

IT-314

Software Engineering

Lab 7

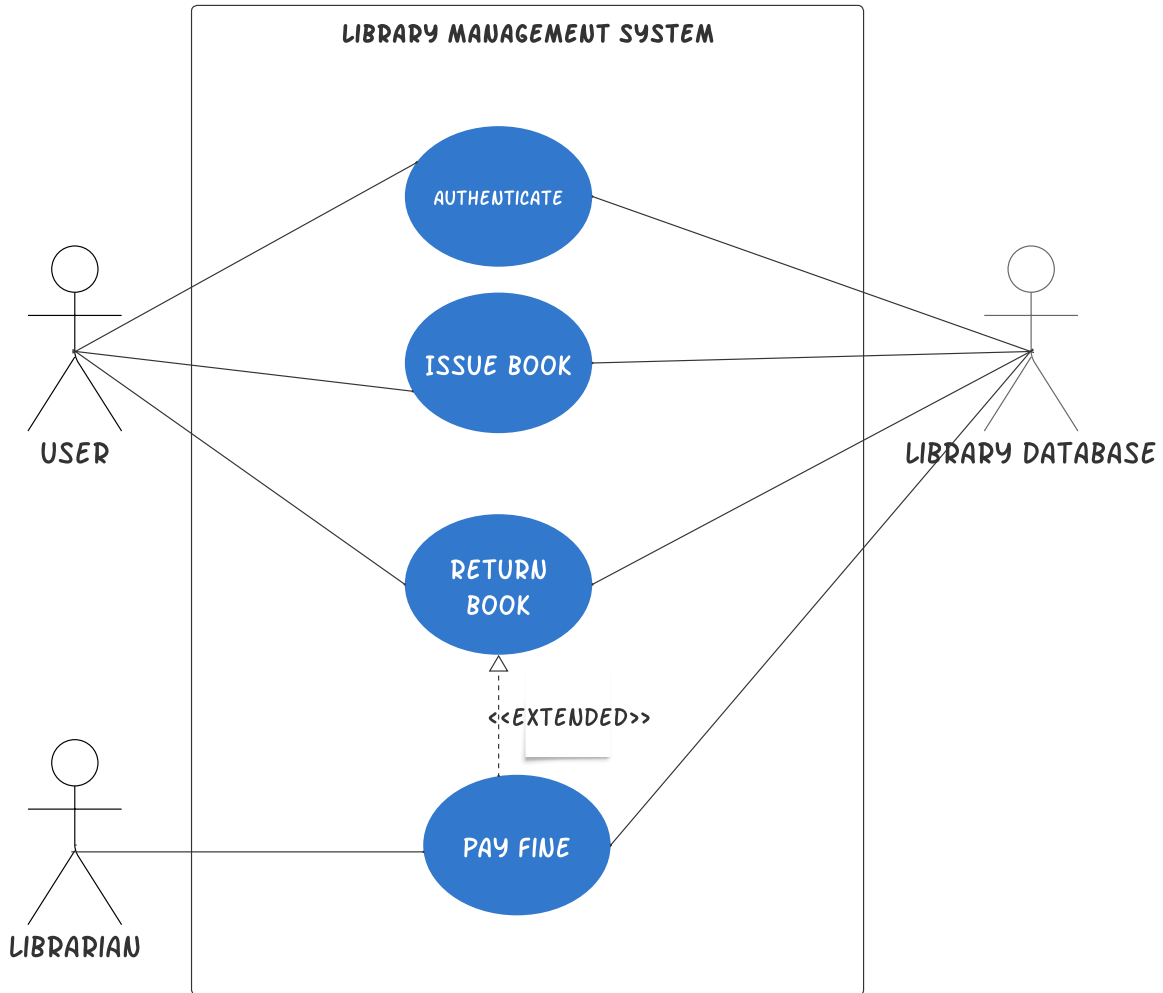
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Q-1-1) USE CASE DIAGRAM

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Use Case Documentation for "issue book" Use Case

1. **Use Case Name:** Issue Book

2. **Description:** This use case illustrates the process of a registered user issuing a book from the library.

