

Problem Statement:

You need to build backend microservices (REST API) where a university student can browse all library books and hold a maximum of 3 books for not more than 2 weeks. The mobile or website will notify the student with relevant information such as returning withheld books or whenever new books are added.

User Stories:

1. As a student, I can do self-registration using my student Id and login to mobile or website.
2. As a student, I can browse all the available books and see book details.
3. As a student, I can withhold a book for max 2 weeks.
4. As a student, I can view my reserved books.
5. As a student, I want to get notification when the return of a book is near due. (3 days before due)
6. As a student, I want to view and update my own profile.

Non-function Requirements:

- Our services need to be highly available.
- Our services need to be secured.

Data

- Student: ID, 1 portrait photo, name, phone number, email.
- Book: Id, Author, Title, Category, Description

Submissions Required:

1. API design of the backend services using Swagger.
2. Develop backend services with following API
 - a. API for registration and login.
 - b. API to get book details should require authorization.
 - c. 1 API to demonstrate communication between the microservices.
 - d. Provide source code with running application instructions.

Important Notes:

- Build backend microservices with Spring boot application.
- Build backend microservices with Docker and Kubernetes is a plus.
- Use Git for version control and submit source code with git metadata (.git folder).
- Codebase should be well organized, including code conventions, folder structure, a README.md with clear instructions on how to set up and run the project.