Lab Session - 7

Domain Analysis Modeling & Sequence Diagram
IT313: Software Engineering

1.
Documentation for "Issue Book" use case

Use Case:
Use Case Name: Issuing a Book
Description:
This use case illustrates the process by which a registered student borrows a book from the library.
Primary Actor: Registered Student
Secondary Actors: Library System and Librarian
Preconditions:
 - The registered student must log in and be verified by the librarian.
 - The desired book must be available in the library's collection.
Postconditions:
- The book is marked as issued to the student.
 - A due date for book return is established.
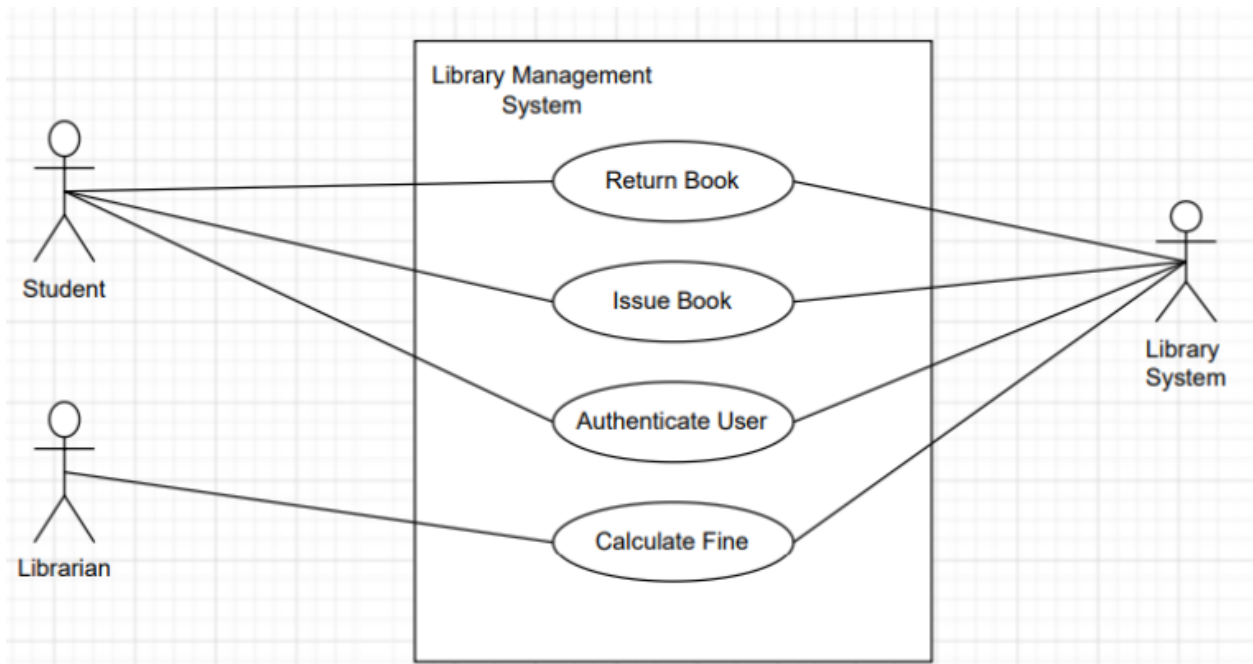- The student receives a notification confirming the successful issuance.
Main Flow:
1. The registered student initiates a book issuance request.
 2. The system verifies the student's authentication status.
 3. The system checks the availability of the requested book.
 4. If the book is available, the system records it as issued to the student.
 5. The system sets a due date for the book's return.
 6. Notifications are sent to both the student and the librarian to confirm the successful issuance.
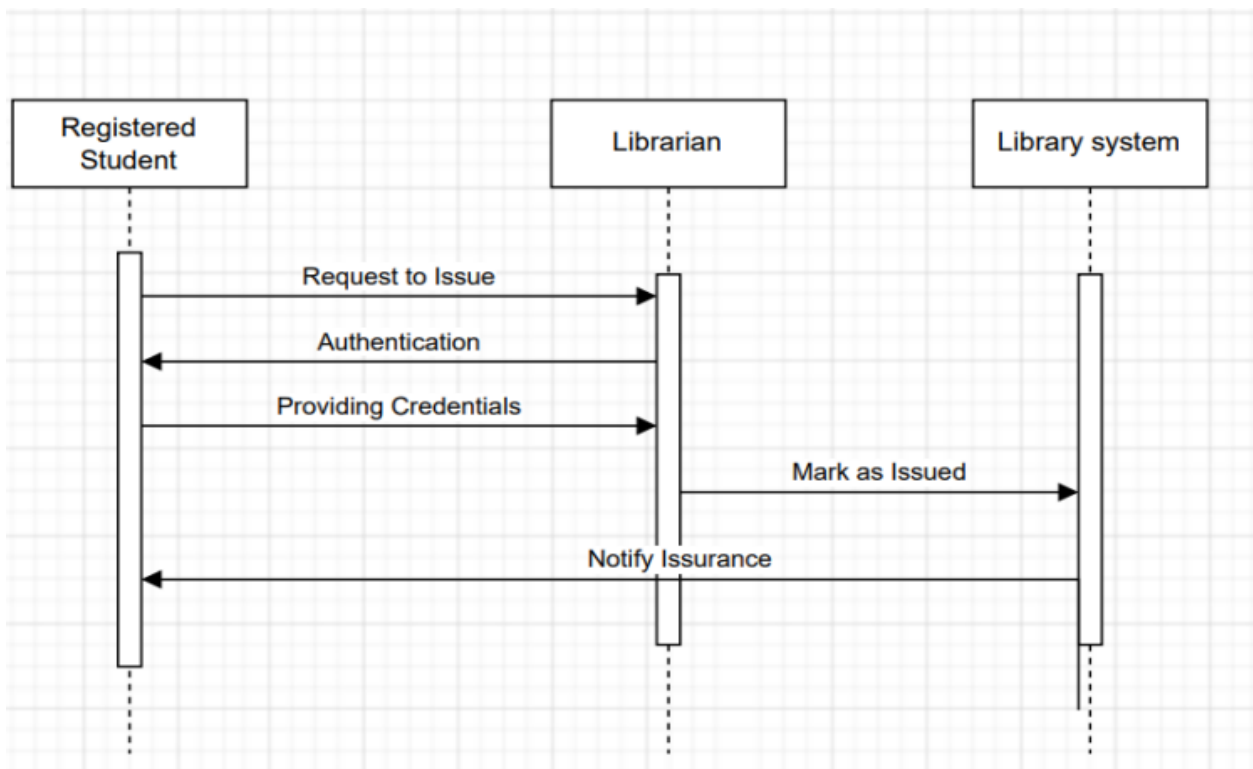 **Alternate Flows:**
- If the requested book is unavailable, the system notifies the student that it cannot be issued at the moment.
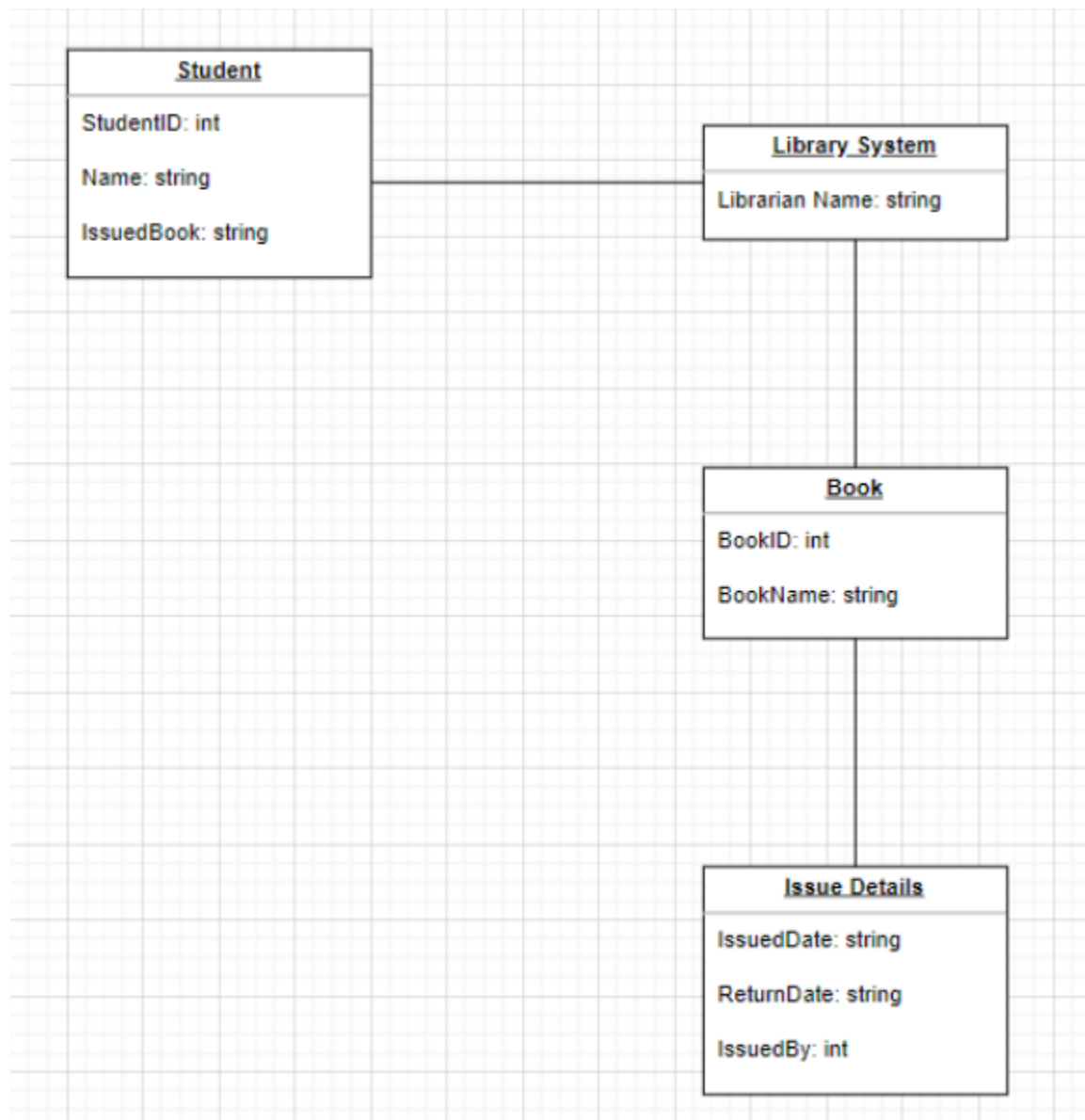- In case the user's authentication fails, the system informs the librarian of the issue.

Use Case Diagram:

Sequence diagram :

Object Diagram:

Student

StudentID: int

Name: string

IssuedBook: string

Library System

Librarian Name: string

Book

BookID: int

BookName: string

Issue Details

IssuedDate: string

ReturnDate: string

IssuedBy: int

2.
Sequence Diagram: