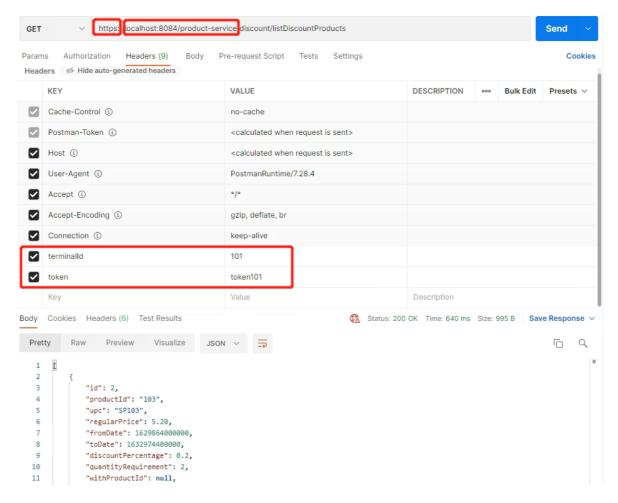
Inventory Management API Document

- 1. For security,API invocations must be authenticated. So each request will put the authentication info into the request when calling the API service and needs Header (terminalld and token).
- 2. use https certificate call and all the requests visit API by Gateway (Port 8084) and then are transferred to relevant microservices.



Product APIs:

1. List all products:

GET https://localhost:8084/product-service/product/list

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
```

```
"code": 200,
    "msg": "success",
    "data": [
        {
            "id": 1,
            "productName": "product101",
            "productId": 101,
            "upc": "SP101",
            "price": 1.50,
            "inventory": 174,
            "stockAlertThreshold": 10,
            "createTime": "2021-08-24T10:17:19",
            "updateTime": "2021-08-24T10:17:24"
        },
            "id": 2,
            "productName": "product102",
            "productId": 102,
            "upc": "SP102",
            "price": 3.20,
            "inventory": 124,
            "stockAlertThreshold": 10,
            "createTime": "2021-08-23T18:18:03",
            "updateTime": "2021-08-23T18:18:09"
        }
   ]
}
```

2. List all products (Pagination):

GET https://localhost:8084/product-service/product/listByPage/1/3

Parameters:

```
Header:
terminalId: 101
token: token101

page: 1
size: 3
```

```
"stockAlertThreshold": 10,
                "createTime": "2021-08-24T10:17:19",
                "updateTime": "2021-08-24T10:17:24"
            },
                "id": 2,
                "productName": "product102",
                "productId": 102,
                "upc": "SP102",
                "price": 3.20,
                "inventory": 124,
                "stockAlertThreshold": 10,
                "createTime": "2021-08-23T18:18:03",
                "updateTime": "2021-08-23T18:18:09"
            },
            {
                "id": 3,
                "productName": "product103",
                "productId": 103,
                "upc": "SP103",
                "price": 5.20,
                "inventory": 192,
                "stockAlertThreshold": 10,
                "createTime": "2021-08-24T18:18:03",
                "updateTime": "2021-08-24T18:18:09"
            }
        ],
        "size": 3,
        "total": 6
   }
}
```

3. Find a product by its ID:

GET https://localhost:8084/product-service/product/findByProductId/104

Parameters:

```
Header:
terminalId: 101
token: token101
product_id: 104
```

```
"id": 4,
    "productName": "product104",
    "productId": 104,
    "upc": "SP104",
    "price": 2.90,
    "inventory": 165,
    "stockAlertThreshold": 10,
    "createTime": "2021-08-25T05:10:39",
    "updateTime": "2021-08-25T05:10:44"
}
```

4. Find a product by UPC number:

GET https://localhost:8084/product-service/product/findByUPC/SP102

Parameters:

```
Header:
terminalId: 101
token: token101

upc: SP102
```

Return

```
"id": 2,
    "productName": "product102",
    "productId": 102,
    "upc": "SP102",
    "price": 3.20,
    "inventory": 124,
    "stockAlertThreshold": 10,
    "createTime": "2021-08-23T18:18:03",
    "updateTime": "2021-08-23T18:18:09"
}
```

5. Edit a product

PUT https://localhost:8084/product-service/product/update

Parameters:

```
Header:
terminalId: 101
token: token101

Body:
{
    "id": 2,
    "productName": "product102",
```

```
"productId": 102,

"upc": "SP102",

"price": 3.20,

"inventory": 200
```

Return

```
{
    "code": 200,
    "msg": "success",
    "data": {
        "id": 2,
        "productName": "product102",
        "productId": 102,
        "upc": "SP102",
        "price": 3.20,
        "inventory": 200,
        "stockAlertThreshold": null,
        "fromDate": null,
        "toDate": null,
        "discountPercentage": null,
        "createTime": null,
        "updateTime": null
   }
}
```

6. subtract stock by product id:

PUT https://localhost:8084/product-service/product/subStock/102/20

Parameters:

```
Header:
terminalId: 101
token: token101

product_id: 102
quantity: 20
```

```
{
    "code": 200,
    "msg": "success",
    "data": "substock product Id 102, success"
}
```

7. Subtract stock by UPC

PUT https://localhost:8084/product-service/product/subStockByUpc/SP102/2

Parameters:

```
Header:
terminalId: 101
token: token101

UPC: 102
quantity: 2
```

Return

```
{
    "code": 200,
    "msg": "success",
    "data": "subtract stock UPC SP106, success"
}
```

8. Check discount products

GET https://localhost:8084/product-service/discount/listDiscountProducts

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
        "id": 2,
        "productId": "103",
        "upc": "SP103",
        "regularPrice": 5.20,
        "fromDate": 1629864000000,
        "toDate": 1632974400000,
        "discountPercentage": 0.2,
        "quantityRequirement": 2,
        "withProductId": null,
       "active": 1,
        "createTime": null,
        "updateTime": null,
        "updateBy": "Tony"
   },
        "id": 3,
        "productId": "105",
        "upc": "SP105",
        "regularPrice": 20.10,
```

```
"fromDate": 1629950400000,
        "toDate": 1632974400000,
        "discountPercentage": 0.2,
        "quantityRequirement": null,
        "withProductId": "106",
        "active": 1,
        "createTime": null,
        "updateTime": null,
        "updateBy": "Tony"
    },
    {
        "id": 4,
        "productId": "104",
        "upc": "SP104",
        "regularPrice": 2.90,
        "fromDate": 1630036800000,
        "toDate": 1632974400000,
        "discountPercentage": 0.3,
        "quantityRequirement": null,
        "withProductId": "102",
        "active": 1,
        "createTime": null,
        "updateTime": null,
        "updateBy": "Tony"
    }
]
```

9. Check discount product by productId

GET https://localhost:8084/product-service/discount/listByProductId/103

Parameters:

```
Header:
terminalId: 101
token: token101
productId: 103
```

```
"id": 2,
    "productId": "103",
    "upc": "sp103",
    "regularPrice": 5.20,
    "fromDate": 1629864000000,
    "toDate": 1632974400000,
    "discountPercentage": 0.2,
    "quantityRequirement": 2,
    "withProductId": null,
    "active": 1,
    "createTime":null,
    "updateTime": null,
    "updateBy": "Tony"
}
```

10. Stock alert list

GET https://localhost:8084/product-service/stockAlert/list

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
    "code": 200,
    "msg": "success",
    "data": [
        {
            "id": 1,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
        },
        {
            "id": 2,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
        },
        {
            "id": 3,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
             "createTime": null,
            "updateTime": null
        },
        {
            "id": 4,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
        }
```

```
]
```

10. Stock alert check from date

GET https://localhost:8084/product-service/stockAlert/listFromDate/2021-06-01

Parameters:

```
Header:
terminalId: 101
token: token101
date: 2021-06-01
```

Return

```
{
    "code": 200,
    "msg": "success",
    "data": [
        {
            "id": 4,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
        },
        {
            "id": 3,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
   ]
}
```

11. Stock alert check by date

GET https://localhost:8084/product-service/stockAlert/listByDate/2021-08-28

Parameters:

```
Header:
terminalId: 101
token: token101
date: 2021-08-28
```

```
{
   "code": 200,
    "msg": "success",
    "data": [
        {
            "id": 4,
            "alertProduct": "product101",
            "alertProductUpc": "SP101",
            "alertCurrentStock": 9,
            "alertContent": "product inventory lower than the alert Threshold,
UPC is :SP101",
            "createTime": null,
            "updateTime": null
       }
   ]
}
```

Cashier APIs:

1. List all cashier terminals

GET https://localhost:8084/cashier-service/cashier/list

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
    "code": 200,
   "msg": "success",
    "data": [
        {
            "id": 1,
            "terminalId": 101,
            "token": "token101",
            "createTime": "2021-08-25T17:32:23",
            "updateTime": "2021-08-25T17:32:27"
        },
            "id": 2,
            "terminalId": 102,
            "token": "token102",
            "createTime": "2021-08-25T17:32:29",
            "updateTime": "2021-08-25T17:32:31"
        },
            "id": 3,
            "terminalId": 103,
```

2. Find a cashier terminal by ID

GET https://localhost:8084/cashier-service/cashier/findByld/103

Parameters:

```
Header:
terminalId: 101
token: token101
terminal_id: 103
```

Return

```
"code": 200,
    "msg": "success",
    "data": {
        "id": 3,
        "terminalId": 103,
        "token": "token103",
        "createTime": "2021-08-25T17:32:34",
        "updateTime": "2021-08-25T17:32:40"
}
```

3. Create a cashier terminal

POST https://localhost:8084/cashier-service/cashier/create/108/token108

Parameters:

```
Header:
terminalId: 101
token: token101

terminal_id: 108
token: token108
```

```
{
    "code": 200,
    "msg": "success",
    "data": "create cashier successfully"
}
```

	id	terminal_id	token	create_time	update_time
	1	101	token101	2021-08-25 17:32	2021-08-25 17:32:2
	2	102	token102	2021-08-25 17:32	2021-08-25 17:32:3
	3	103	token103	2021-08-25 17:32	2021-08-25 17:32:4
	4	104	token104	(Null)	(Null)
	5	105	token105	(Null)	(Null)
	6	106	token106	(Null)	(Null)
	7	107	token107	2021-08-25 17:27	2021-08-25 17:27:4
١	8	108	token108	2021-08-27 08:45	2021-08-27 08:45:5

Order APIs:

1. List all orders

GET https://localhost:8084/order-service/orderHead/list

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
    "code": 200,
    "msg": "success",
    "data": [
        {
            "orderId": "e9c8cecab86d4bfd9c316cb66afe1d4d",
            "customerName": "tony",
            "terminalId": 13,
            "orderAmount": 30.4,
            "orderStatus": "new",
            "paymentMethod": "credit card",
            "payStatus": "pending",
            "createTime": null,
            "updateTime": null
        },
            "orderId": "e5fb7d4c064b1418af607babfe19a790",
            "customerName": "tony",
            "terminalId": 13,
            "orderAmount": 30.4,
            "orderStatus": "new",
            "paymentMethod": "credit card",
            "payStatus": "pending",
            "createTime": null,
```

