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.
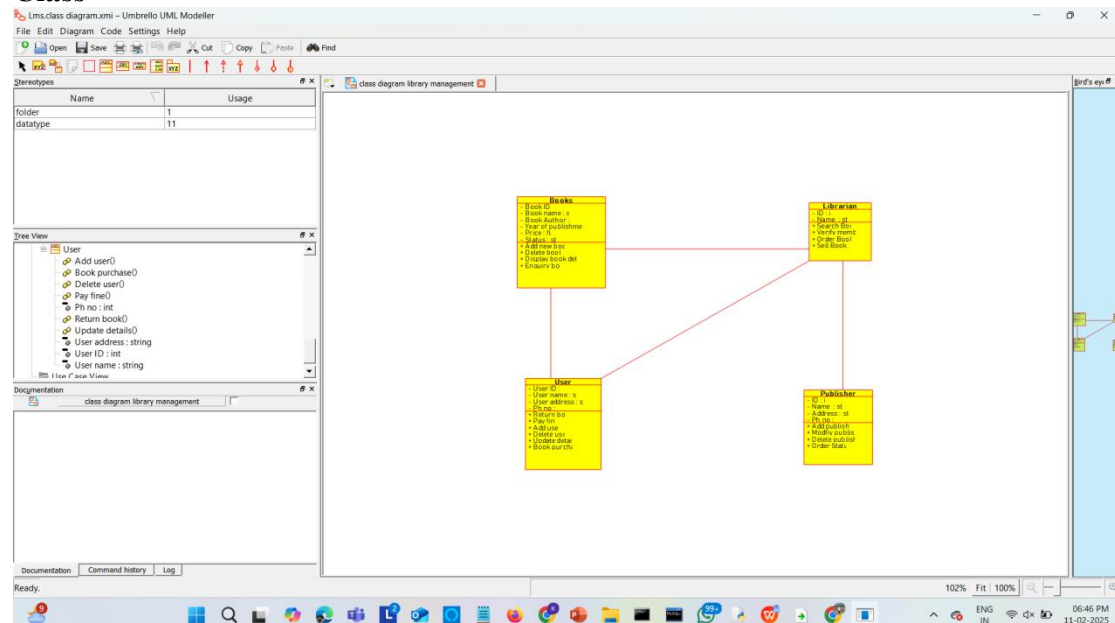
AIM:

To design a Use Case Diagram for a Library Management System that automates resource management tasks such as cataloging, book borrowing, and user management.
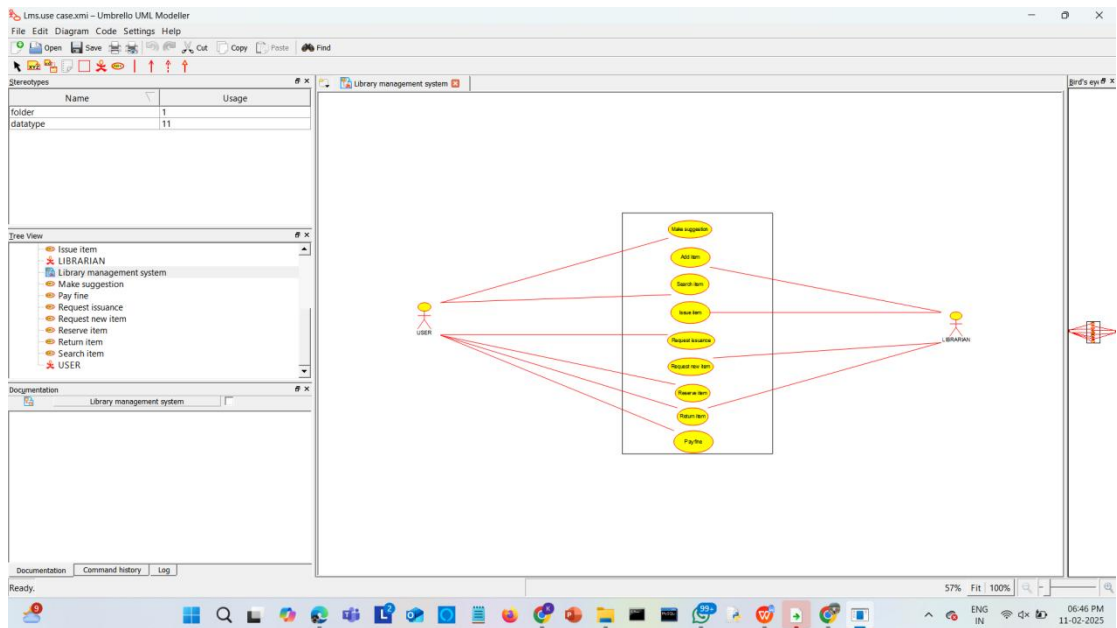
Procedure :

