Library Homework Assignment

BorrowedItemRequest

Design

BurrowedItemResponse

Models

Item:

1.UniqueId 3.Type

2.ItemId 4.Title

dto

TokenRequest

User:

1.Userid

TokenResponse

* The design: in the design, I adopted Singleton design pattern.

• object-oriented programming skills: I implemented basic OOP principles such as Interfaces, Inheritance, abstraction

• production quality: the naming convention of classes, methods and variables were not ambiguous

• maintainability: I implemented SOLID principle for example a class has only one specific function that is Single responsibility, open closed principle and Interfaces segregation and Dependency Inversion

• extensibility: the classes and methods have single responsibilities which means they are decoupled and give room for extensibility

• scalability (Will your design work with say 1 million books in the library): the application is synchronised which makes it scalable and thread safe

**Deployment**:

1. Import and open the source code into any IDE that supports Java and SpringBoot.
2. Put the CSV File in a directory on local PC.
3. Point the file path to the directory where the file is located on your local system (for example: C:\\Users\\bradesin\\Documents\\Berenberglibrary.csv).
4. Click on the class LibraryApplication.java to run and the maven dependency manager will download all the dependencies.

**Testing**

1. I used swagger UI as my Rest Client, it can be launch on <http://localhost:8080/swagger-ui/index.html#/>
2. Click on the “/api/v1/library/getToken/” endpoint and click try it out to test.
3. Input this key(“SecretKeyToGenJWTsForBerenberLibrary”) for the clientSecret parameter.
4. Then click on Execute, you should have a JWT token from the server.
5. Click on the “Authorize” button, insert the token in the textbox and close.
6. To test the end points, retrieve test parameters from the CSV file and put in the appropriate tag.
7. At the end of each call, the endpoint functionality can be confirmed by checking the CSV FILE