

IT 314 - LAB 7

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Exercise 1:

Question 1. Complete the use case diagram for the above problem text along with use case documentation for “issueBook” use case.

Use Cases:

- **Use Case:** 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:

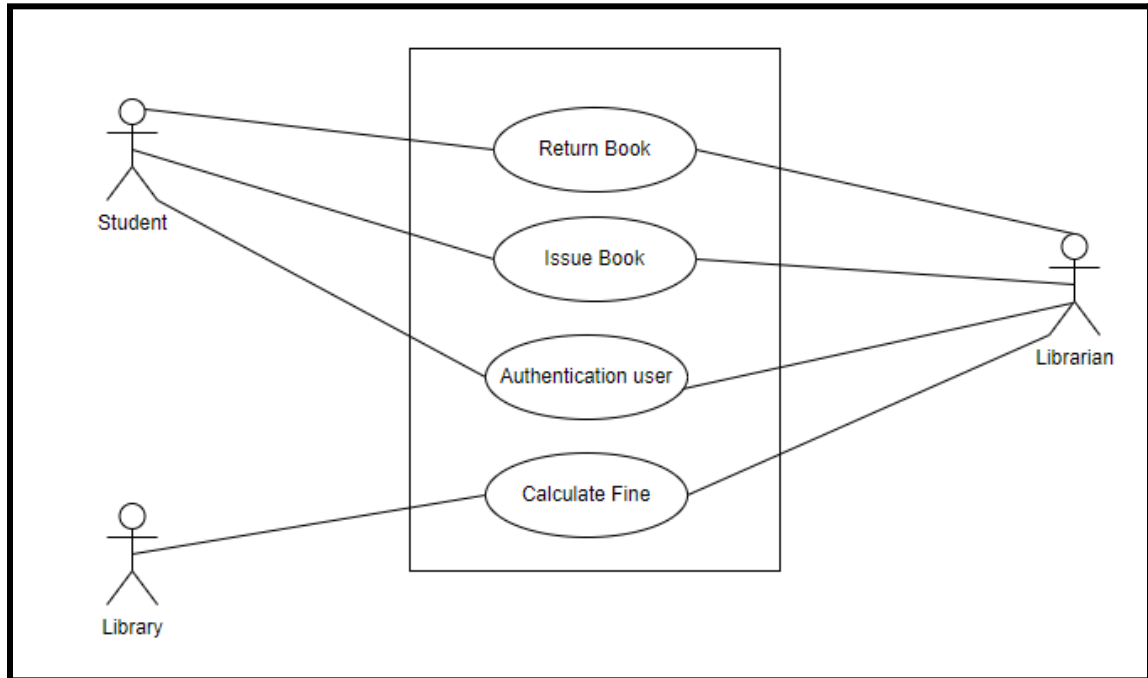
- The registered student initiates a book issuance request.

- 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.

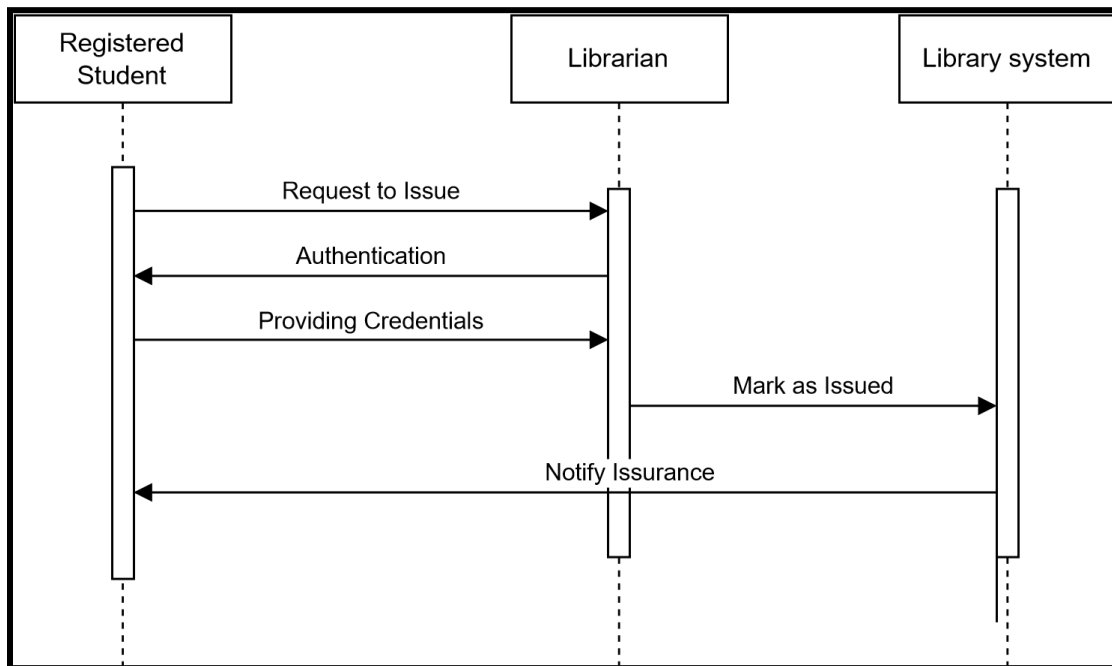
Alternate Flows:

- 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.

Usecase Diagram:

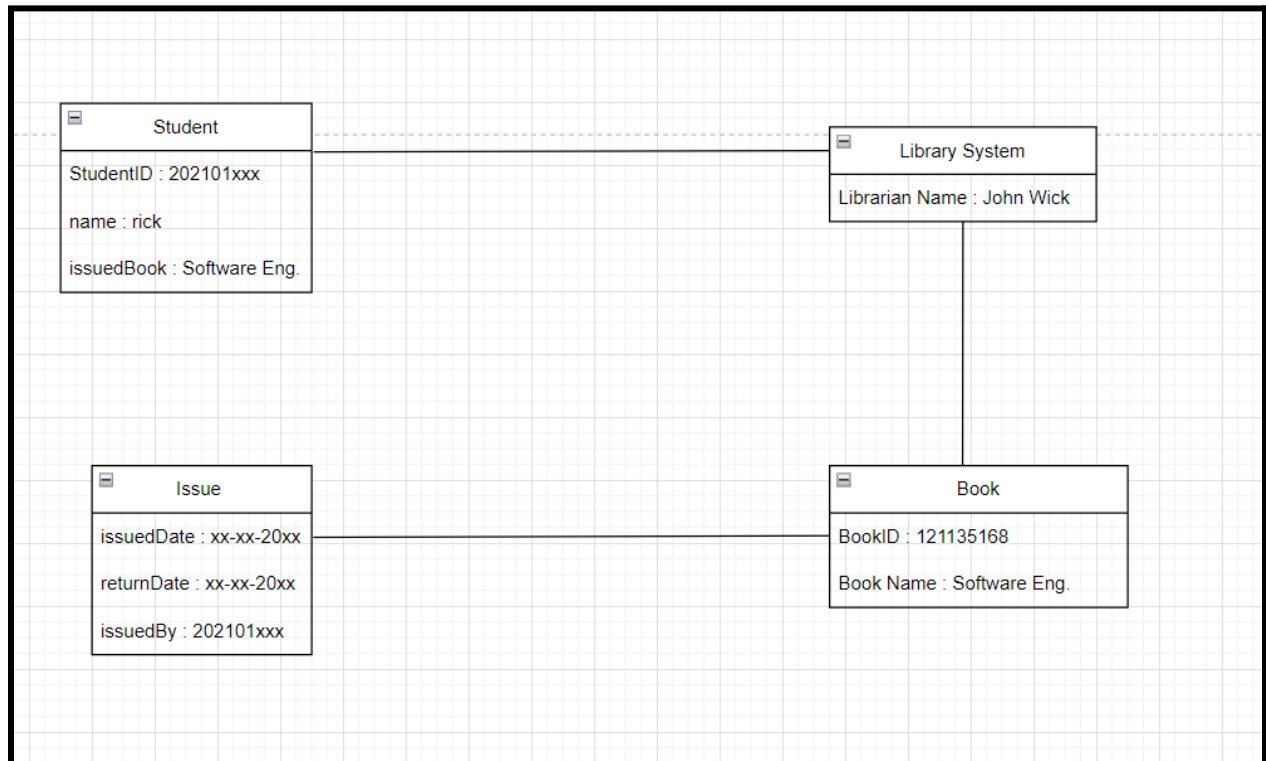


Question 2. The sequence diagram for the “issueBook” use case.



Question 3. Draw the analysis object diagram for the “issueBook” use case analysis.

Object diagram:



Exercise 2:

Draw a sequence diagram that represents this process. Make sure to show when is each actor participating in the process. Also, show the operation that is carried out during each interaction, and what its arguments are.

SEQUENCE DIAGRAM:

