

10. 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**, showing relationships between users and system functionalities like book cataloging, searching, checkout, return, invoicing, and user management.

1. PROCEDURE:

Identify Key Actors:

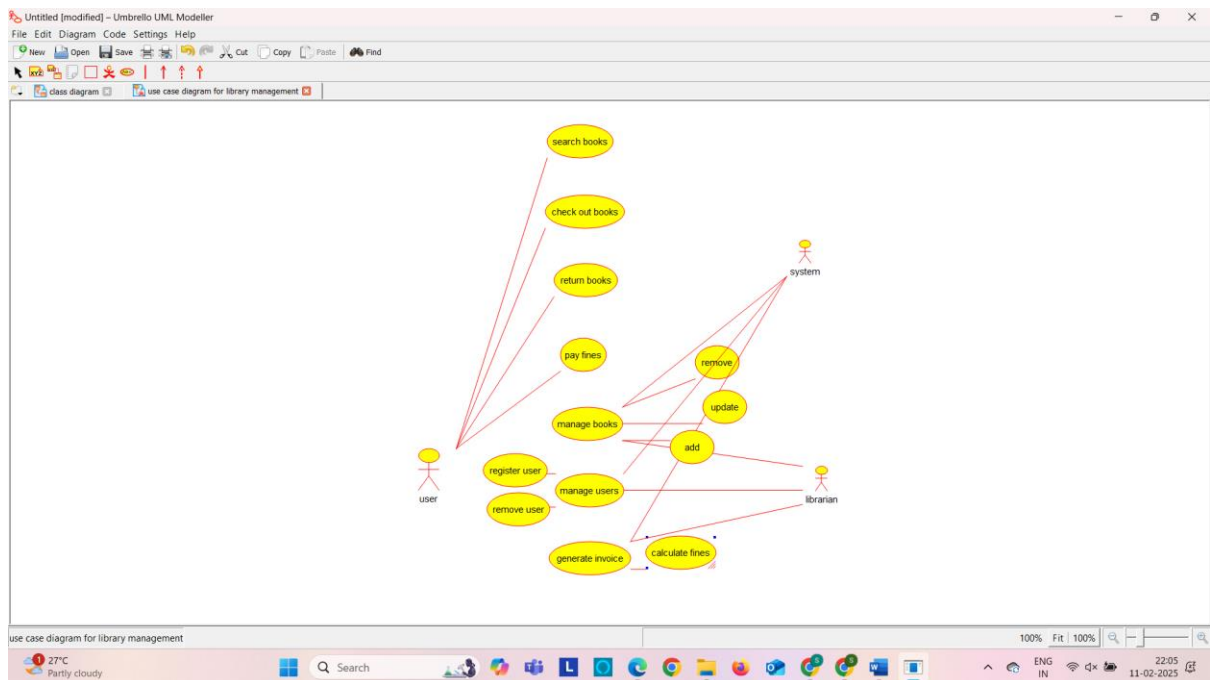
- **Member (User):** Searches books, borrows, and returns them.
- **Librarian:** Manages books, users, and invoices.
- **System:** Handles book cataloging, transactions, and fines.

2. **Identify Use Cases & Relationships:**

- **Member** interacts with:
 - **Search Books** (View Book Details).
 - **Check Out Books** (Pay Fines if applicable).
 - **Return Books** (Check for Late Fees).
 - **Pay Fines** (Generate Invoice).
- **Librarian** interacts with:
 - **Manage Books** (Add, Update, Remove Books).
 - **Manage Users** (Register and Remove Users).
 - **Generate Invoice** (Calculate Fines).

OUTPUT:

Usecase diagram



RESULT:

A **Use Case Diagram** for the **Library Management System** was successfully created, showing relationships between actors, use cases, and system functionalities.