Assignment 1, A Shipping and Transportation Web Services API Development

In this assignment, you are asked to develop Restful service APIs for a shipping ordering service.

***Requirements:***

1, Your APIs need to cover the basic requirements for a shipper to ship his goods. In general,

* Create a shipper account
* Create a shipping order
* Retrieve carriers billing for different shipments
* Tracking the shipments and transportation

2, Restful APIs designing with tools, such as swagger-gen(<https://swagger.io/>), ApiFox(https://www.apifox.com/), ApiPost7(<https://www.apipost.cn/>).

3, URI versioning and JSON/XML payloads for each service.

4, API-key and additional authentication are optional.

在本作业中，要求您为配送订购服务开发Restful服务api。

要求:

您的api需要涵盖托运人运输货物的基本要求。一般来说,

创建托运人账户

创建发货单

检索不同货物的承运人账单

跟踪发货和运输

2、Restful api设计工具，如swagger-gen(https://swagger.io/)， ApiFox(https://www.apifox.com/)， ApiPost7(https://www.apipost.cn/)。

3、每个服务的URI版本和JSON/XML有效负载。

4、api密钥和附加认证是可选的。

***Delivery:***

1, You need to archive the project source code and running and testing screen capture to a github repository.

2, Providing a system design report is necessary.

3, Hand in due to 2023-4-30

Reference:

<https://www.huaweicloud.com/solution/freight-forwarder/details.html>

<http://idiaodu.com/>

<https://www.aftership.com/docs/shipping/quickstart/api-quick-start>

<https://developers.google.com/maps/documentation/transportation-logistics/on-demand-rides-deliveries-solution?hl=zh-cn#components>

<https://www.apispace.com/shipengine/api/se-api/apiDocument>

Assignment 2, Implement the shipping Rest APIs

In this assignment, you are asked to implement the shipping REST APIs with spring boot + sping mvc + jpa/batis + mysql + jwt.

***Requirements:***

1, Design and implement the shipping and transportation services with Restful API.

2, API Authentication and authorization using spring security and JWT is optional.

3, Unit testing for components is optional.

4, You are encouraged to apply openapi document in your program.

5, Using Curl/Postman to test the APIs.

***Delivery:***

1, You need to archive the project source code and running and testing screen capture to a github repository.

2, Provide a system design report.

3, Hand in due to 2023-5-22

Reference:

Assignment 3, Lightweight Web-end Development

In this assignment, you are asked to develop a web page with Vue.js/React.js to invoke a server side service.

***Requirements:***

1, Develop a web front-end with Vue.js/React.js.

2, Ajax to call a restful service.

**Delivery:**

1, You need to archive the project source code and running and testing screen capture to a github repository.

2, Provide a design report.

3, Hand in due to 2023-5-22

Assignment 4, A shipping Micro-services development with Spring-Cloud

In this assignment, you are asked to refactor the shipping server-end using spring cloud.

***Requirements:***

1, Re-structuring your shipping services as micro-services.

2, Service discovery with Eureka is necessary.

4, Oauth2 authorization server integration **is optional**.

5, Expose API to external users with Gateway

6, Calling a restful service from another service using Openfeign.

***Delivery:***

1, You need to archive the project source code and running and testing screen capture to a github repository.

2, Provide a design report.

3, Hand in due to 2023-6-xx

Reference: