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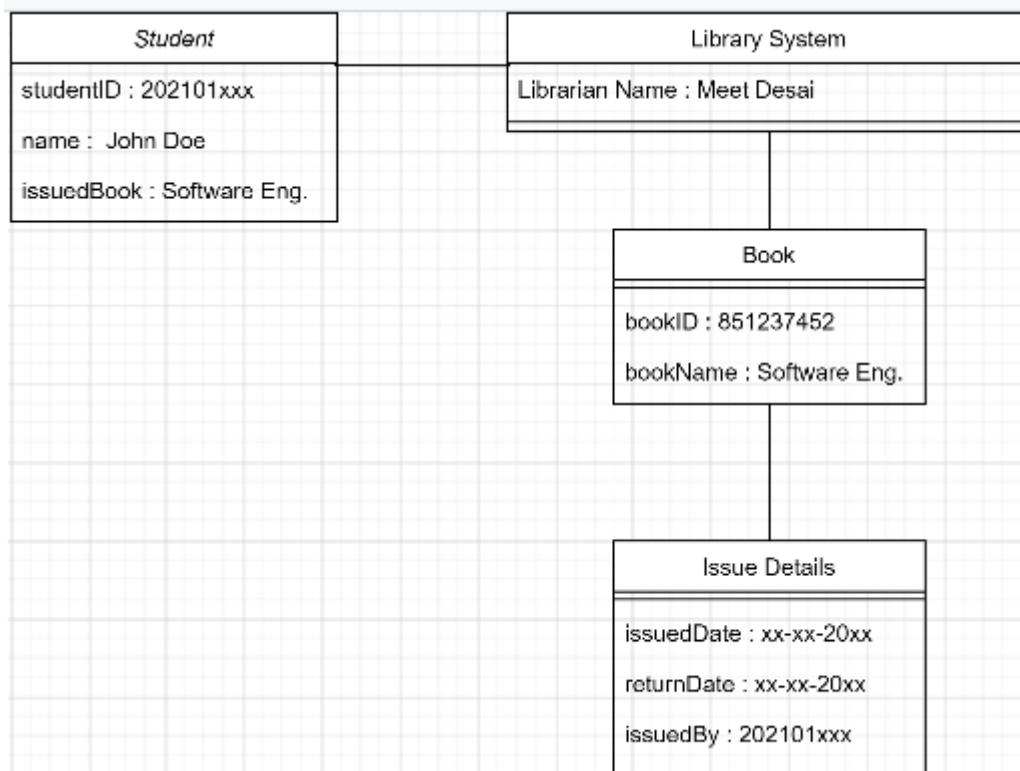
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**Group: 2**

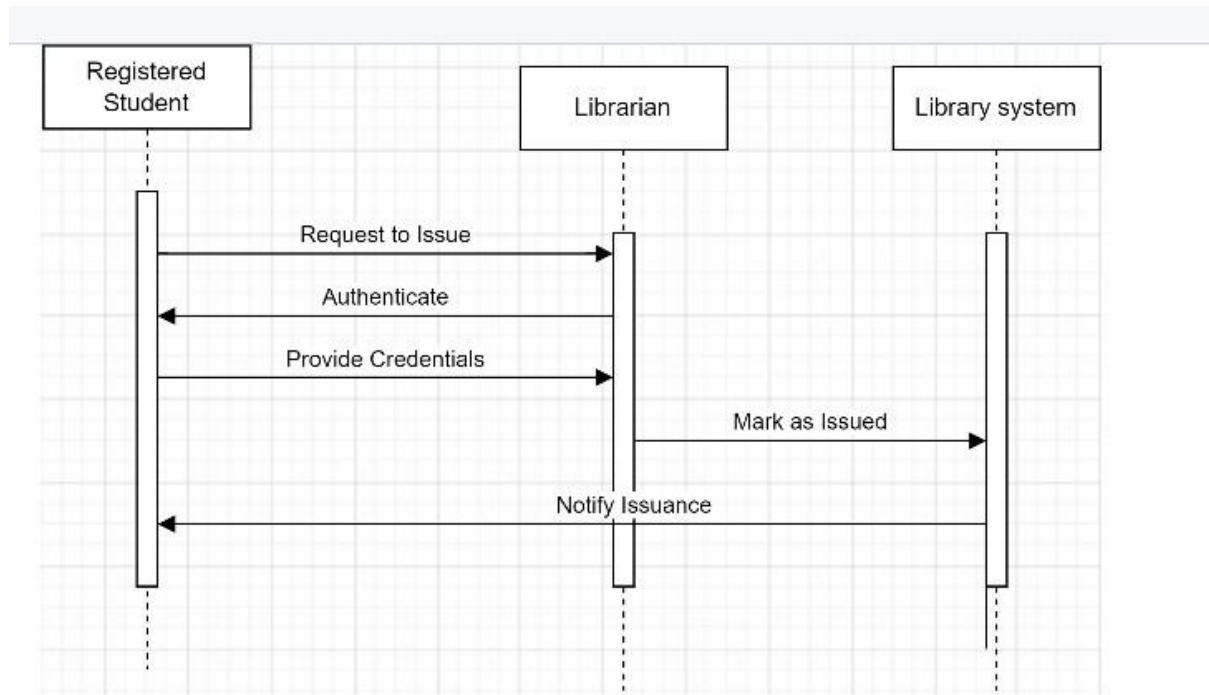
**Lab: 7**

**Q1:-**

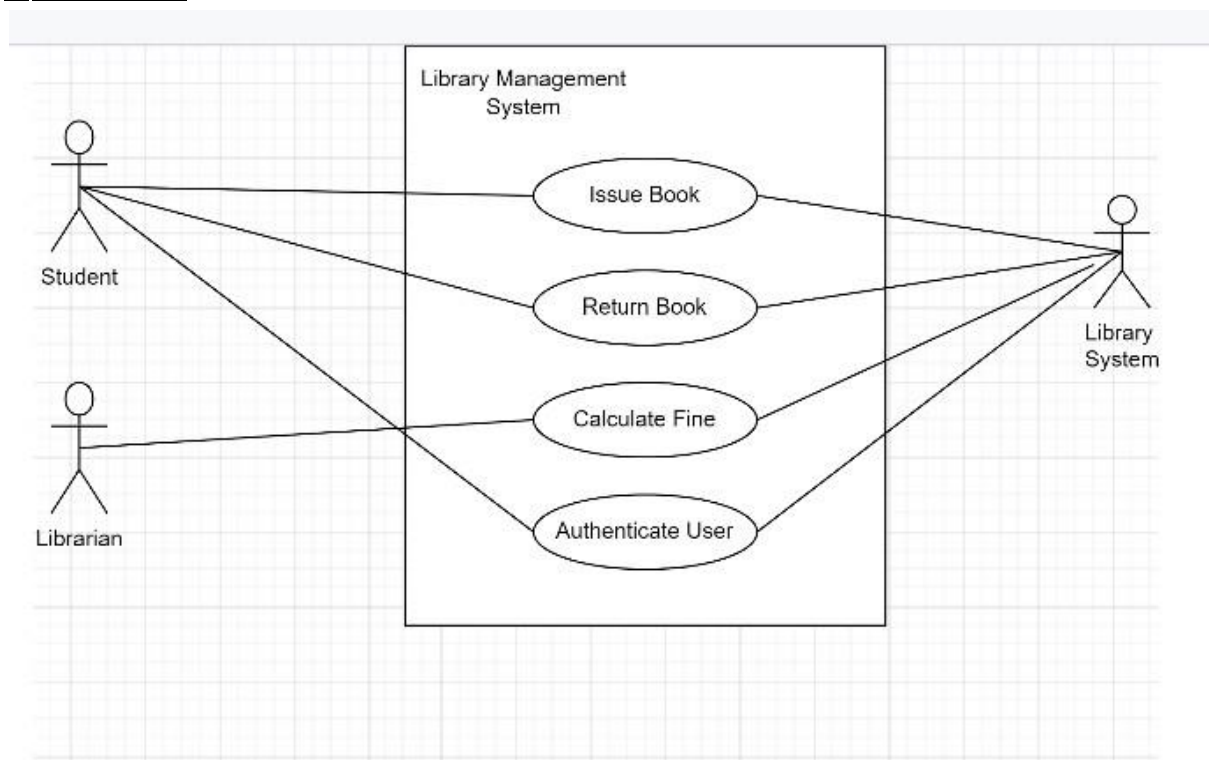
**1.Object Diagram:**



**2.e Diagram**



### 3.e Diagram



### Use Case Documentation for "issueBook" Use Case:

**Use Case Name:** Issue Book

**Description:** This use case represents the process of a registered student issuing a book from the library

**Primary Actor:** Registered Student

**Secondary Actor:** Library and Librarian

**Preconditions:** The registered student must be logged in and authenticated by the librarian. The book being issued must be available in the library.

**Postconditions:** The book is marked as issued to the student. The due date for returning the book is set. The student is notified of the successful issuance.

**Main Flow:** The registered student requests to issue a book. The system validates the student's authentication status. The system checks if the requested book is available. If the book is available, the system marks it as issued to the student. The system sets the due date for returning the book. The system notifies the student and the librarian about the successful issuance.

**Alternate Flows:** If the book is not available, the system notifies the student that the book cannot be issued at the moment. If the user is not authenticated, the system notifies the librarian

## Q2

### 1.Sequence Diagram

