
18        "_id": "6290b7837a928403921a5486"
19      }
20    ]
21  }
```

Вывод

Узнал как реализовать отдельный микросервис, выполняющий содержательную функцию из всего арсенала функций приложения.