```
"updateTime": null
}
```

2. List all orders with order details

GET https://localhost:8084/order-service/orderHead/orderListWithOrderDetail

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
   "code": 200,
   "msg": "success",
   "data": [
        {
            "orderId": "6b50af9223b6472217dadd7f60b25192",
            "customerName": "Michael",
            "terminalId": 101,
            "orderAmount": 243.515,
            "orderStatus": "completed",
            "paymentMethod": "credit card",
            "payStatus": "paid",
            "createTime": null,
            "updateTime": null,
            "orderDetailList": [
                {
                    "detailId": "c133e4e7cbbaed4223cf4e38f2b4c473",
                    "orderId": "6b50af9223b6472217dadd7f60b25192",
                    "productId": 105,
                    "productName": "product105",
                    "upc": "SP105",
                    "price": 20.1,
                    "amount": 5,
                    "createTime": null,
                    "updateTime": null
                }
        },
            "orderId": "6e88b7bea2fa32d12c8e79e557744a92",
            "customerName": "Michael",
            "terminalId": 101,
            "orderAmount": 243.515,
            "orderStatus": "pending",
            "paymentMethod": "credit card",
            "payStatus": "pending",
            "createTime": null,
            "updateTime": null,
```

```
"orderDetailList": [
                {
                    "detailId": "f4097d9fe79fe2f4be210b45b848a6c1",
                    "orderId": "6e88b7bea2fa32d12c8e79e557744a92",
                    "productId": 105,
                    "productName": "product105",
                    "upc": "SP105",
                    "price": 20.1,
                    "amount": 5,
                    "createTime": null,
                    "updateTime": null
                },
                    "detailId": "eadf02aa0992e2fbb221689fde875966",
                    "orderId": "6e88b7bea2fa32d12c8e79e557744a92",
                    "productId": 106,
                    "productName": "product106",
                    "upc": "SP106",
                    "price": 11.5,
                    "amount": 10,
                    "createTime": null,
                    "updateTime": null
                }
            ]
       }
   ]
}
```

3. List all orders (Pagination)

GET https://localhost:8084/order-service/orderHead/orderListByPage/1/2

Parameters:

```
Header:
terminalId: 101
token: token101

page: 1
size: 2
```

```
"createTime": null,
                "updateTime": null
            },
                "orderId": "50d332706c0c3cdcc22b8d2e951d71fb",
                "customerName": "ZHOU",
                "terminalId": 14,
                "orderAmount": 18.08,
                "orderStatus": "new",
                "paymentMethod": "credit card",
                "payStatus": "pending",
                "createTime": null,
                "updateTime": null
            }
        ],
        "total": 7,
        "size": 2
   }
}
```

4. Find all products purchased and quantities of each product in an order

GET https://localhost:8084/order-service/orderDetail/orderDetailByOrderId/8c81e09be5e39158da e3147caaa907b2

Parameters:

```
Header:
terminalId: 101
token: token101

order_id: 8c81e09be5e39158dae3147caaa907b2
```

```
{
   "code": 200,
   "msg": "success",
   "data": [
        {
            "detailId": "9808fcd4426b39110c1565a07cdfa26d",
            "orderId": "8c81e09be5e39158dae3147caaa907b2",
            "productId": 105,
            "productName": "product105",
            "upc": "SP105",
            "price": 20.1,
            "amount": 5,
            "createTime": null,
            "updateTime": null
        },
            "detailId": "9cf8a62e0ab535e01f7fc9ed779a9bd9",
            "orderId": "8c81e09be5e39158dae3147caaa907b2",
            "productId": 106,
            "productName": "product106",
```

5. Add a product to an order by UPC and quantity

PUT https://localhost:8084/order-service/order-Head/addProductToOrder

Parameters:

```
Header:
terminalId: 101
token: token101
Body:
    "customerName": "WANG",
   "terminalId": 14,
    "orderId": "8c81e09be5e39158dae3147caaa907b2",
    "items": [
        "upc": "SP103",
        "amount": 5
   },
     {
        "upc": "SP104",
        "amount": 10
    }
}
```

Return

```
{
    "code": 200,
    "msg": "success",
    "data": "add product to order 8c81e09be5e39158dae3147caaa907b2, success"
}
```

6. Find an order by ID/Get total price of an order

GET <u>https://localhost:8084/order-service/orderHead/findByOrderId/50d332706c0c3cdcc22b8d2e9</u> <u>51d71fb</u>

Parameters:

```
Header:
terminalId: 101
token: token101

order_id: 50d332706c0c3cdcc22b8d2e951d71fb
```

Return

```
{
   "code": 200,
    "msg": "success",
    "data": {
        "orderId": "50d332706c0c3cdcc22b8d2e951d71fb",
        "customerName": "ZHOU",
        "terminalId": 14,
        "orderAmount": 18.08,
        "orderStatus": "new",
        "paymentMethod": "credit card",
        "payStatus": "pending",
        "createTime": null,
        "updateTime": null,
        "orderDetailList": [
                "detailId": "db310054ac86b3af1541e5842b47fbeb",
                "orderId": "50d332706c0c3cdcc22b8d2e951d71fb",
                "productId": 102,
                "productName": "product102",
                "upc": "SP102",
                "price": 3.2,
                "amount": 5,
                "createTime": null,
                "updateTime": null
            }
       ]
    }
}
```

7. Create an order

POST https://localhost:8084/order-service/orderHead/create

Parameters:

```
Header:
terminalId: 101
token: token101

Body:
{
    "customerName": "Michael",
    "terminalId": 101,

    "orderStatus": "new",
    "paymentMethod": "credit card",
    "payStatus": "",
    "items": [
```

```
{
    "productId": 105,
    "amount": 5
},
    {
        "productId": 106,
        "amount": 10
}
]
```

Return

```
{
    "code": 200,
    "msg": "success",
    "data": {
        "orderId": "6e88b7bea2fa32d12c8e79e557744a92"
    }
}
```

8. Close an order when payments are made in full

Parameters:

```
Header:
terminalId: 101
token: token101

order_id: 6b50af9223b6472217dadd7f60b25192
```

Return

If not paid yet, will response

```
{
   "code": 200,
   "msg": "success",
   "data": "payment not done, please pay the order first"
}
```

If paid in full, will response

```
{
    "code": 200,
    "msg": "success",
    "data": "payments are made in full, close order
6b50af9223b6472217dadd7f60b25192 successfully"
}
```

9. sales statistics of past xx days

GET https://localhost:8084/order-service/orderDetail/salesStatistic/7

Parameters:

```
Header:
terminalId: 101
token: token101

past_days: 7
```

```
{
    "code": 200,
   "msg": "success",
    "data": [
        {
            "upc": "SP103",
            "productId": 103,
            "productName": "product103",
            "price": 5.2,
            "totalSales": 49
        },
            "upc": "SP104",
            "productId": 104,
            "productName": "product104",
            "price": 2.9,
            "totalsales": 35
        },
            "upc": "SP101",
            "productId": 101,
            "productName": "product101",
            "price": 1.5,
            "totalsales": 30
        },
            "upc": "SP106",
            "productId": 106,
            "productName": "product106",
            "price": 11.5,
            "totalSales": 20
        },
            "upc": "SP102",
            "productId": 102,
            "productName": "product102",
            "price": 3.2,
            "totalSales": 16
        },
        {
            "upc": "SP105",
```

And the report will be saved into the sales_report table in database for further check.

```
Feport_jid report_detail repor
```

10. Recall check by UPC

GET https://localhost:8084/order-service/orderHead/recallCheck/SP104

Parameters:

```
Header:
terminalId: 101
token: token101
upc: SP104
```

```
{
   "code": 200,
    "msg": "success",
    "data": [
        {
            "orderId": "cef40fc5e54045e12337f7d9348bb383",
            "customerName": "tony",
            "terminalId": 13,
            "orderAmount": 51.0,
            "orderStatus": "new",
            "paymentMethod": "credit card",
            "payStatus": "pending",
            "createTime": null,
            "updateTime": null,
            "orderDetailList": [
                    "detailId": "df724ac8987f5aa1b8bcf6a3ced45a6d",
                    "orderId": "cef40fc5e54045e12337f7d9348bb383",
                    "productId": 101,
                    "productName": "product101",
                    "upc": "SP101",
                    "price": 1.5,
                    "amount": 5,
                    "createTime": null,
                    "updateTime": null
                },
                {
                    "detailId": "4223184b5db83e2ea9fb4323da95cdd7",
```

```
"orderId": "cef40fc5e54045e12337f7d9348bb383",
            "productId": 104,
            "productName": "product104",
            "upc": "SP104",
            "price": 2.9,
            "amount": 5,
            "createTime": null,
            "updateTime": null
        },
            "detailId": "1bbf6b2efce6dcd725dd131e2911a08b",
            "orderId": "cef40fc5e54045e12337f7d9348bb383",
            "productId": 104,
            "productName": "product104",
            "upc": "SP104",
            "price": 2.9,
            "amount": 5,
            "createTime": null,
            "updateTime": null
        }
   ]
},
{
    "orderId": "024b585af40cec2399bb0ae428d8c512",
    "customerName": "YY",
    "terminalId": 14,
    "orderAmount": 22.0,
    "orderStatus": "new",
    "paymentMethod": "credit card",
    "payStatus": "pending",
    "createTime": null,
    "updateTime": null,
    "orderDetailList": [
        {
            "detailId": "d8b3a1f1c2cc1576d5e0c9ba43f21cd2",
            "orderId": "024b585af40cec2399bb0ae428d8c512",
            "productId": 101,
            "productName": "product101",
            "upc": "SP101",
            "price": 1.5,
            "amount": 5,
             "createTime": null,
            "updateTime": null
        },
        {
            "detailId": "cf3389578d6e19f67c79af99a35c04e6",
            "orderId": "024b585af40cec2399bb0ae428d8c512",
            "productId": 104,
            "productName": "product104",
            "upc": "SP104",
            "price": 2.9,
            "amount": 5,
            "createTime": null,
            "updateTime": null
        }
   ]
}
```

Payment APIs:

1. List all payments

GET https://localhost:8084/order-service/payment/list

Parameters:

```
Header:
terminalId: 101
token: token101
```

```
{
   "code": 200,
   "msg": "success",
   "data": [
        {
            "id": 1,
            "orderId": "8c81e09be5e39158dae3147caaa907b2",
            "orderAmount": 243.515,
            "paymentMethod": "credit card",
            "paymentStatus": "paid",
            "createTime": null,
            "updateTime": null
        },
            "id": 2,
            "orderId": "6b50af9223b6472217dadd7f60b25192",
            "orderAmount": 243.515,
            "paymentMethod": "credit card",
            "paymentStatus": "paid",
            "createTime": null,
            "updateTime": null
        },
            "id": 3,
            "orderId": "6e88b7bea2fa32d12c8e79e557744a92",
            "orderAmount": 243.515,
            "paymentMethod": "credit card",
            "paymentStatus": "pending",
            "createTime": null,
            "updateTime": null
   ]
}
```

2. List all payments made for an order

GET https://localhost:8084/order-service/payment/listByOrderId/6e88b7bea2fa32d12c8e79e5577 44a92

Parameters:

```
Header:
terminalId: 101
token: token101

order_id: 6e88b7bea2fa32d12c8e79e557744a92
```

Return

3. Update payment status to paid by orderId

PUT https://localhost:8084/order-service/payment/paymentStatusUpdate/6e88b7bea2fa32d12c8 e79e557744a92/paid

Parameters:

```
Header:
terminalId: 101

order_id: 6e88b7bea2fa32d12c8e79e557744a92
status: paid
```

```
{
    "code": 200,
    "msg": "success",
    "data": "payment status updates to paid"
}
```