IT314: Software Engineering:Lab7

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Question 1

Brief Description: In this scenario, a registered student has the opportunity to borrow a book from the library. The process involves several steps: the student selects a book of their choice, their identity is verified by library staff, the availability of the chosen book is checked, if it's available, the book is issued to the student, and finally, the library's records are updated to reflect the book's loan status.

Actors: Student, Library System, Librarian

Preconditions:
The student must be registered with the library system.
The student must be logged in to the System.

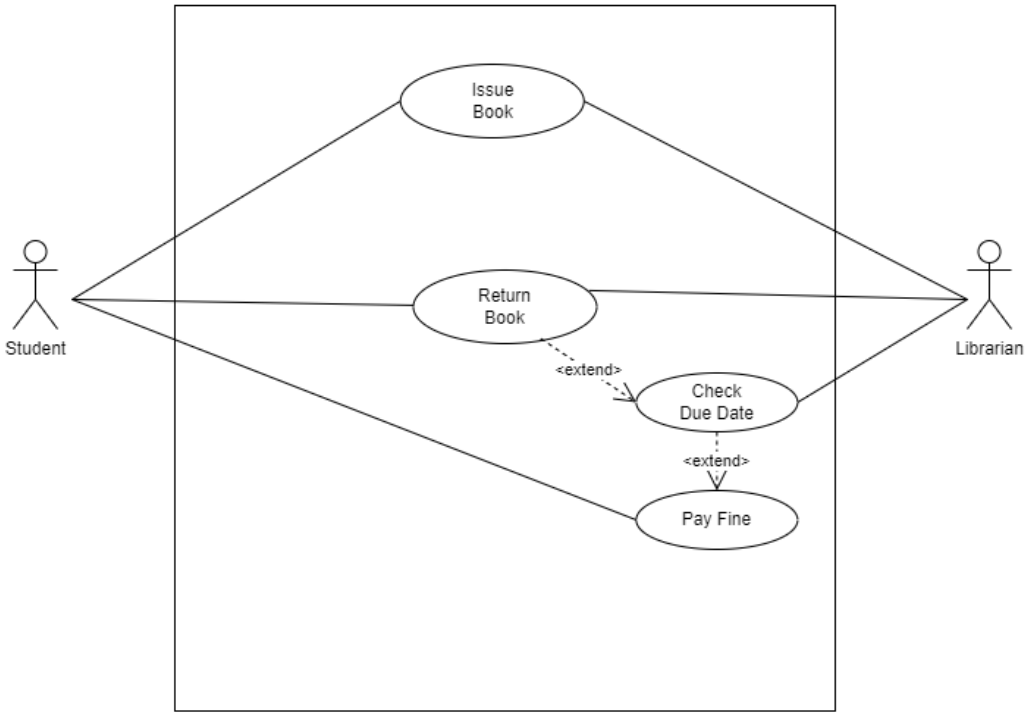
Main Flow:

1. The student picks a book from the library's collection.
2. The system validates the student's identity and confirms their eligibility to borrow books.
3. The system checks the book's availability for borrowing.
4. If the book is available, the system logs it as issued to the student.
5. The system updates its records to reflect the issuance of the book.
6. The book is given to the student.

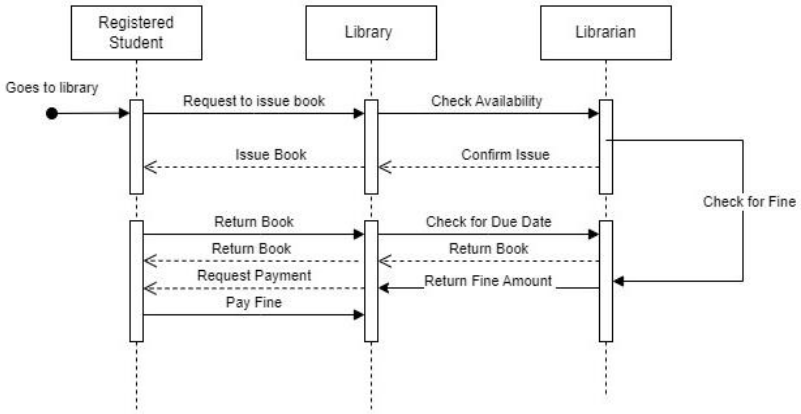
Postconditions:
The book is marked as issued to the student.
The student is responsible for returning the book within the specified period.
The system updates its records to reflect the issued book.

Alternative Flows:
Step 3a: If the selected book is not available, the system informs the student that the book is currently unavailable, and the use case ends.
Step 4a: If the student has reached their maximum allowable book limit, the system informs the student that they cannot issue more books until they return some, and the use case ends.

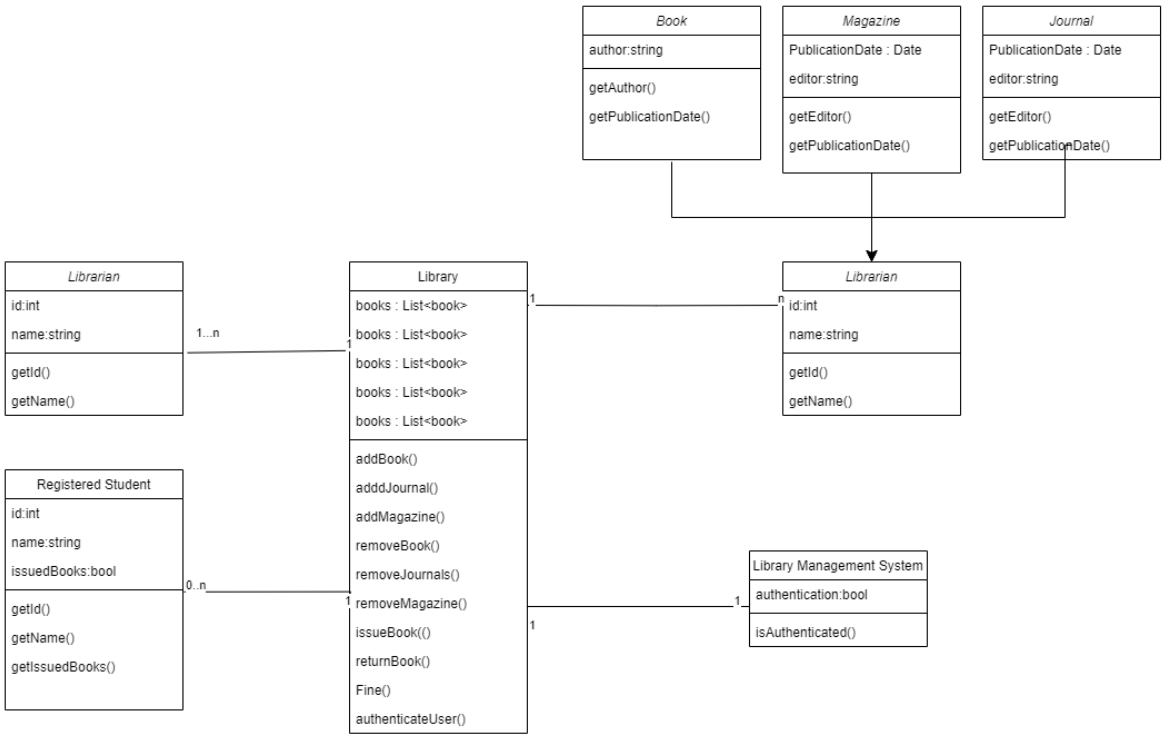
1. Use case Diagram:



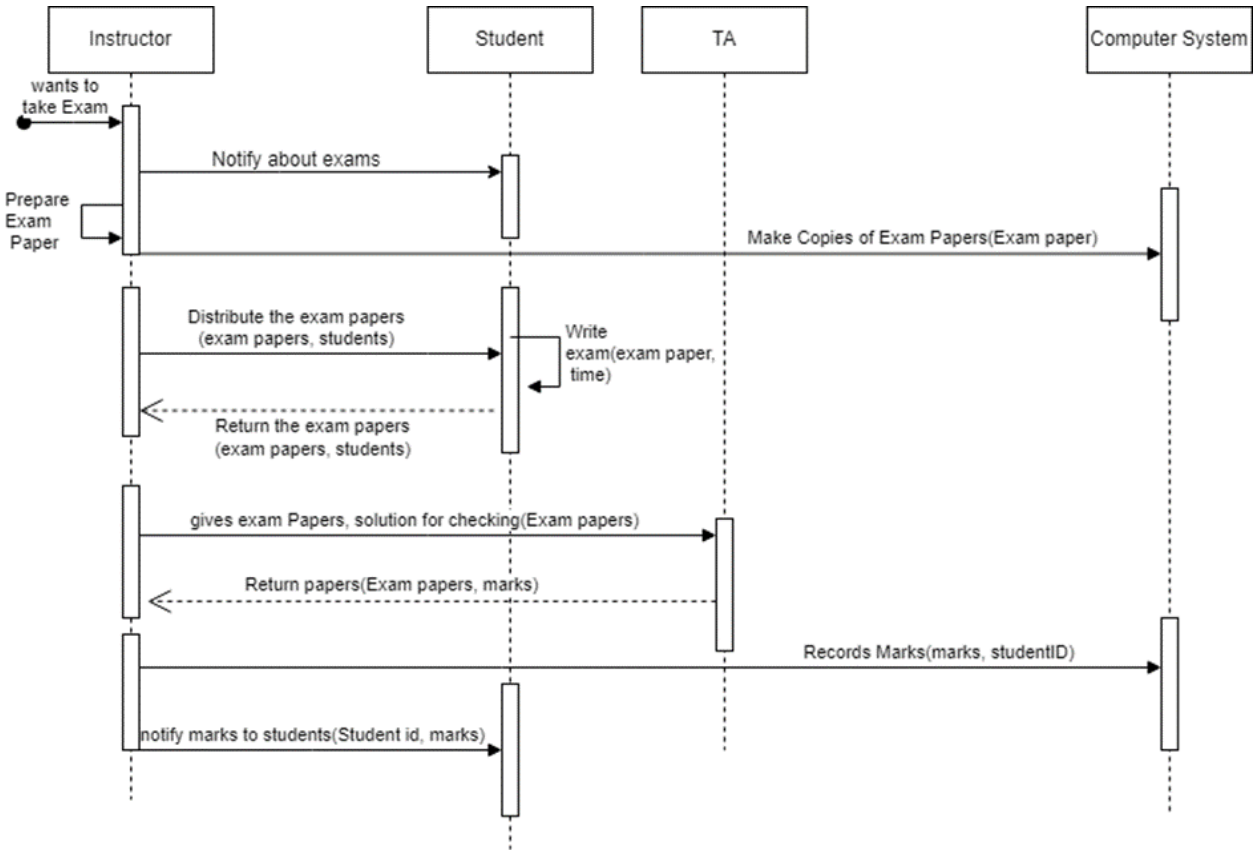
2. Sequence Diagram:



3. Analysis Object Diagram:



Question 2


Instructor
Student
TA
Computer System
wants to take Exam
Notify about exams
Prepare Exam Paper
Make Copies of Exam Papers(Exam paper)
Distribute the exam papers (exam papers, students)
Write exam(exam paper, time)
Return the exam papers (exam papers, students)
gives exam Papers, solution for checking(Exam papers)
Return papers(Exam papers, marks)
Records Marks(marks, studentID)
notify marks to students(Student id, marks)