

IT-313: Software Engineering

Lab 7: Domain Analysis Modeling & Sequence Diagram

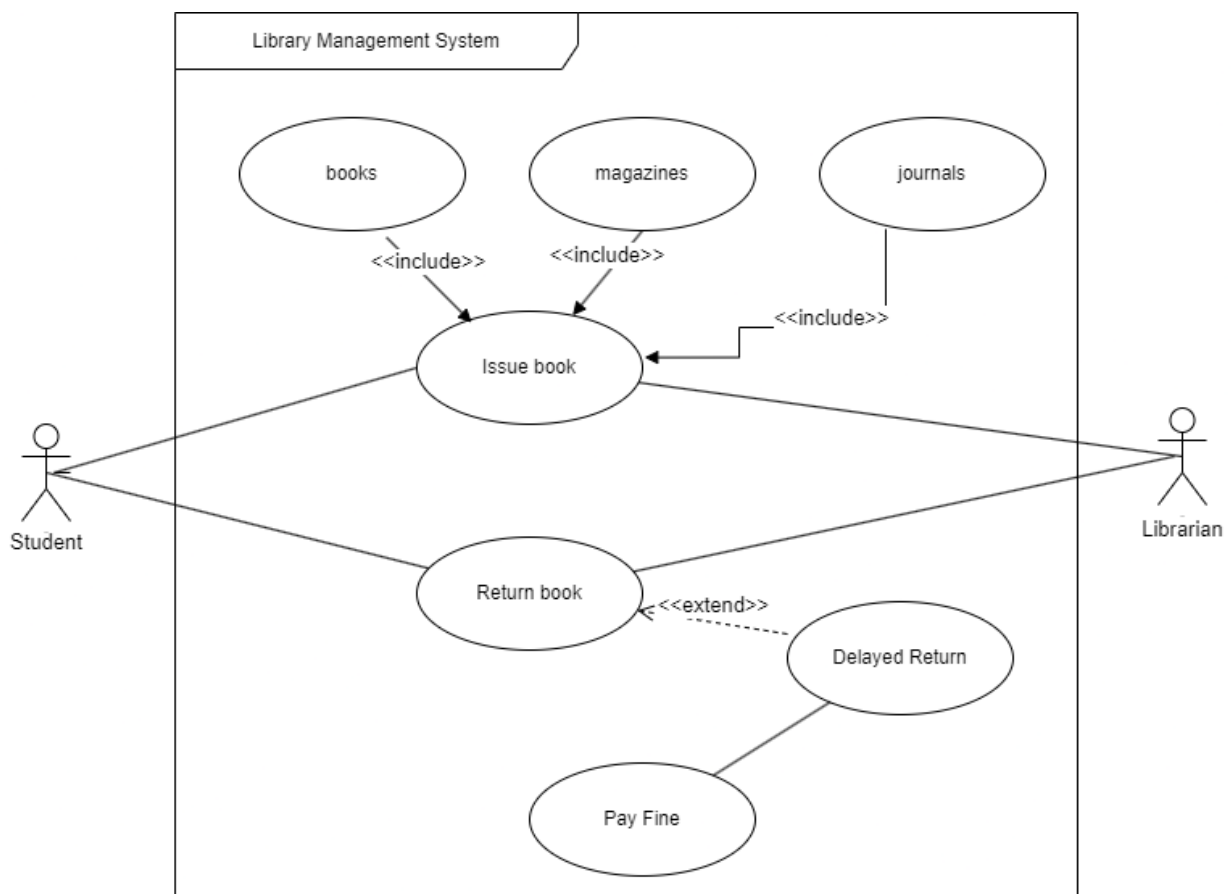
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Que-1:

1. Complete the use case diagram for the given text along with use case documentation for “issueBook” use case.



Documentation:

Use case name: Issue book

Summary: Student issues book from library.

Primary Actor: Librarian/Library

Secondary Actor: Student

Precondition:

- The librarian is logged into the authenticated Library Management System.
- The student is registered in the system.

