

# IT314

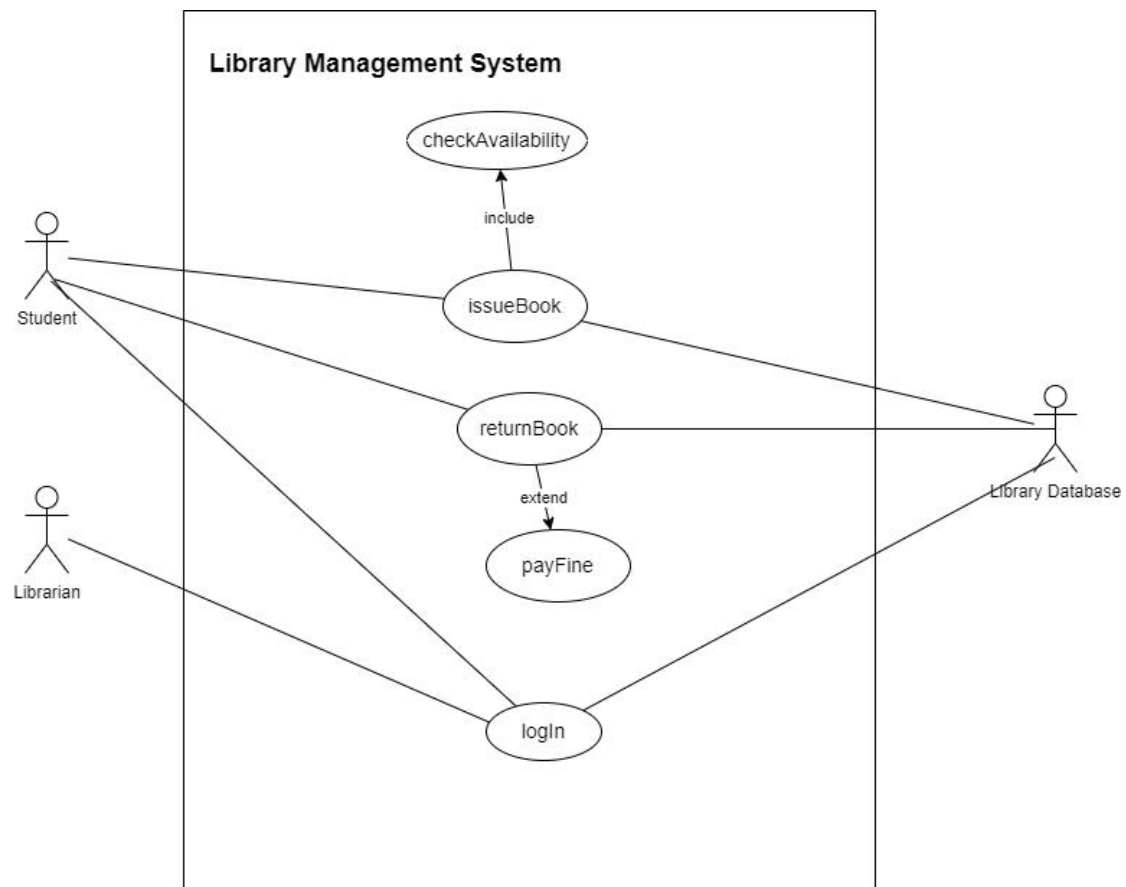
## Software Engineering

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Lab 7  
Domain Analysis Modeling & Sequence Diagram

## Question 1

### 1. Use case diagram



### Use case documentation

- ◆ Use case name: Issue book
- ◆ Description : Process for Issuing book
- ◆ Primary Actors : Student
- ◆ Secondary Actors : Library database, Librarian
- ◆ Pre-conditions:
  - Registered student must be logged in and authenticated by the system.
  - 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.

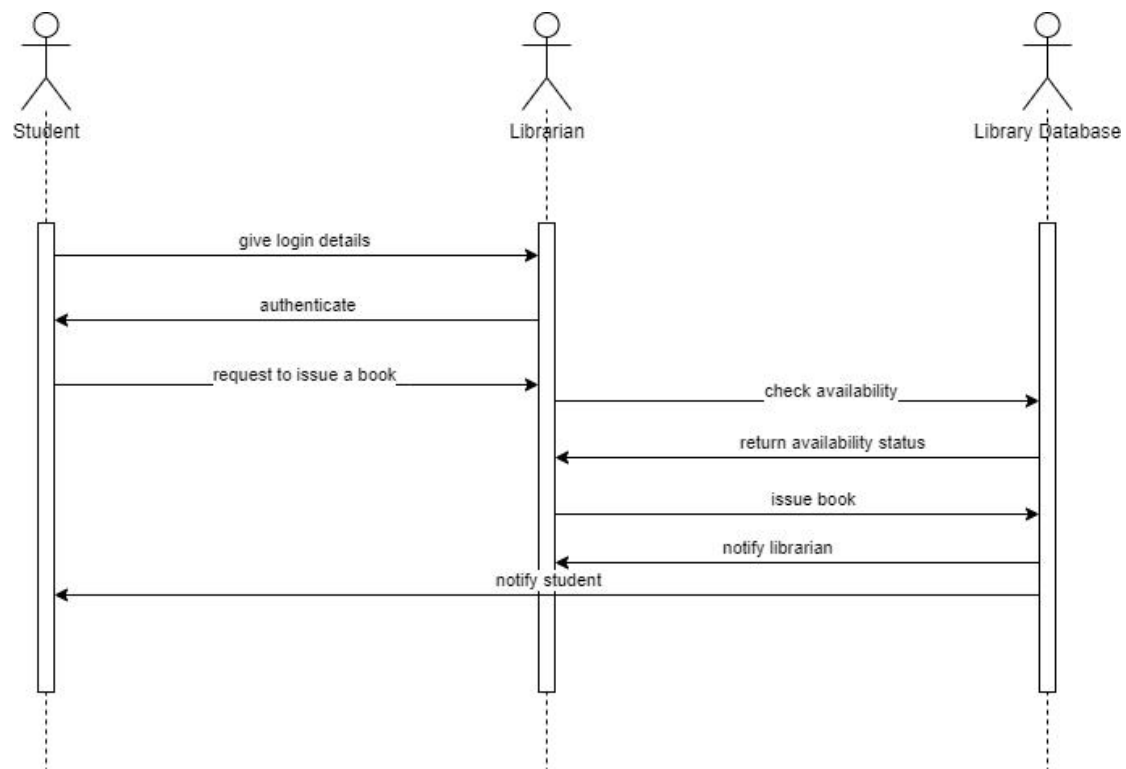
◆ Main flow:

1. The student requests to issue a book.
2. The system validates the student's authentication details.
3. The system checks if the requested book is available or not.
4. If the book is available, the system marks it as issued to that student.
5. The system sets the due date for returning the book.
6. The system notifies the student and the librarian about the successful issuance.

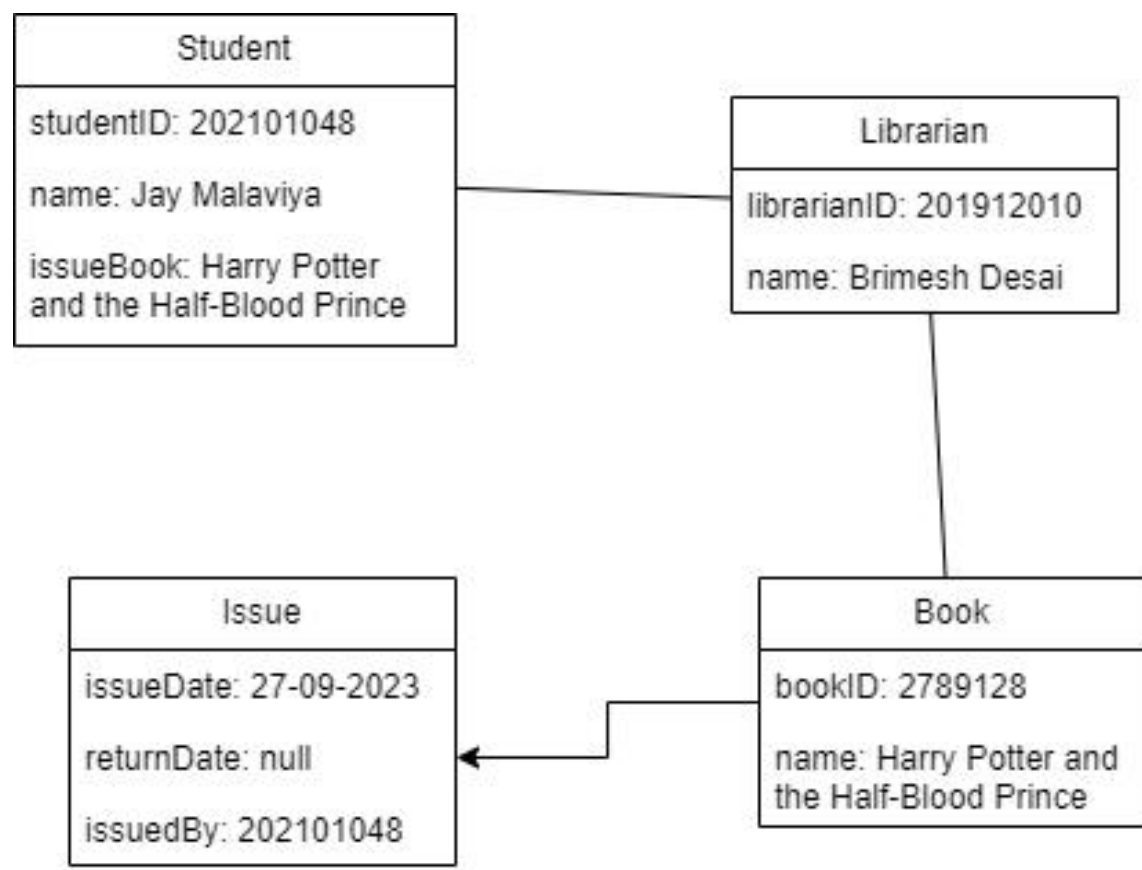
◆ Alternate Flows:

- 2.a If the student is not authenticated.
  - 2.a.1 The system notifies the librarian.
- 4.a The book is not available.
  - 4.a.1 The system notifies the student that the book cannot be issued at the moment.

## 2. Sequence Diagram



## 3. Class diagram



## Question 2

### Exam Management System

