

IT314 - Software Engineering
LAB 7
Domain Analysis Modeling & Sequence Diagram

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1. Library Management

Actors:

1. Student
2. Librarian

Use Case Name: Issue Book

Description:

Preconditions:

- Students must be registered with the library.

Trigger:

A student visits the library to either borrow or return a book.

Postcondition:

The system updates the library's database with the information about the borrowed or returned book.

Main Flow:

1. When a student wants to borrow a book:

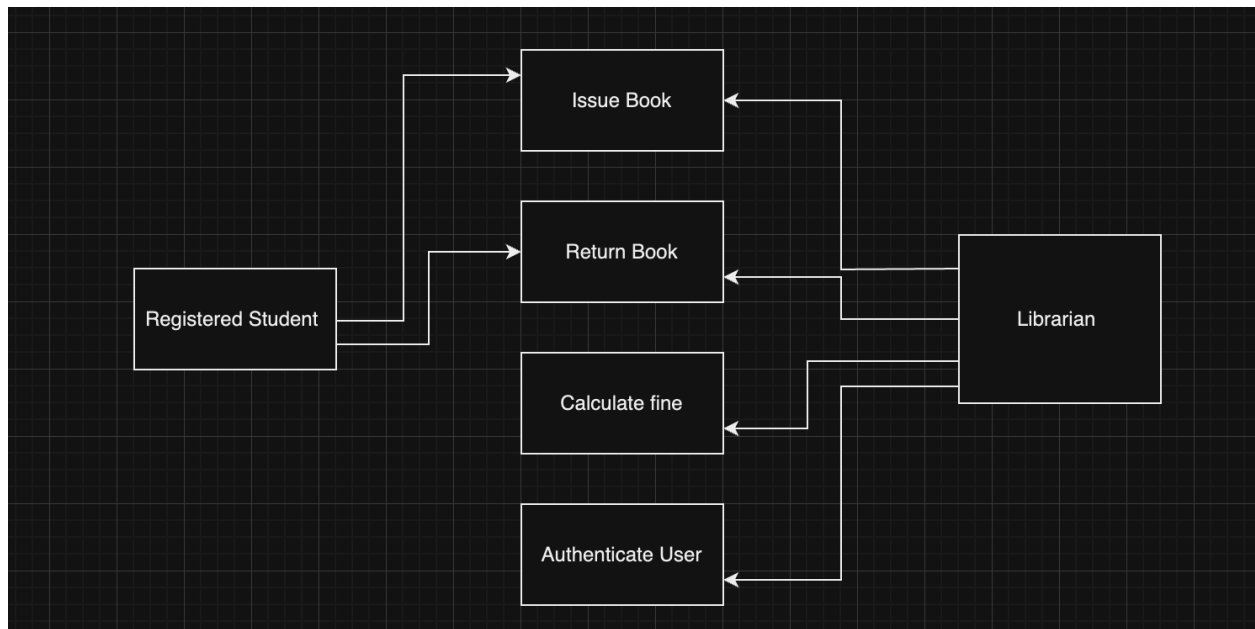
- The student approaches the librarian.
- The librarian checks the availability of the requested book in the library.
- If the book is available, the librarian issues the book to the student.
- The librarian records the transaction in the library database.

2. When a student returns a book:

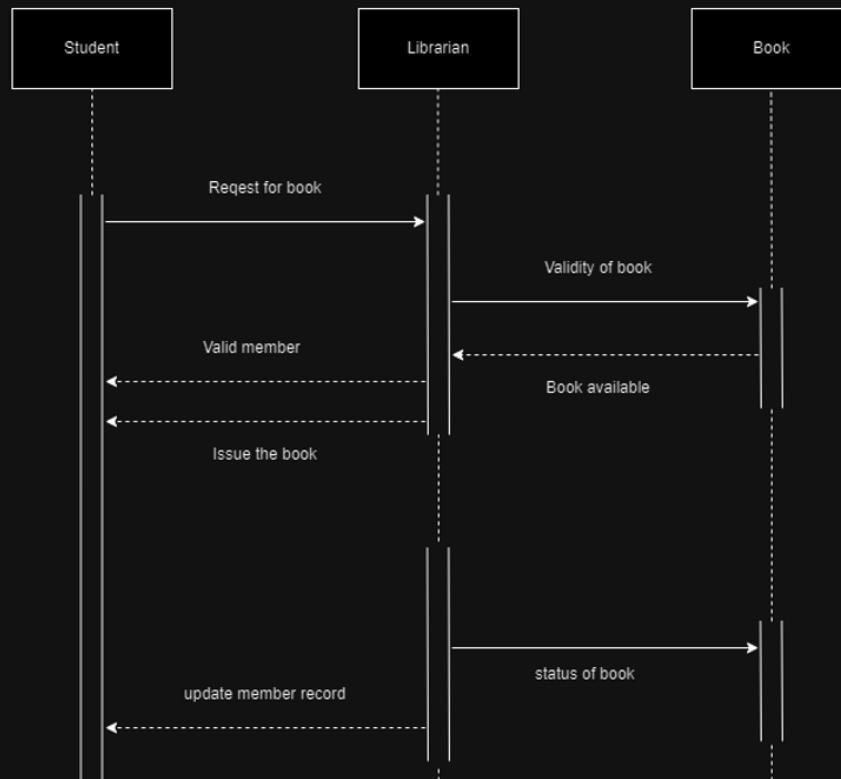
- The student returns the book to the librarian.
- The librarian checks the due date of the book.
- If the student has exceeded the due date, the librarian calculates the fine.
- The librarian accepts the fine from the student and processes the book return.
- The librarian updates the library database with the returned book information.

Alternative Flows:

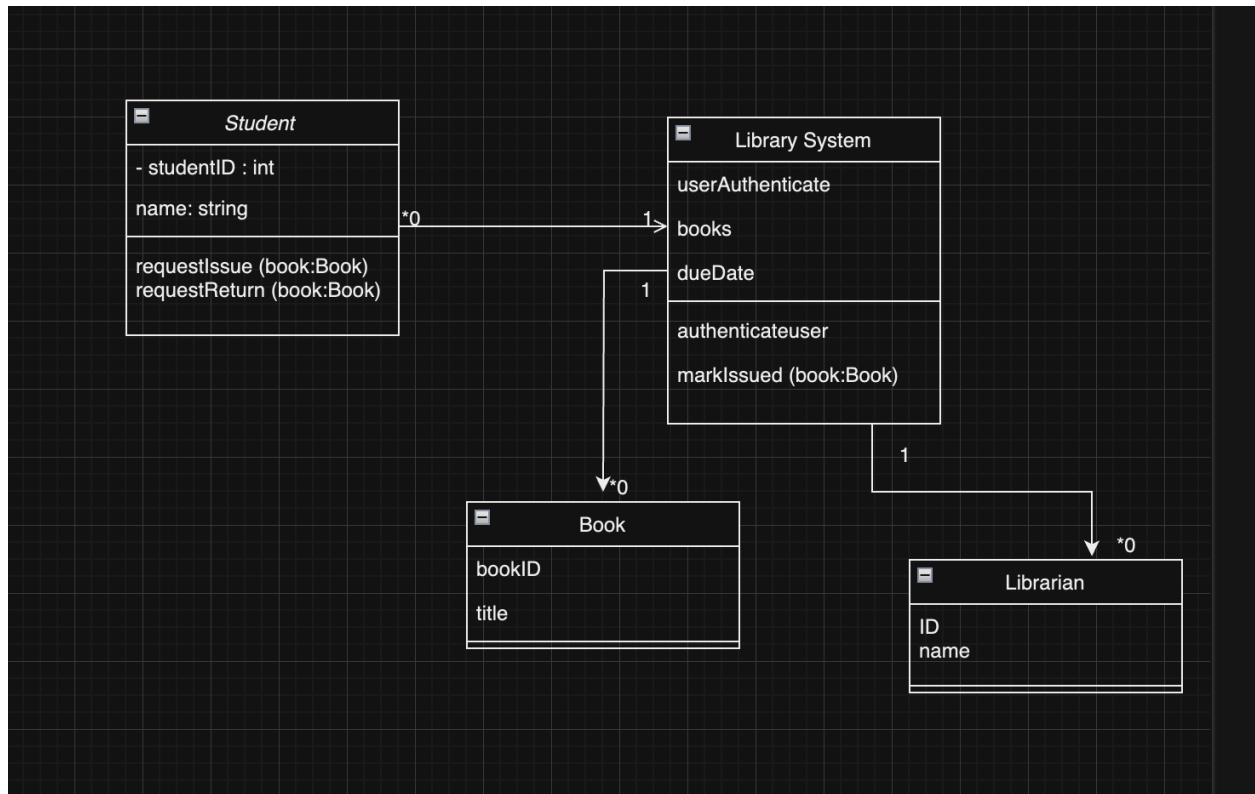
- If the requested book is not available in the library, the librarian notifies the student and suggests alternative options or informs them when the book is expected to be back in stock.



