IT313-Software Engineering
Lab 7

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Q1)
Documenting "Issue Book" Use Case:
Use Case Name: Issuing a Book
Description: This use case outlines 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.
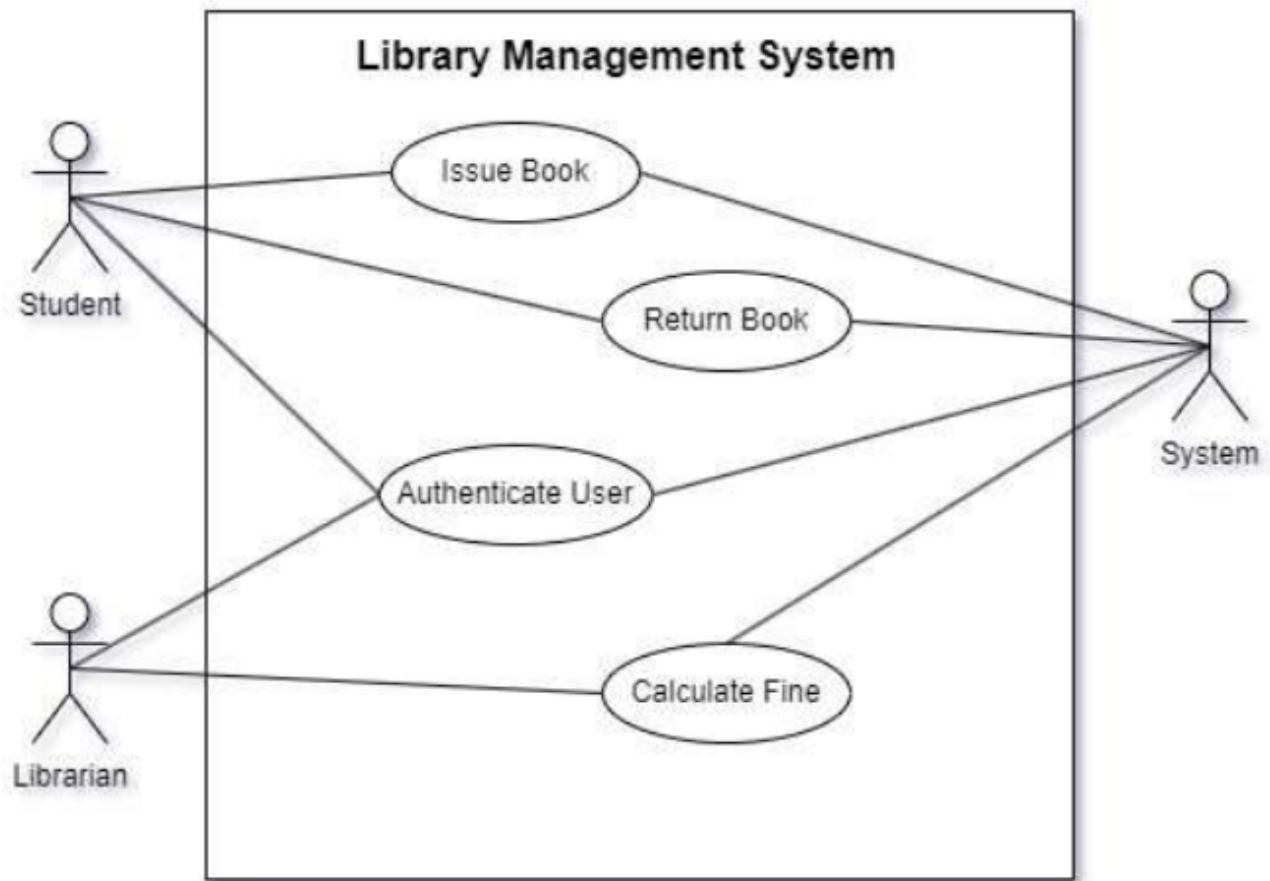
Main Flow:
• The registered student initiates a book issuance request.
• The system verifies the student's authentication status.
• The system checks the availability of the requested book.
• If the book is available, the system records it as issued to the 1 student.
• The system sets a due date for the book's return.
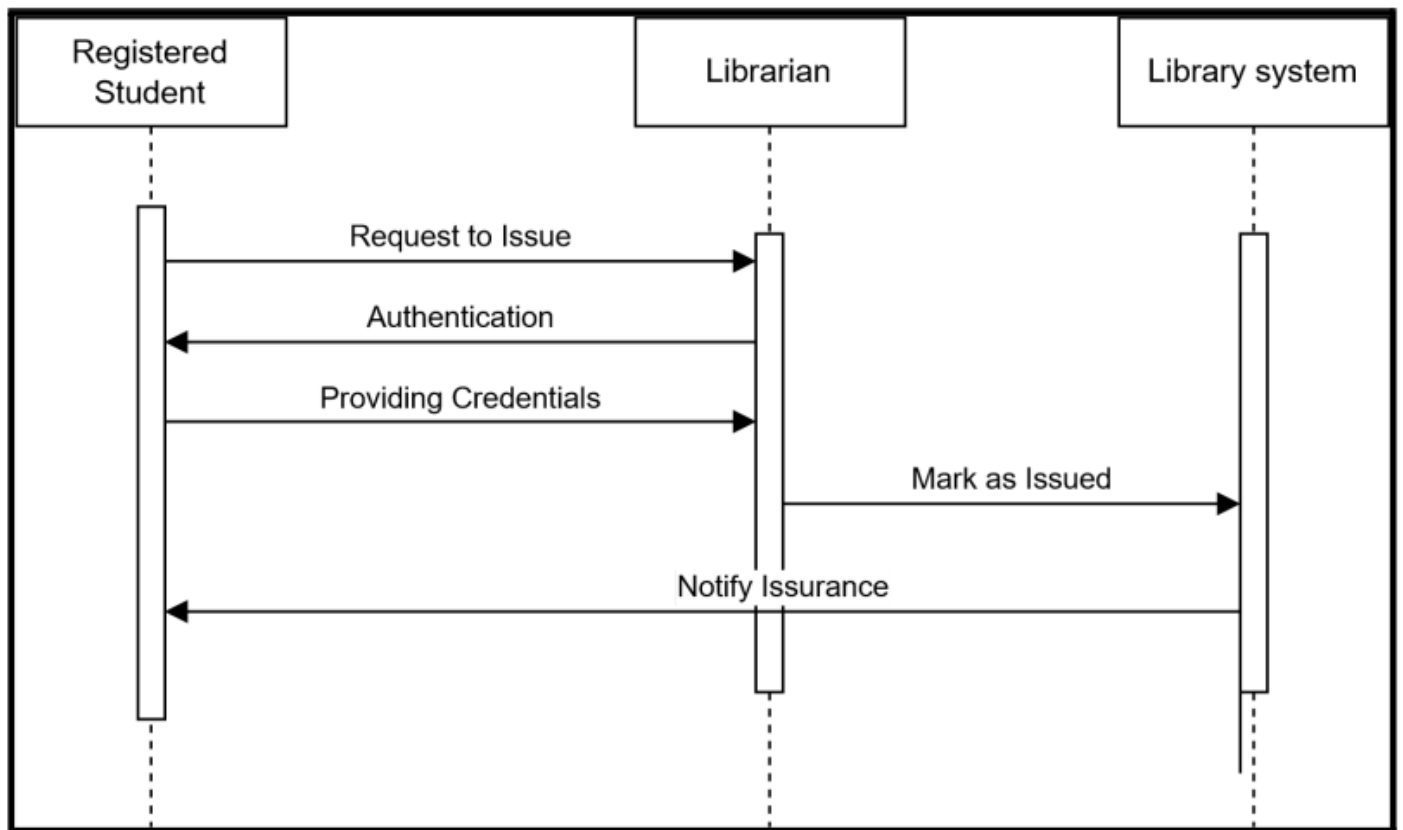• Notifications are sent to both the student and the librarian to confirm the successful issuance.
Alternate Flows:

• If the requested book is unavailable, the system notifies the student that it cannot be issued at the moment.
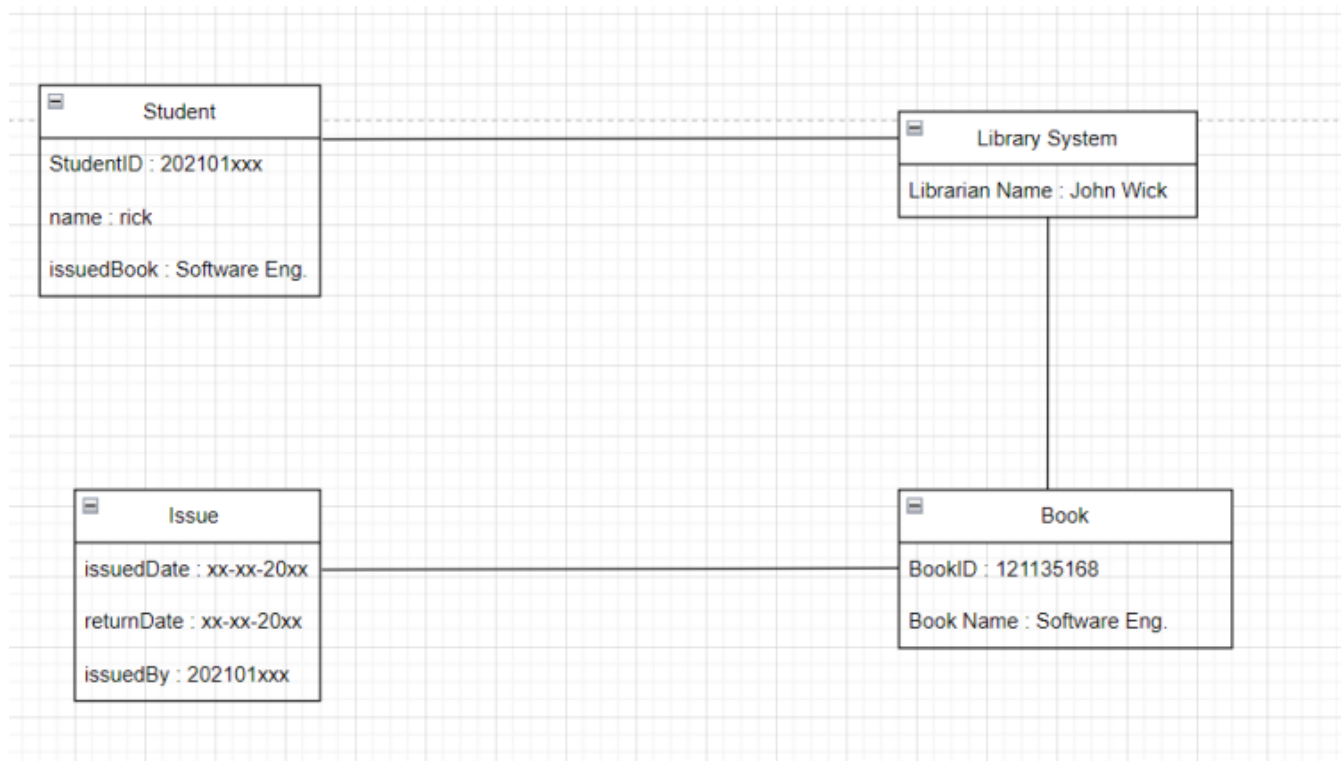• In case the user's authentication fails, the system informs the librarian of the issue.

Use Case Diagram :

Sequence Diagram :

Object Diagram:

Student

StudentID : 202101xxx

name : rick

issuedBook : Software Eng.

Library System

Librarian Name : John Wick

Issue

issuedDate : xx-xx-20xx

returnDate : xx-xx-20xx

issuedBy : 202101xxx

Book

BookID : 121135168

Book Name : Software Eng.

Q2) Sequence Diagram :