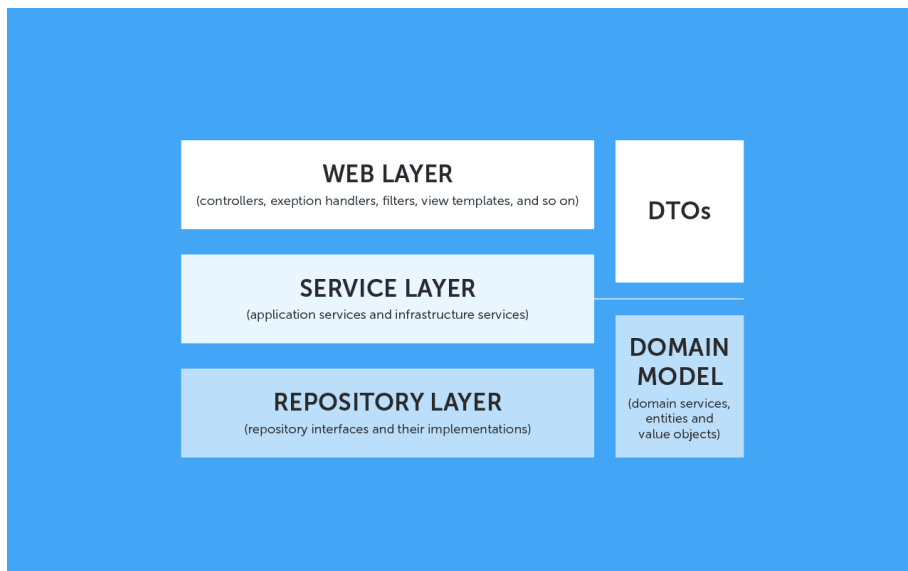


Architecture

I used the most common architecture of Spring boot to develop this project, dividing the project into three layers: Controller, Service, and Repository.



- The project requires all endpoints to use basic auth, so I rewrote the security configuration and added a filter before every request to check the name and password used by the user are correct. And to ensure it corresponds to the id of the safebox in the request.
- To ensure that passwords are strong enough, a password check is performed at Service when the user calls API to create a new safebox. The password needs to be more than 8 characters and contain upper and lower case characters, numbers, and special symbols.
- As the project requirements don't include the building of a database, so I used dummy data at the repository layer.

The fake DB has 3 safebox:

Safebox1: id=1, name=safebox1, password=safebox1_123456

Safebox2: id=2, name=safebox2, password=safebox2_123456

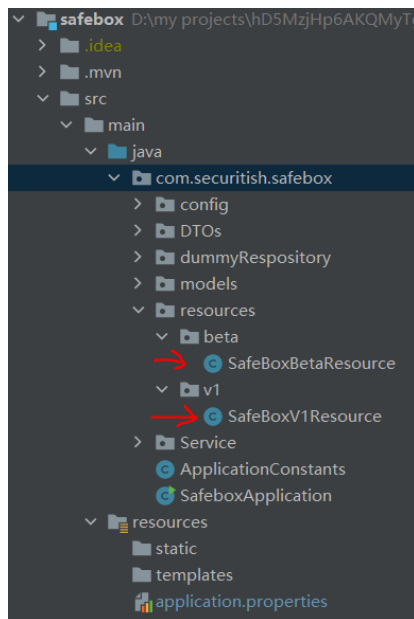
Safebox3: id=3, name=safebox3, password=safebox3_123456

- In version 1, the use of a token is required to secure the API. I used the following dependencies to generate the token.

```
<dependency>
  <groupId>io.jsonwebtoken</groupId>
  <artifactId>jjwt</artifactId>
  <version>0.9.1</version>
</dependency>
<dependency>
  <groupId>javax.xml.bind</groupId>
  <artifactId>jaxb-api</artifactId>
</dependency>
<dependency>
  <groupId>com.sun.xml.bind</groupId>
  <artifactId>jaxb-impl</artifactId>
  <version>4.0.0</version>
</dependency>
```

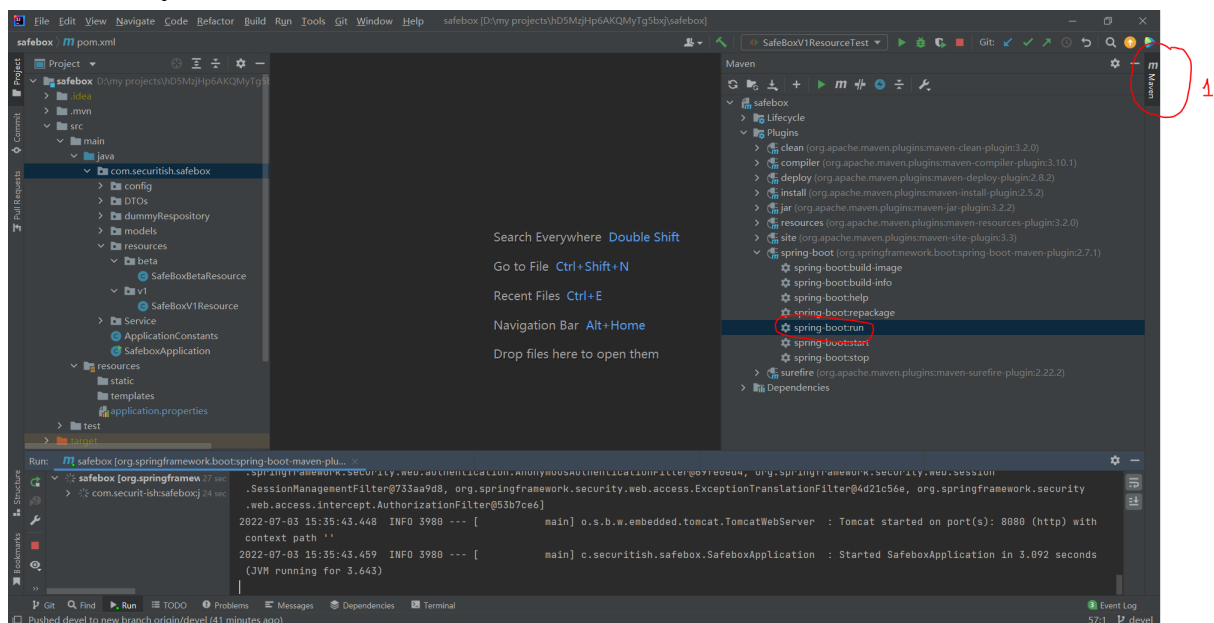
How to use APIs

The project is in the folder “safebox”. There are two versions of APIs: beta and v1.

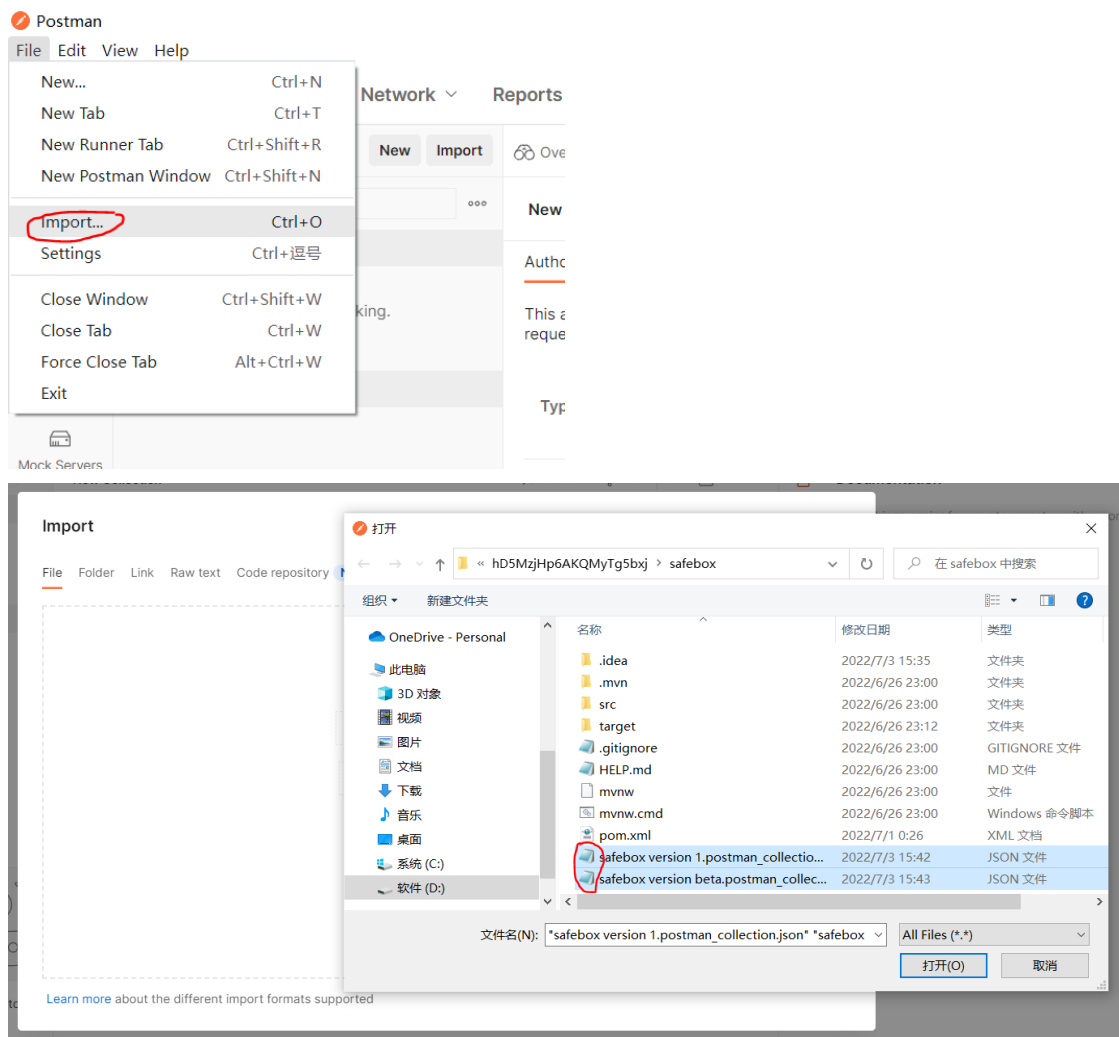


To use it, you must download the project and open it using IntelliJ (make sure that your pc has been installed “Maven”).

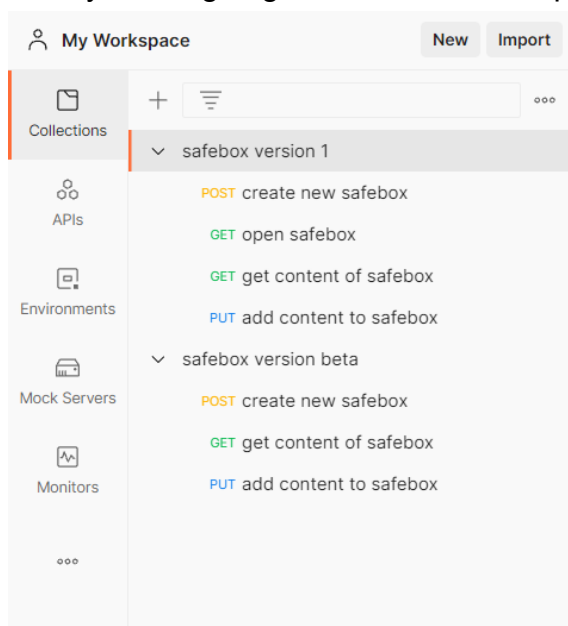
Once, you have the project opened. You need to run it. Find the button “Maven” on the right, click it, then find the button “spring-boot run” and double-click it to run the project (make sure that port 8080 is free). Waiting for the project to run successfully...



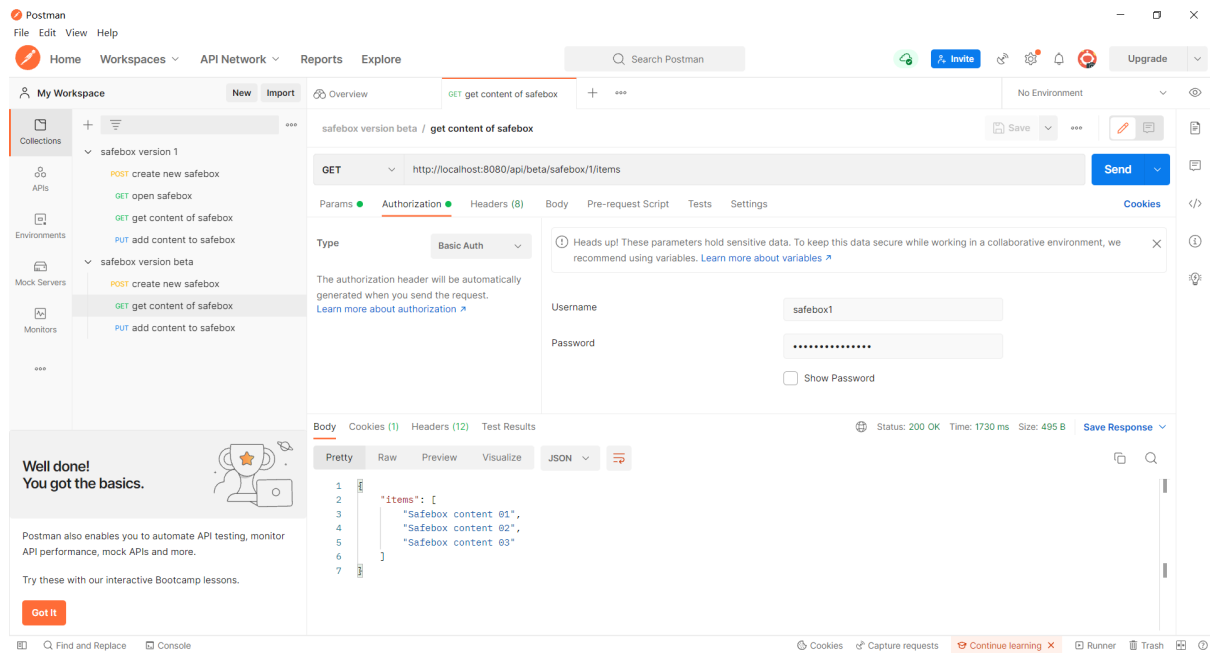
How to use these Apis. You need to open postman and import the two json files in the project folder.



Then you are going to have the API requests created.



You can use these API requests to test the project.



In addition to this, there are automated tests in the project. Open the “test” folder and there are two test files inside: “SafeboxBetaResourceTest” and “SafeboxV1ResourceTest”.

You can open any one of them. and click on the green button on the right to run the test. The results will be displayed in the console. According to the image below, we can see that all the tests have passed.

