DELHI TECHNOLOGICAL UNIVERSITY

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DEPARTMENT OF SOFTWARE ENGINEERING

SE301: Object Oriented Software Engineering

Assignment File

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ASSIGNMENT-1

AIM: Draw use case scenario diagram for 1) Return Book and 2) Query Book in LMS.

THEORY: A library management system is ERP software that is designed & developed to manage all the in-house functions of a library. A librarian requires maintaining a database of new books and the books that are borrowed by users along with their due dates. This system completely automates all your library's activities. The best way to maintain, organize, and handle countless books systematically is to implement a library management system software.

You can find books in an instant, issue/reissue books quickly, and manage all the data efficiently and orderly using this system. The purpose of a library management system is to provide instant and accurate data regarding any type of book, thereby saving a lot of time and effort.

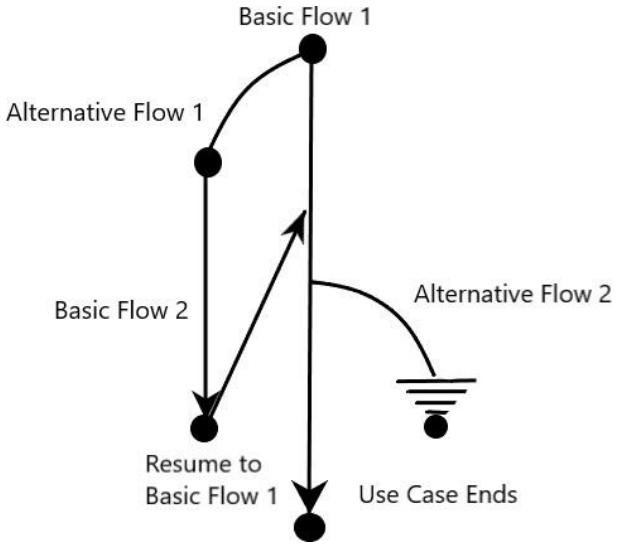
1. RETURN BOOK:

Use Case Description:

Introduction: This use case documents the steps that must be followed in order to return a book.
Actors Administrator Library staff
Precondition: The administrator/library staff must be logged onto the system before the use case begins.
Postcondition: If the use case is successful, the book is returned back to the library and if needed, the "fine calculation" use case is called, otherwise the system state is unchanged.
Event Flow **Basic Flow** 1. The book information is read from the bar code of the book through the bar code reader. 2. The student/faculty/employee detail on whose name the books were issued is displayed on the system. The date of issue and return is also displayed. 3. The administrator/library staff checks the stamp on the book to check the duration of issue of the book. 4. The database is updated and the book status is updated. 5. The date stamp on the book is cancelled.

Alternative Flows **Alternative Flow 1: Late return of book** If the duration for which the book has been kept by the student is more than 15 days, then a fine calculation use case is called. After the execution of fine calculation use case, the original use case resumes the basic flow. **Alternative Flow 2: User exits** This allows the user to exit at any time during the use case. The use case ends.
Special requirement None
Associated use case Login, fine calculation

Use Case Scenario:



Basic flow 1: Return Book
Basic flow 2: Fine Calculation
Alternative flow 1: Late Return of Book
Alternative flow 2: User Exists

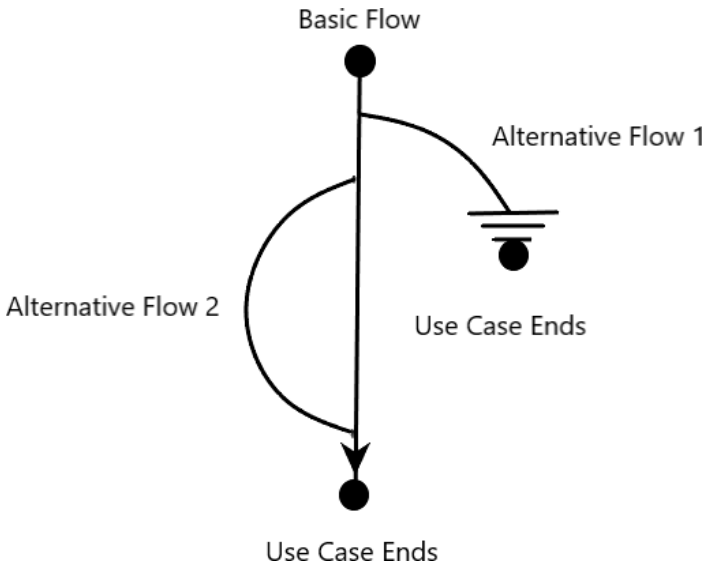
2. QUERY BOOK

Use Case Description:

Introduction This use case documents the steps that must be followed in order to query a book by a student.
Actors Administrator Library staff

Precondition The operator must be logged into the system before this use case begins.
Postcondition If the use case is successful, the system shows details of book queried on the screen, else the system state remains unchanged.
Event Flow Basic Flow 1. The operator enters any one of the following information: Full or partial name of the book. Full or partial name of the author. 2. The system conducts a search for the book. 3. The system displays the details of the book, with the number of copies available.
Alternate Flows **Alternative Flow 1: Book Does not Exist** If the book name or author name does not return any reference to the book, a message reporting the failure of search is displayed. **Alternative Flow 2: User Exits** This allows the user to exit at any time during the use case. The use case ends.
Special Requirements None
Associated Use Cases None

Use Case Scenario:



Basic Flow: Query Book
Alternative Flow 1: Use Exists
Alternative Flow 2: Book doesn't exist.