



SAVEETHA SCHOOL OF ENGINEERING
SAVEETHA INSTITUTE OF MEDICAL AND
TECHNICAL SCIENCES



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LIST OF EXPERIMENTS

COURSE CODE : CSA4001

COURSE NAME : MANAGEMENT INFORMATION SYSTEM

- 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 **Library Management System** that automates book cataloging, checkouts, returns, invoicing, and user management for efficient library operations.

PROCEDURE:

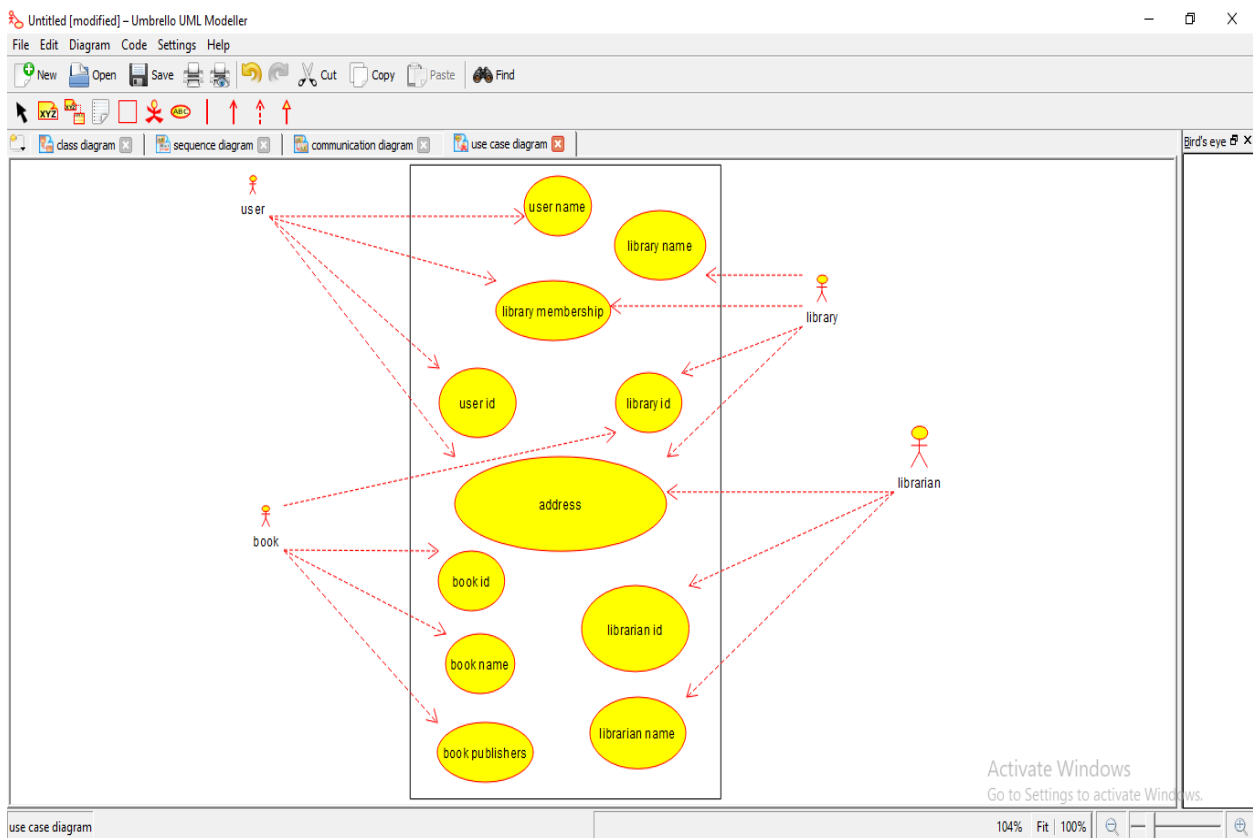
1. **User Searches for Books**
 - Users can search for books using properties like Book ID, Title, Author, or Publisher.
2. **View Book Details & Availability**
 - The system displays book details, including available copies and location.
3. **User Issues (Checks Out) a Book**
 - A registered user borrows a book, and the system updates its status.
4. **User Returns a Book**
 - The system records book returns and updates availability.
5. **Manage Fines & Invoicing**
 - The system calculates overdue fines and generates invoices if applicable.
6. **Admin Manages Books & Users**
 - The admin adds, removes, or updates book records and user accounts.