- Identify key actors: Librarian, Member, and Administrator.
- Define primary use cases: Search Books, Check Out Book, Return Book, Invoice Management, and User Management.
- Establish relationships between actors and use cases:
- Member searches for books and borrows or returns them.
- Librarian handles invoicing and manages book cataloging.
- Administrator manages user access and system configurations.
- Include search criteria (Book ID, Title, Author, Publisher) for book-related queries.
- Connect actors with their respective use cases using associations.
- Draw the Use Case Diagram with clearly labeled use cases and actor relationships.
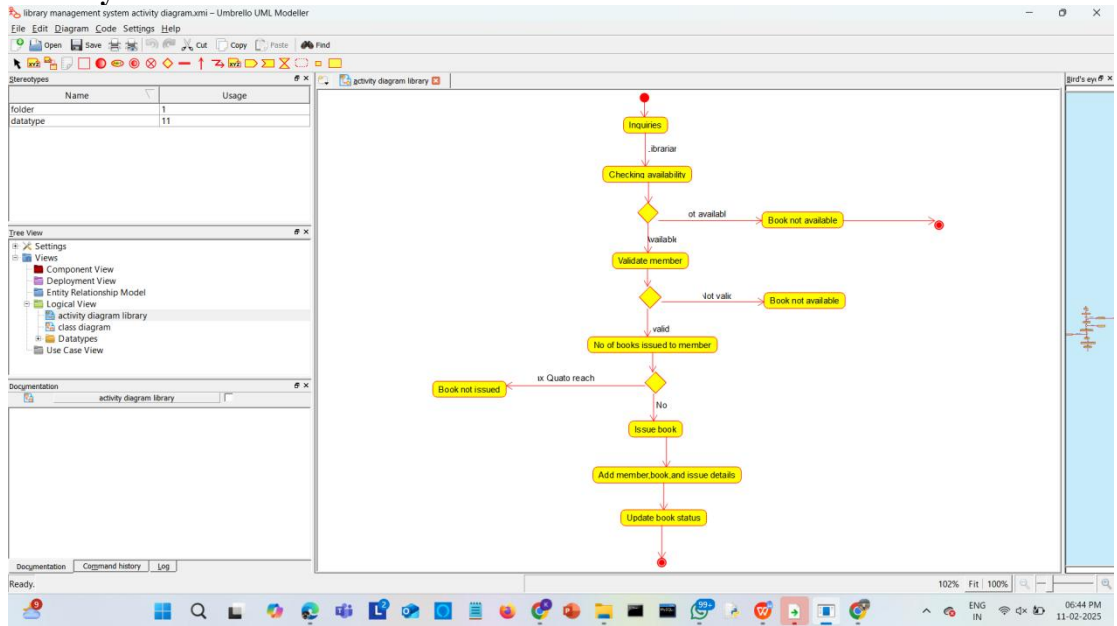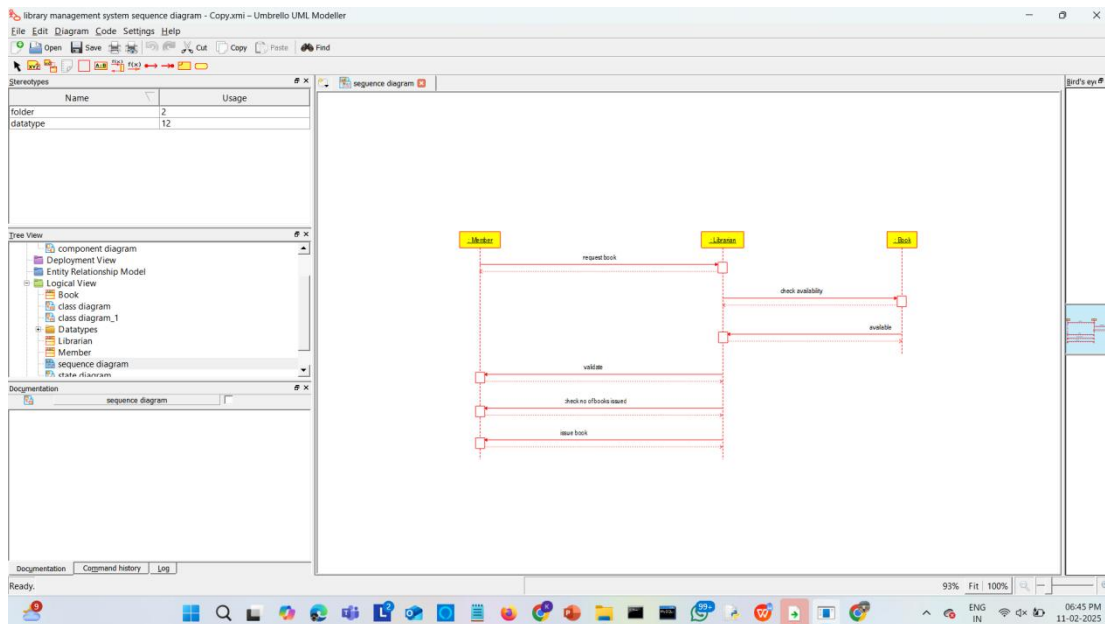- Ensure adherence to UML conventions and clarity in system visualization.
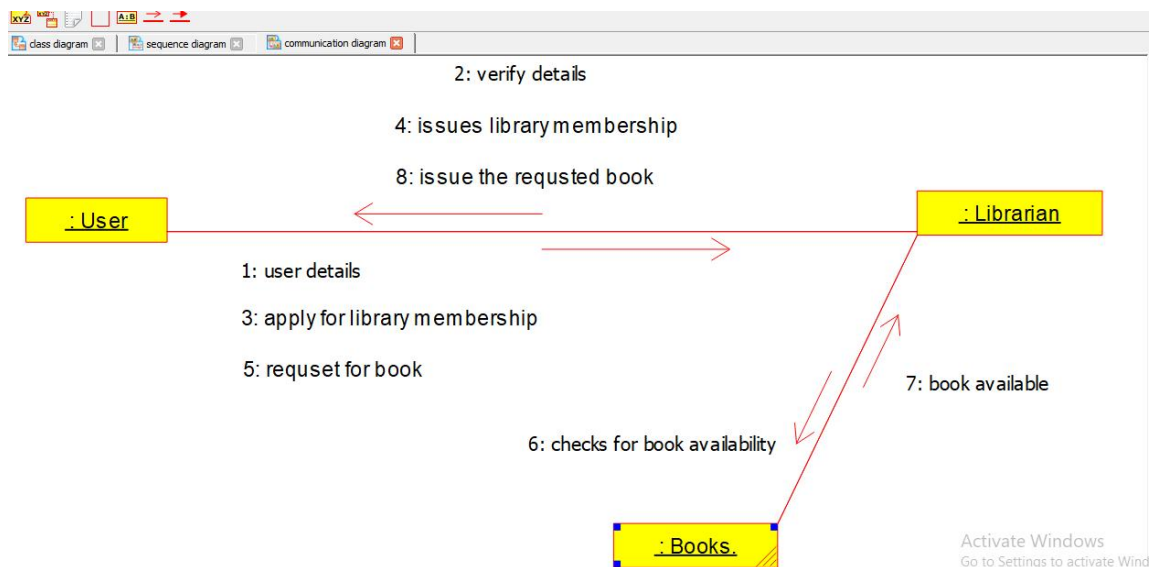
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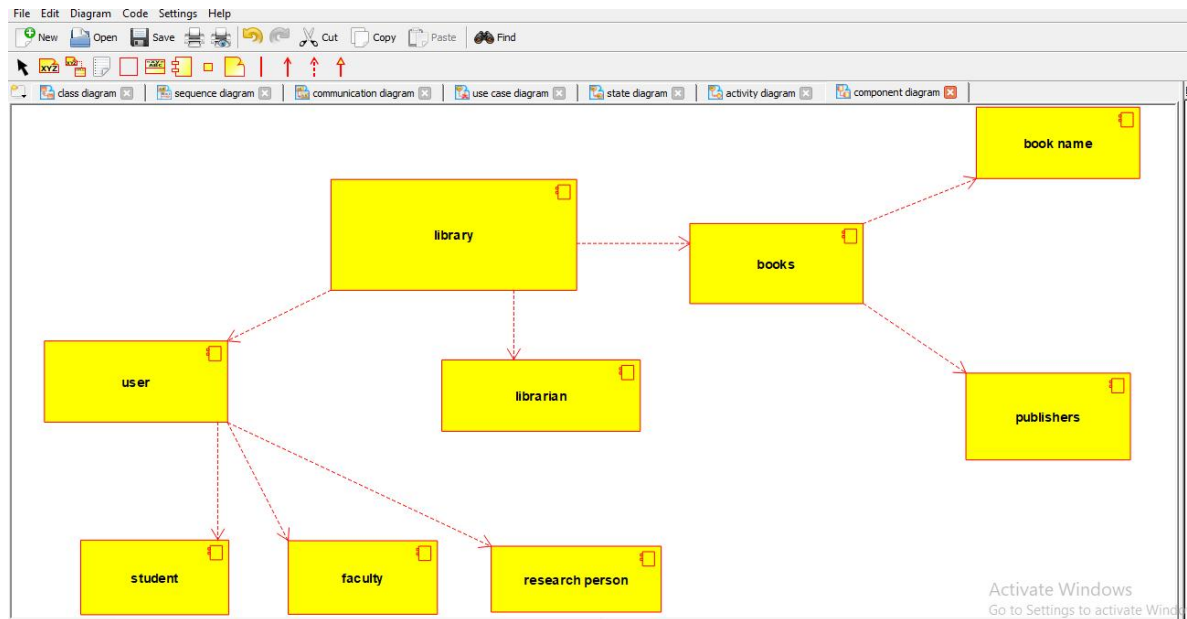