Use Case Diagram

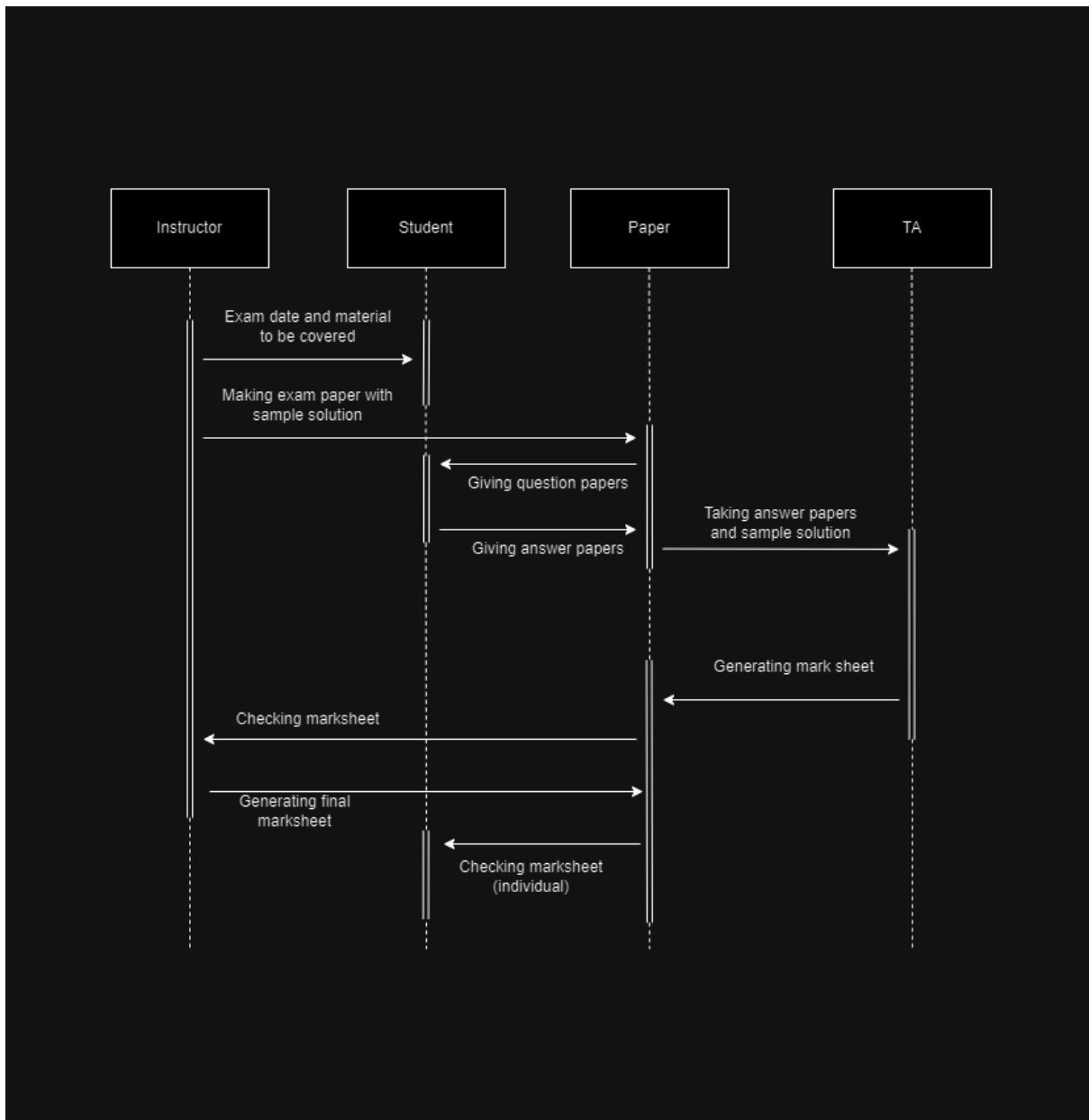


Sequence Diagram



Class Diagram

2. Exam Management



Sequence Diagram