3. **Primary Actor:** Registered Student

4. **Secondary Actor:** Library Database and Librarian

5. **Preconditions:**

- The registered student must be logged in and authenticated by the librarian.
- The library must have the book that is being issued.
- The student must stay within the maximum book borrowing capacity.

6. **Postconditions:**

- The book is marked as issued
- The due date for returning the book is set.
- The Number of borrowed books has increased by one.

7. **Main Flow:**

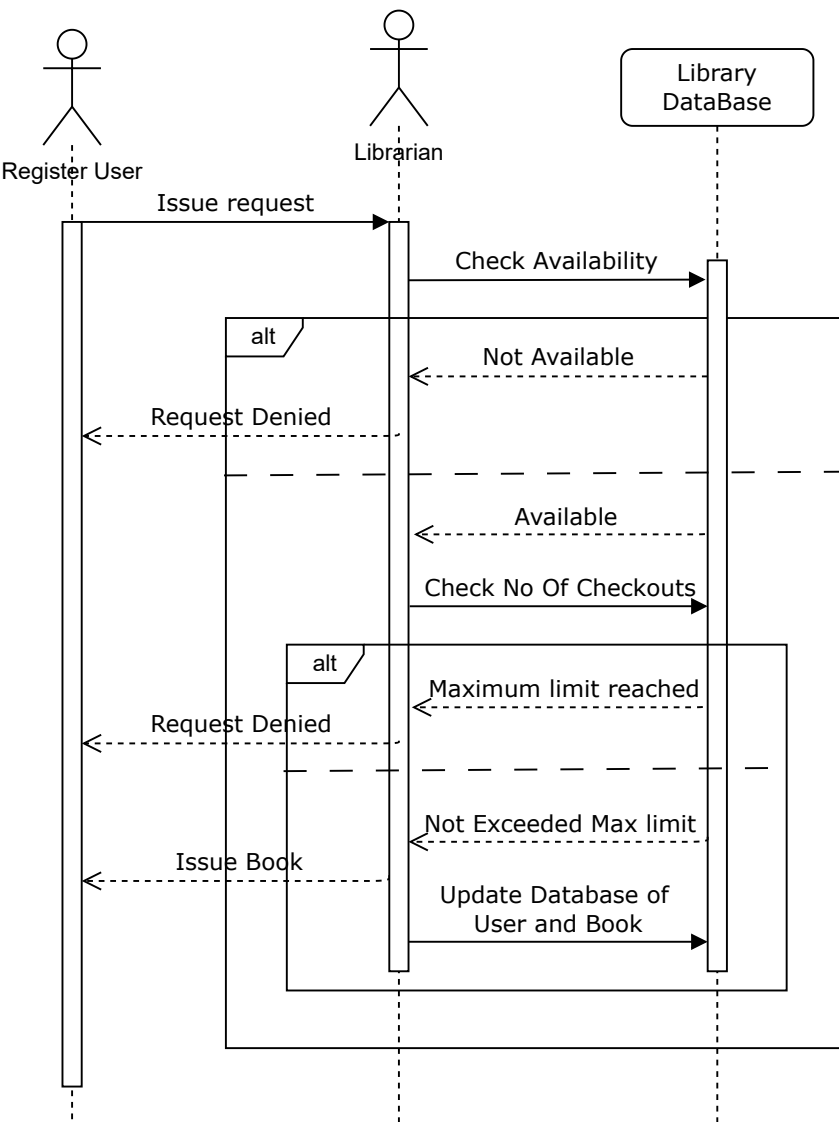
- The registered student requests to issue a book.
- The system authenticates the student.
- The system checks if the requested book is in stock.
- The system checks if the student reached his maximum book borrowing limit.
- The system marks it as issued to the student.
- The system sets the due date for returning the book.
- The system notifies the student and the librarian about the successful issuance.

8. **Alternate Flows:**

- If the book is unavailable, the system notifies the student that the book cannot be issued at the moment.
- If the student has reached the maximum book borrowing limit, the system notifies that the maximum limit has been reached.
- If the user is not authenticated, the system notifies the librarian.

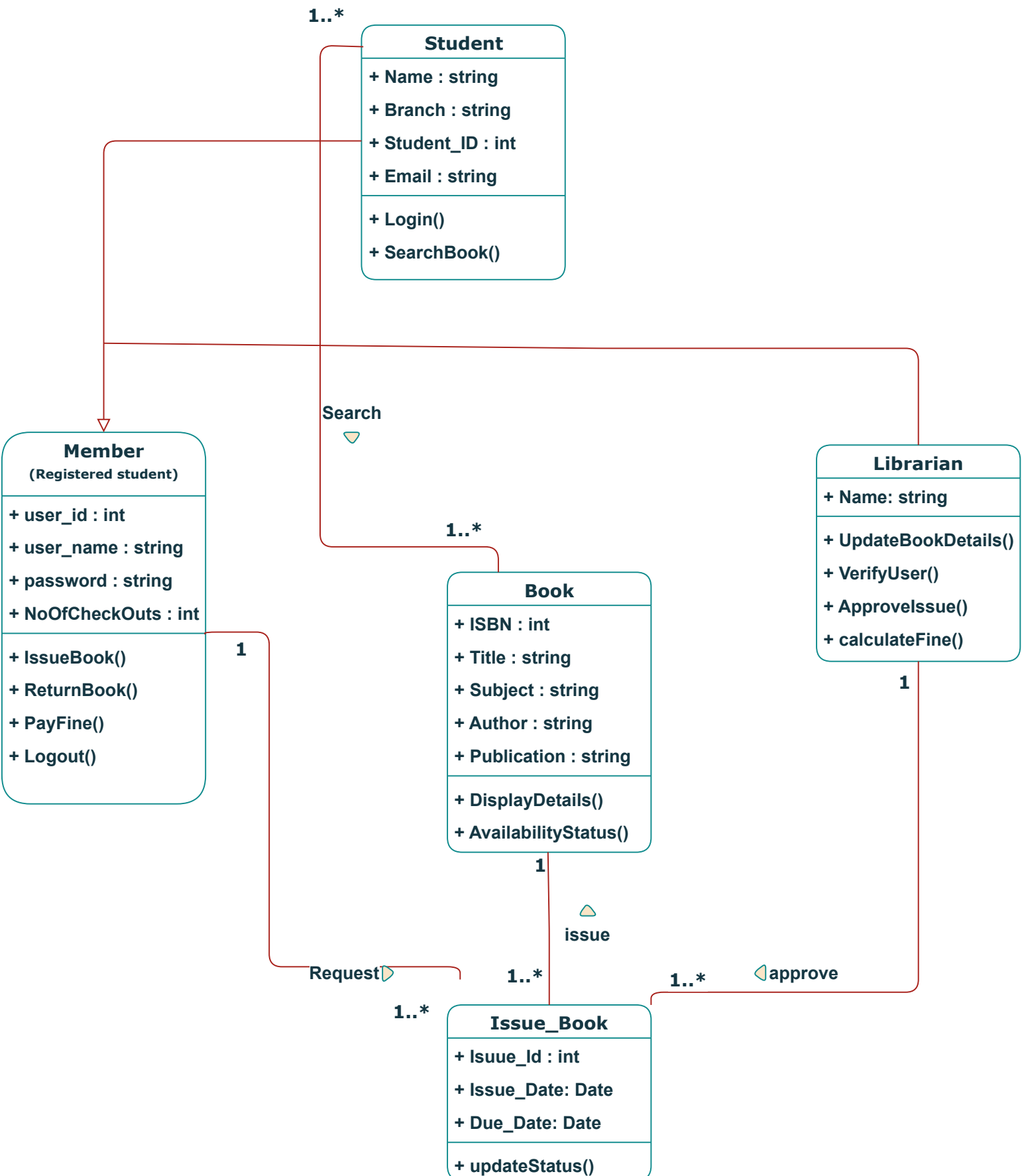
Q-1-2)

*The sequence diagram
for the “issueBook”
use case.*



Q-1-3)

*The sequence diagram
for the “issueBook”
use case.*



Q-2) The sequence diagram