Description:

- Librarian selects "Issue Book" from the Library Management System.
- System prompts librarian to enter the student's ID or search for the student.
- Librarian enters the student's ID or searches for the student.
- System displays student information.
- Librarian selects the book to be issued from the available books.
- System marks the book as "issued" and assigns a due date for return.
- Librarian confirms the issue.

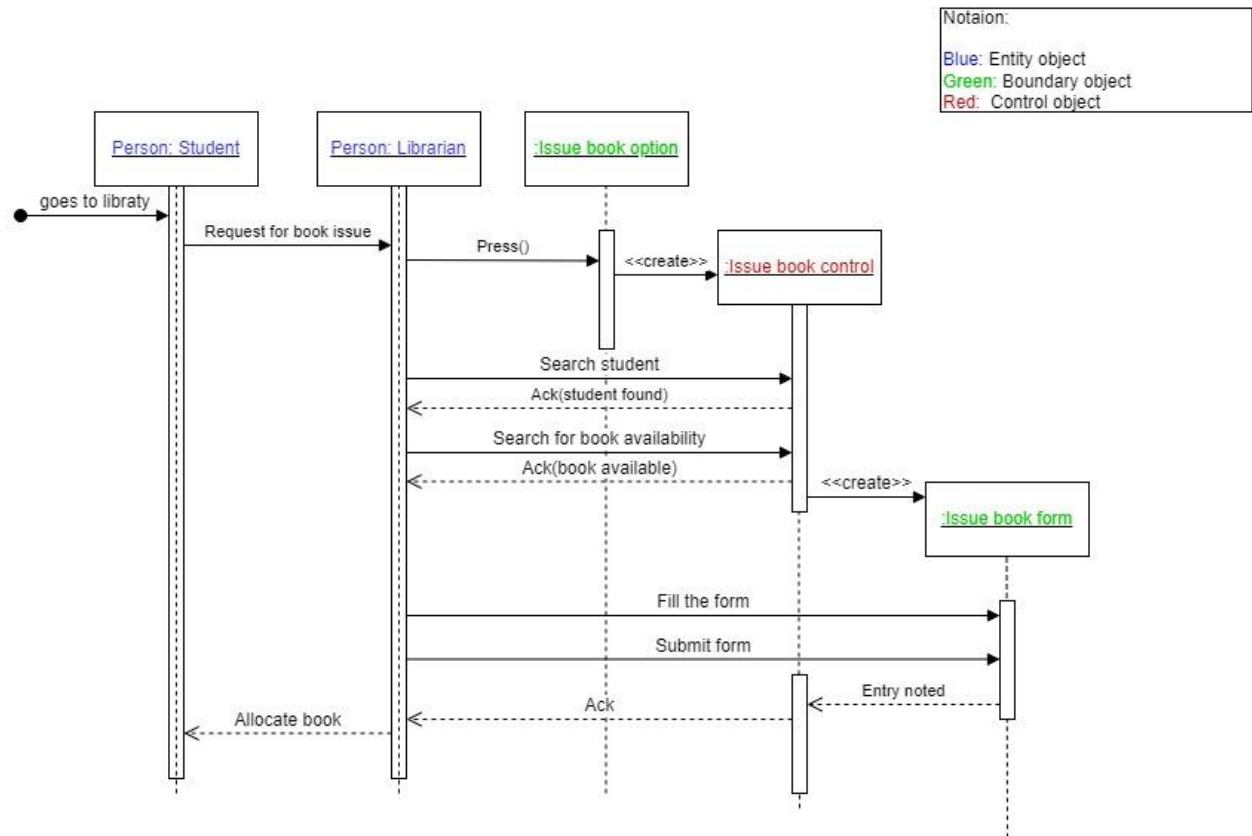
Alternatives:

- If the system cannot find the student, it prompts the librarian to re-enter the student's information.
- If the selected book is not available, the system informs the librarian and prompts for an alternative book selection.
- 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.

