# IT314 Software Engineering



# Lab Report: 7

Domain Analysis Modeling & Sequence Diagram

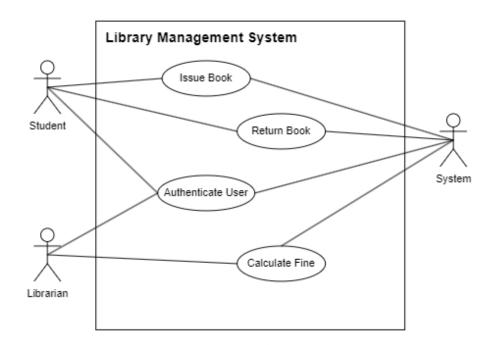
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## 1 Question: 1

#### 1.1

## Use case diagram



## Use case documentation for 'Issue book' use case:

Use case name : Issue Book

**Description**: Represents the process Issuing book

Primary Actors: Registered Students

Secondary Actors: Library, Librarian

### ${\bf Pre-conditions}:$

- Registered student must be logged in and authenticated by the librarian.
- The book being issued must be available in the library.

#### Post-conditions:

- 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.

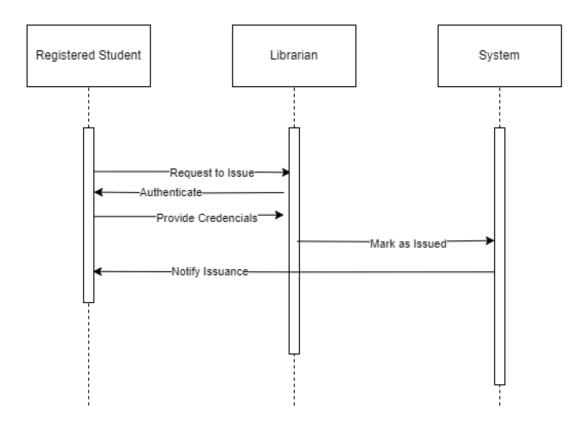
#### Main flow:

- 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.

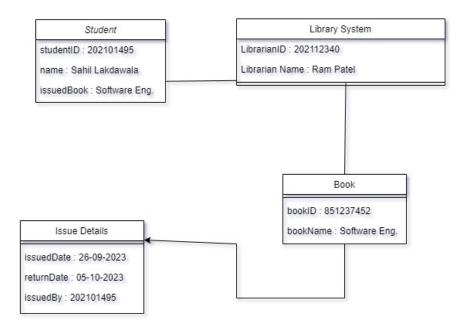
#### **Alternate Flows**:

- 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

### 1.2 Sequence diagram



## 1.3 Analysis object diagram



## 2 Question: $2 \Rightarrow$ Sequence diagram