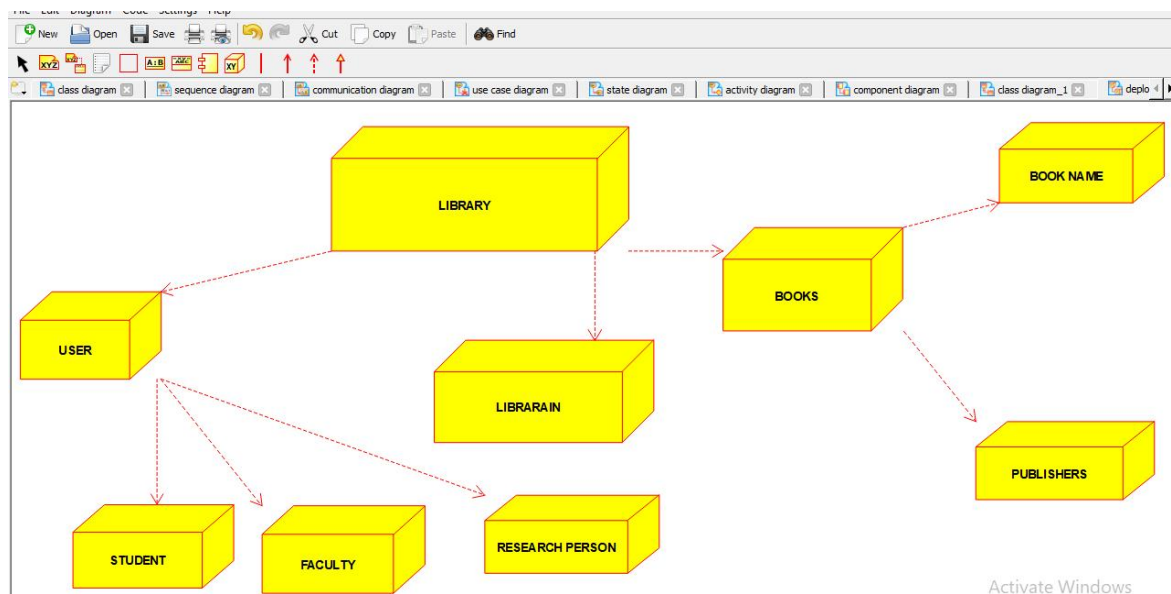**Usecase**

Activity

Sequence

COMMUNICATION DIAGRAM

COMPONENT DIAGRAM

Deployement

Result :
The Use Case Diagram for the Library Management System was successfully designed, capturing user interactions, book transactions, and resource management processes for efficient library operations.