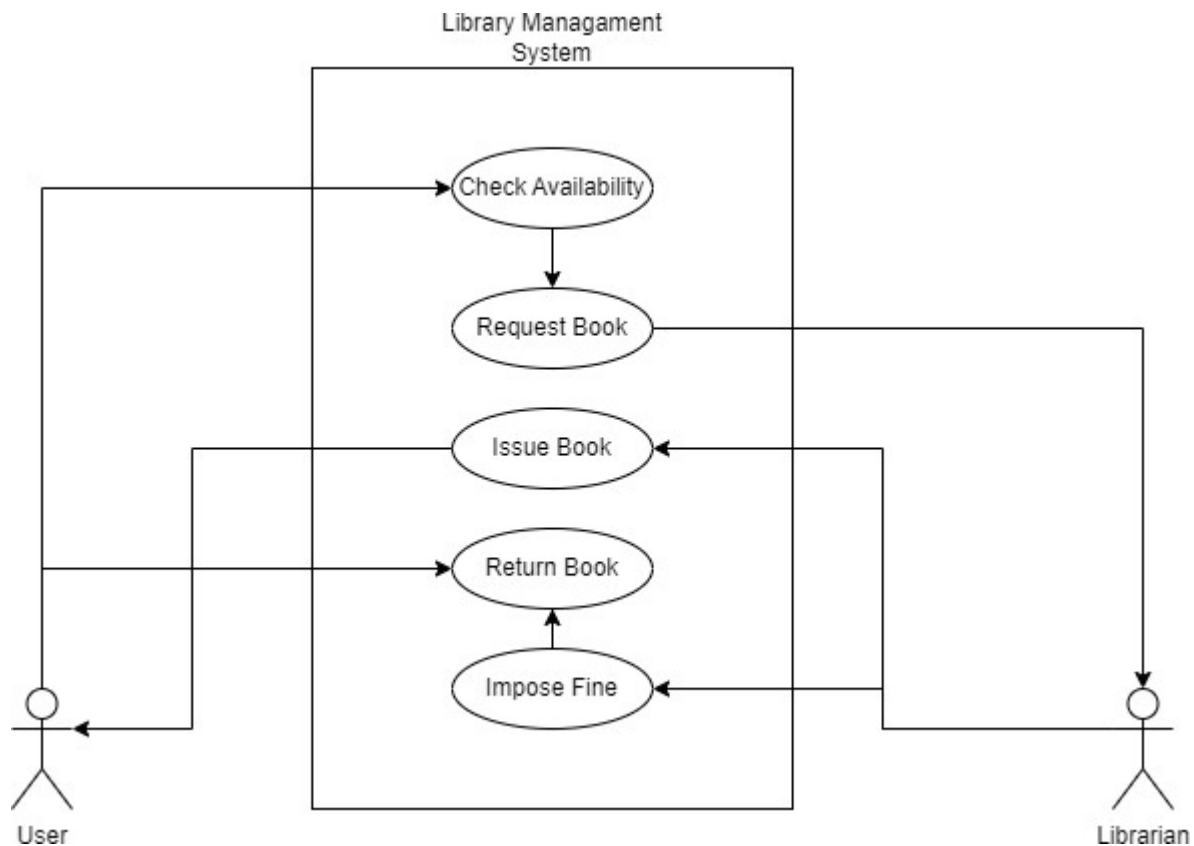


# Software Engineering Lab 7

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## Question 1.1



## Question 1.2

### Use Case Documentation

**Name:** Issue book from the library

**Primary Actor:** Librarian

**Other Actors:** Students, faculty, database (consisting of a catalog of books and personal information of users)

**Stakeholders and Interests:**

- *Librarian:*

Wants to check if the user who has requested to issue a book is a registered user or not, issue a book to a registered user and impose late penalty as applicable

- *Student / Faculty:*

Wants to check the availability of any book in the library and request to issue an available book

**Preconditions:** There should be an administrator who can access the database and

**Success Guarantee / Goals:** The status of a book in catalog is updated to be issued. The student's profile is updated and stores information about the issue of the book.

