IT314 Software Engineering

Lab Report: 7

Domain Analysis Modeling & Sequence Diagram
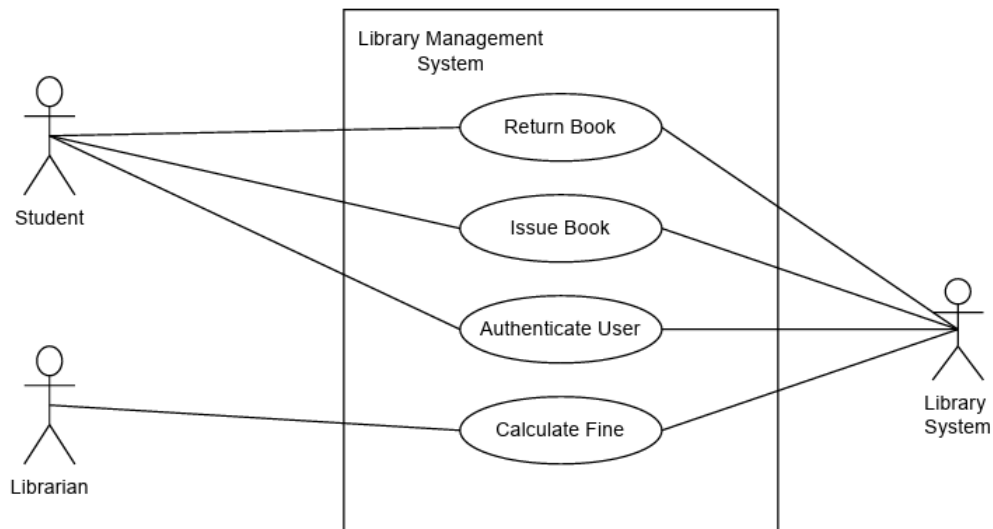
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1   Question: 1

1.1

Use case diagram

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.
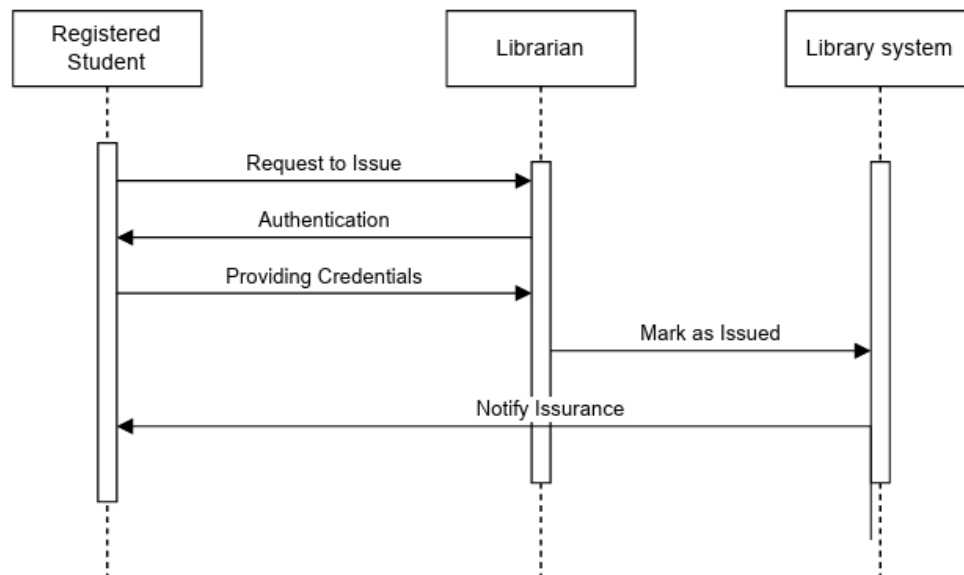
Main Flow:

- 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. 6
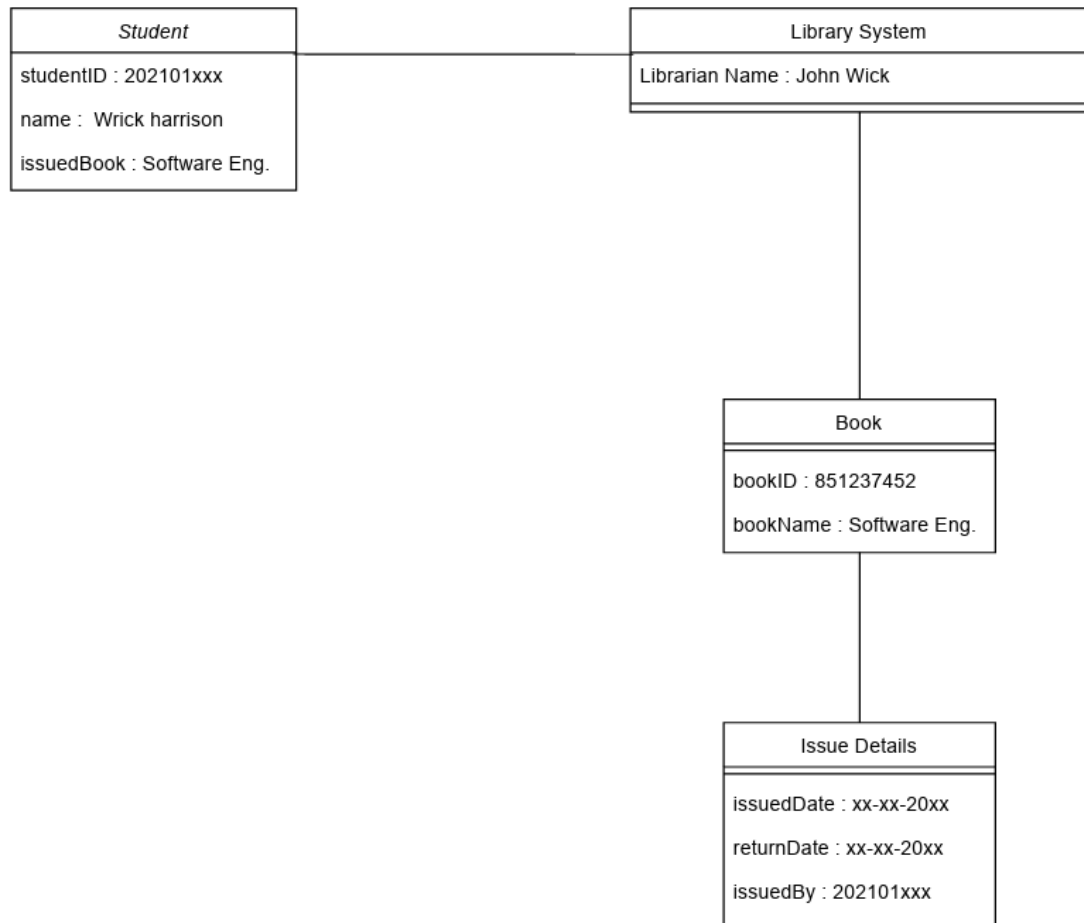- Notifications are sent to both the student and the librarian to confirm the successful issuance.

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.

1.2 Sequence diagram

1.3 Analysis object diagram

Student
studentID : 202101xxx
name : Wrick harrison
issuedBook : Software Eng.

Library System
Librarian Name : John Wick

Book
bookID : 851237452
bookName : Software Eng.

Issue Details
issuedDate : xx-xx-20xx
returnDate : xx-xx-20xx
issuedBy : 202101xxx

2 Question: 2 ⇒ Sequence diagram