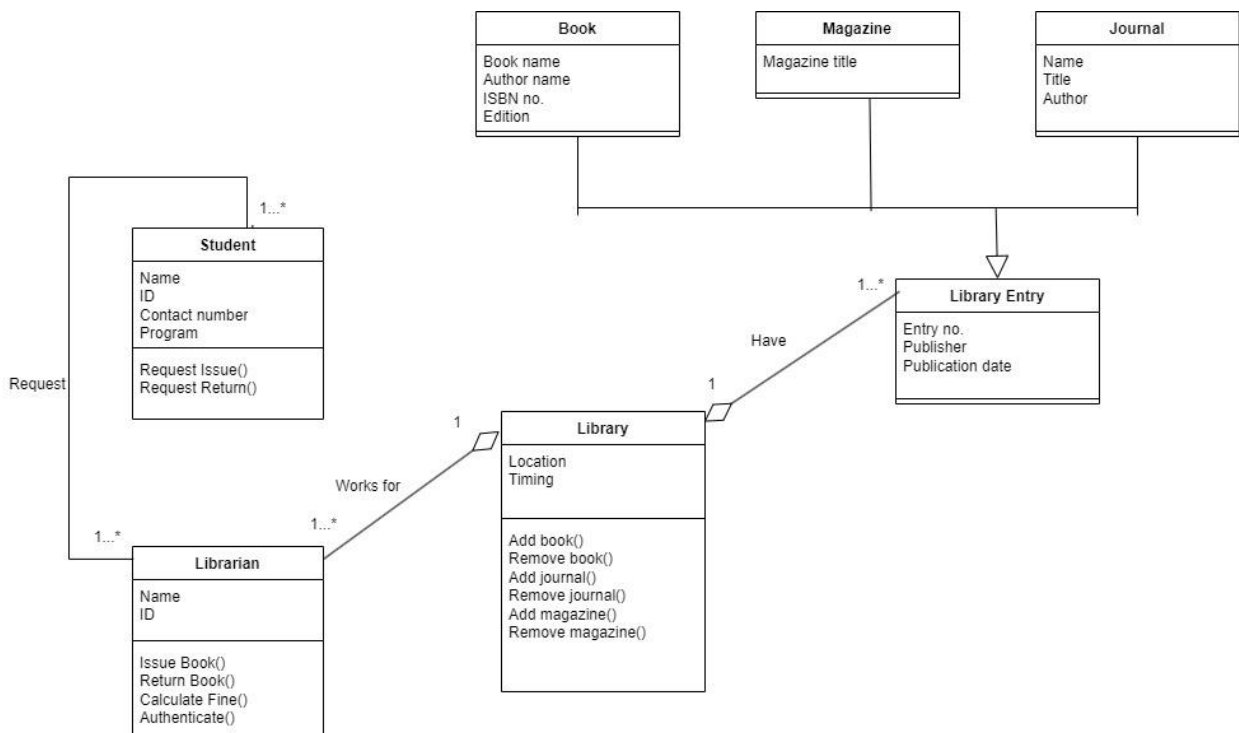
Post Conditions:

- The book is marked as issued to the student.
- The system updates its records to reflect the issued book.

2. The sequence diagram for the "issueBook" use case.



3. Draw the analysis object diagram for the “issueBook” use case analysis.



Que-2:

To give an exam, an instructor first notifies the students of the exam date and the material to be covered. She then prepares the exam paper (with sample solutions), gets it copied to produce enough copies for the class, and hands it out to students on the designated time and location. The students write their answers to exam questions and hand in their papers to the instructor. The instructor then gives the exam papers to the TAs, along with sample solutions to each question, and gets them to mark it. She then records all marks and returns the papers to the students.

Draw a sequence diagram that represents this process. Make sure to show when is each actor participating in the process. Also, show the operation that is carried out during each interaction, and what its arguments are.