**Trigger:** Student visits librarian with a book to be issued

**Main Scenario:**

1. Student arrives at the librarian with the book to be issued.
2. Librarian verifies the student to check if he is a member of the library or not.
3. Librarian updates the book's status to be issued.
4. Librarian updates the issued books in the student's profile.
5. Student gets the book issued to him/her.

**Extensions (Alternative Flow):**

\*a At any time, if the system fails:

1. The system can recover the prior state.
2. If prior state has anomalies,
  - a. the process is canceled and started again
  - b. librarian can manually update the issue process

\*b At any time, student asks to not issue book

1. The issue transaction is canceled and the book is returned to the librarian.
- 2.a If the user is invalid, the issue transaction is canceled and the book is returned to the librarian.
- 3.a If the book is held by someone, the issue transaction is canceled and the book is returned to the librarian.

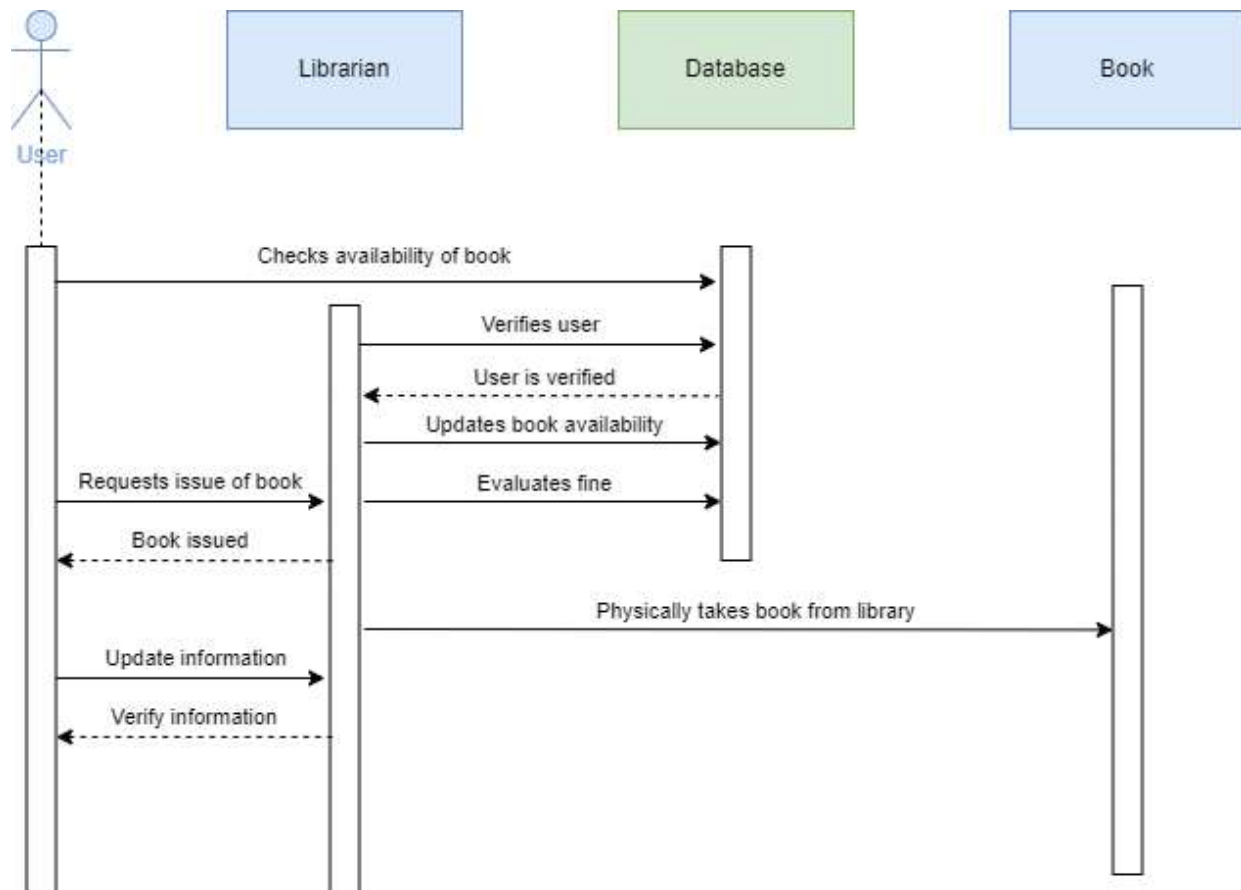
**Special Requirements:**

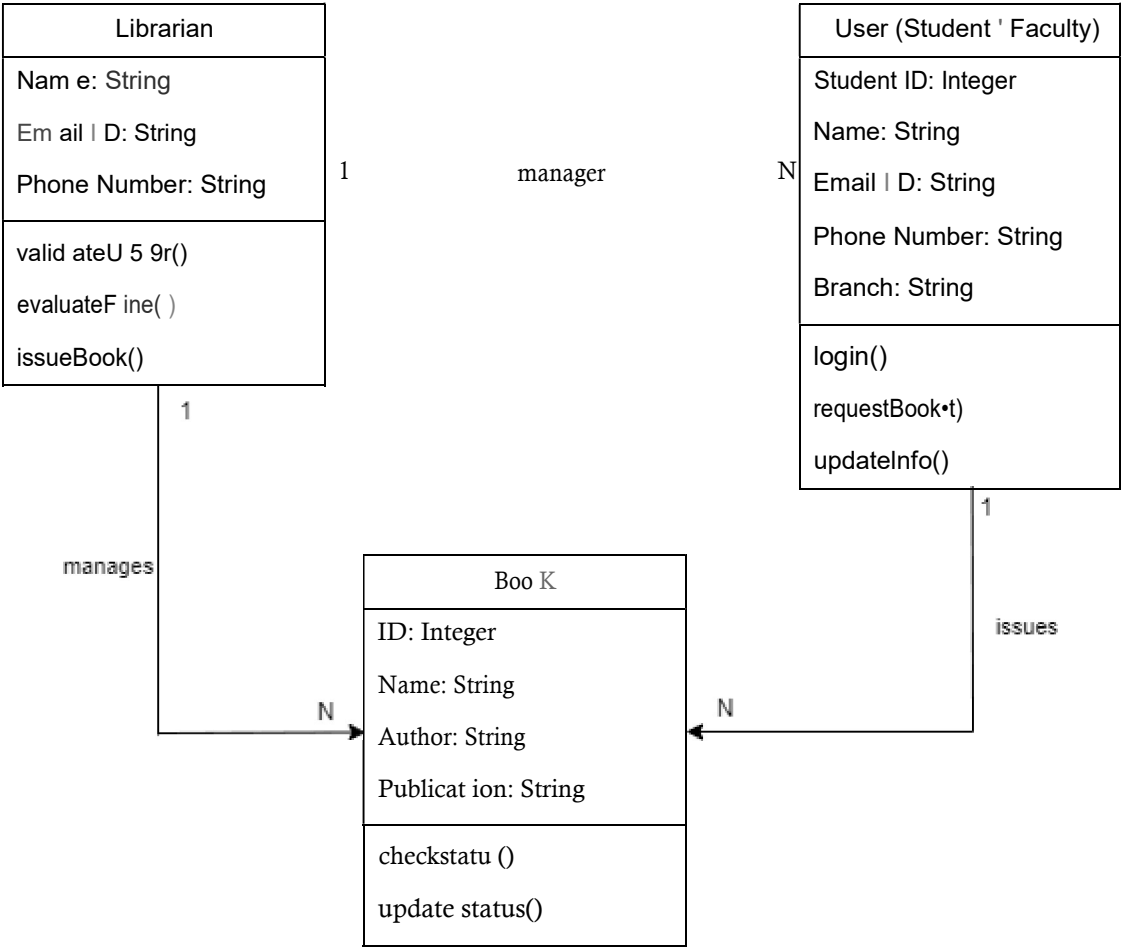
- Robust recovery

- Quick authorization response
- Timely updates on the system

**Post conditions:** The system returns to dashboard, ready for another issue or return transaction

### Question 1.3





## Question 2

