

EXERCISE.NO:10

Draw a use case diagram for Library Management System is an automation system used to manage a library and the different resource management required in it like cataloguing of books, allowing check out and return of books, invoicing, user management, etc. The user can search for books details using few book properties (Book ID, Title, Author, and Publisher). Searching should return details about all the book copies that match the search query.

AIM:

To design a Use Case Diagram for a Library Management System that automates library operations such as cataloguing books, managing checkouts and returns, invoicing, and user management. The system should also enable users to search for book details using various properties like Book ID, Title, Author, and Publisher.

PROCEDURE:

STEP 1: Understand System Requirements: Identify key functionalities like book cataloging, checkouts, returns, invoicing, and user management in the Library Management System

STEP 2: Identify the Actors: Define system users such as Librarian (manages books and invoices), User/Member (searches and borrows books), and System Admin (manages user accounts).

STEP 3: Identify Use Cases: List system functionalities including Search Books, Borrow Books, Return Books, Manage Catalog, Generate Invoice, and Manage Users.

STEP 4: Define Relationships: Establish connections between actors and use cases using association lines, include, and extend relationships to depict interactions.

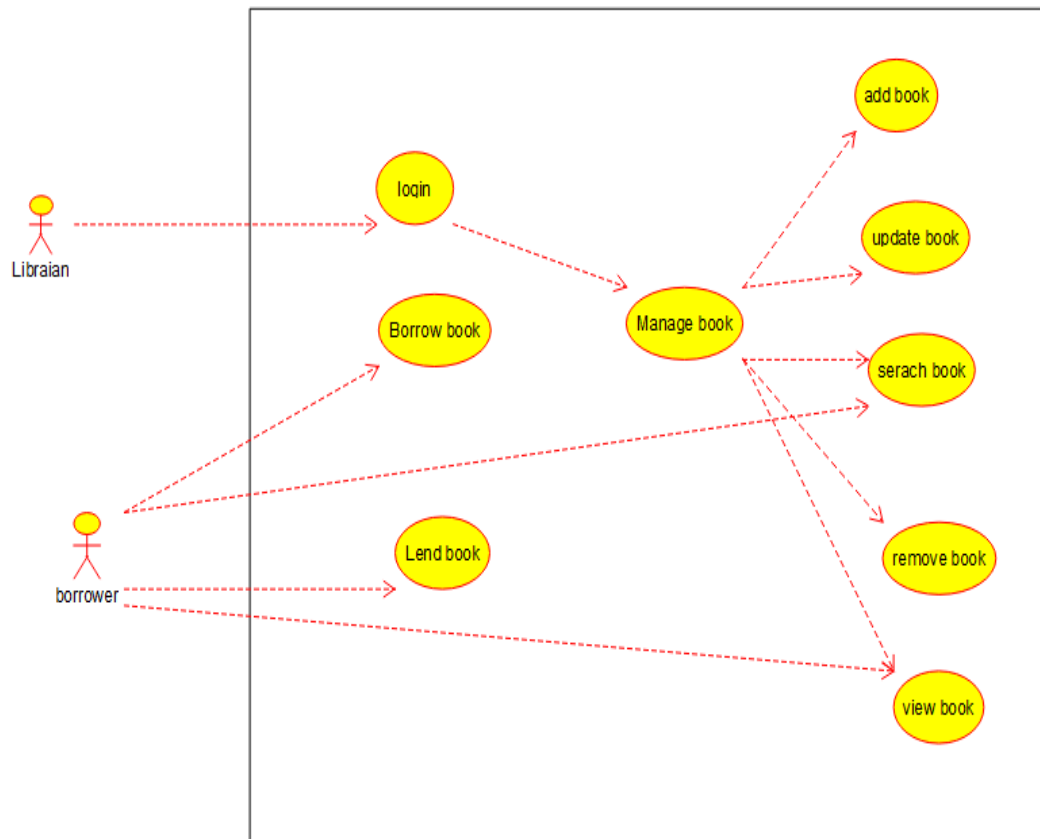
STEP 5: Create the UML Use Case Diagram: Use UML tools to visually represent actors, use cases, and their interactions for a structured system design.

STEP 6: Ensure System Security: Implement authentication and authorization for different actors to prevent unauthorized access.

STEP 7: Optimize Performance: Ensure efficient database management for quick retrieval of books, user records, and transaction details.

USE CASE DIAGRAM:

LIBRARY MANAGEMENT SYSTEM



RESULT:

Thus the Use Case diagram for the Library Management System has been implemented successfully.