7. Generate Reports & Notifications

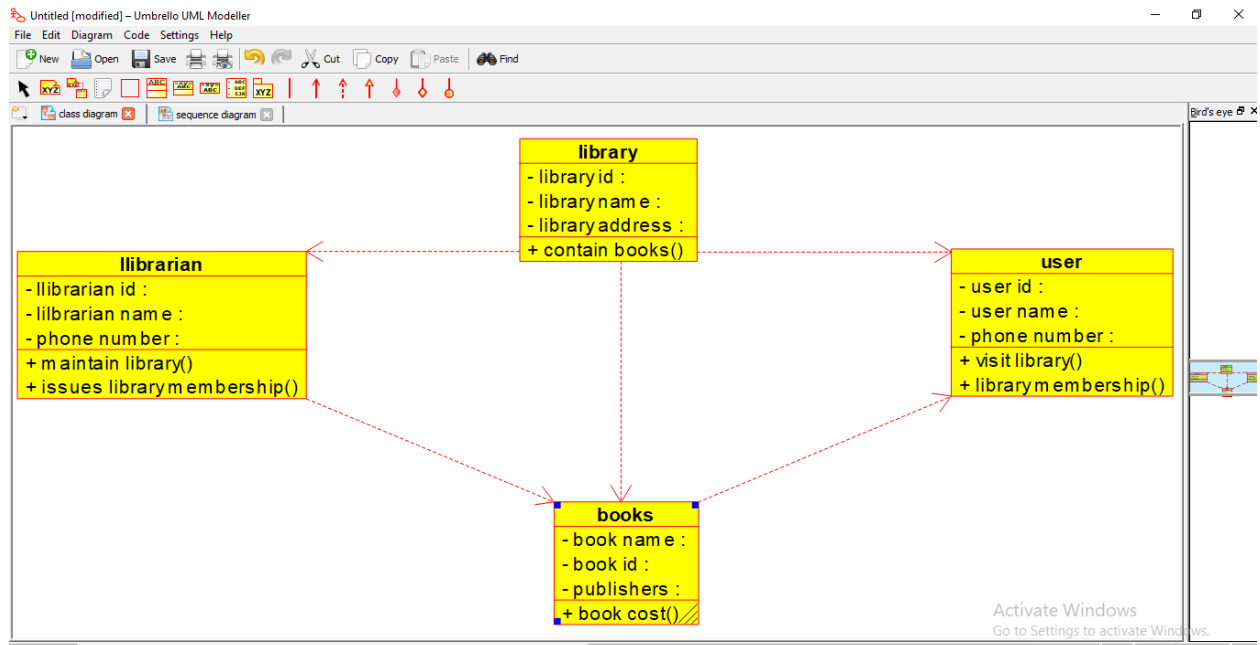
- The system provides reports on borrowed books, due dates, and fines while notifying users about due dates.

OBSERVATION:

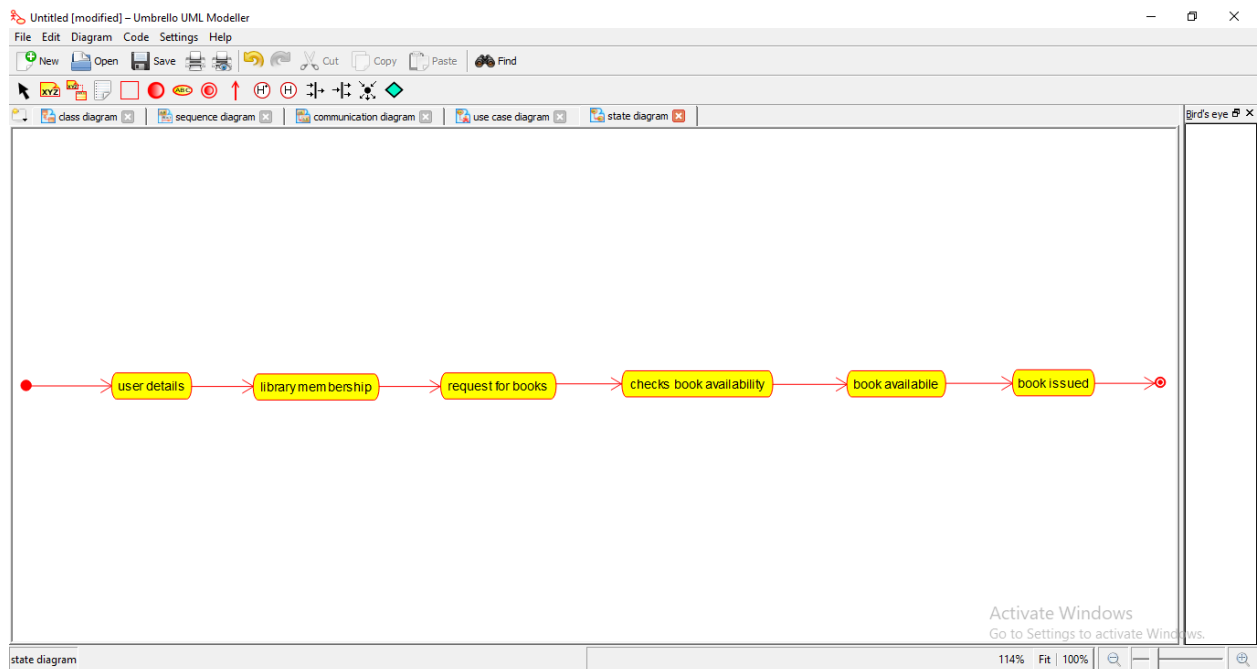
USECASE DIAGRAM:



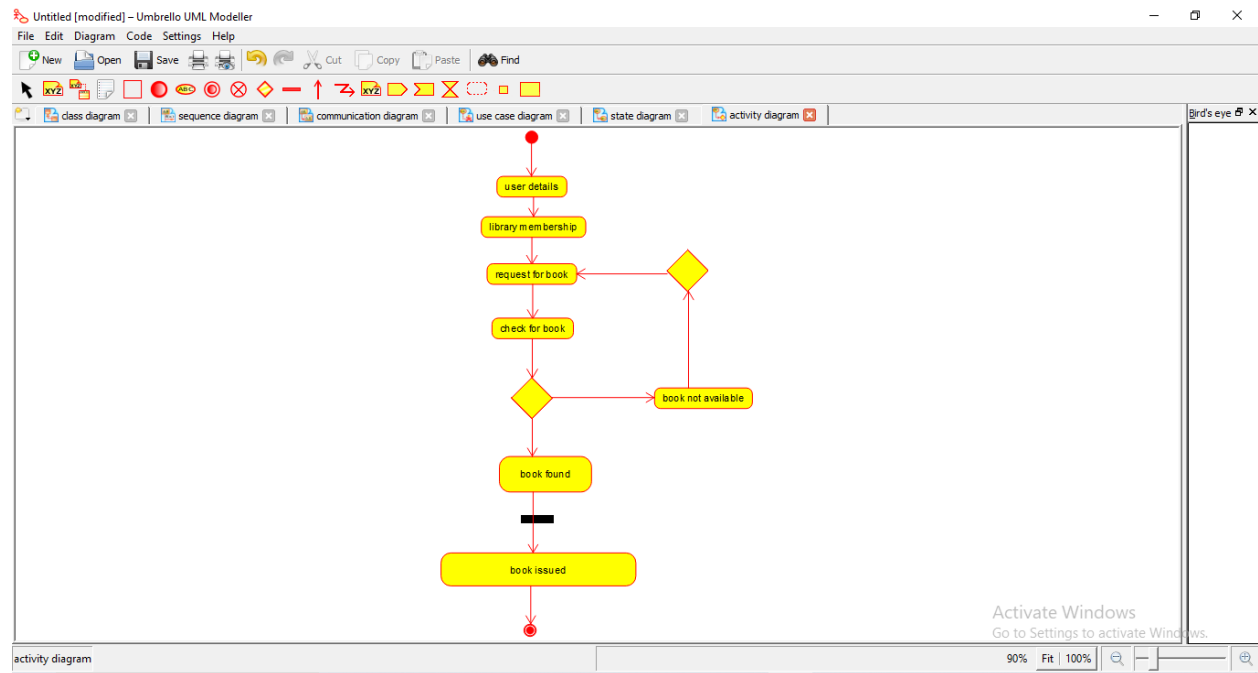
CLASS DIAGRAM:



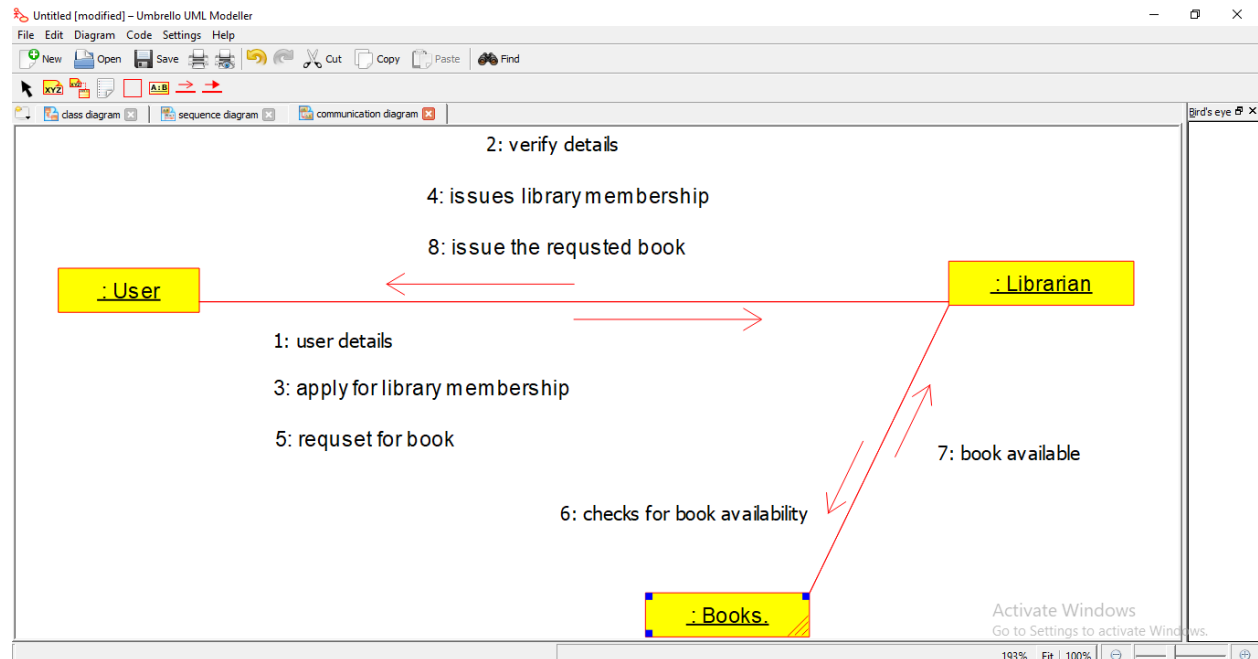
STATE DIAGRAM:



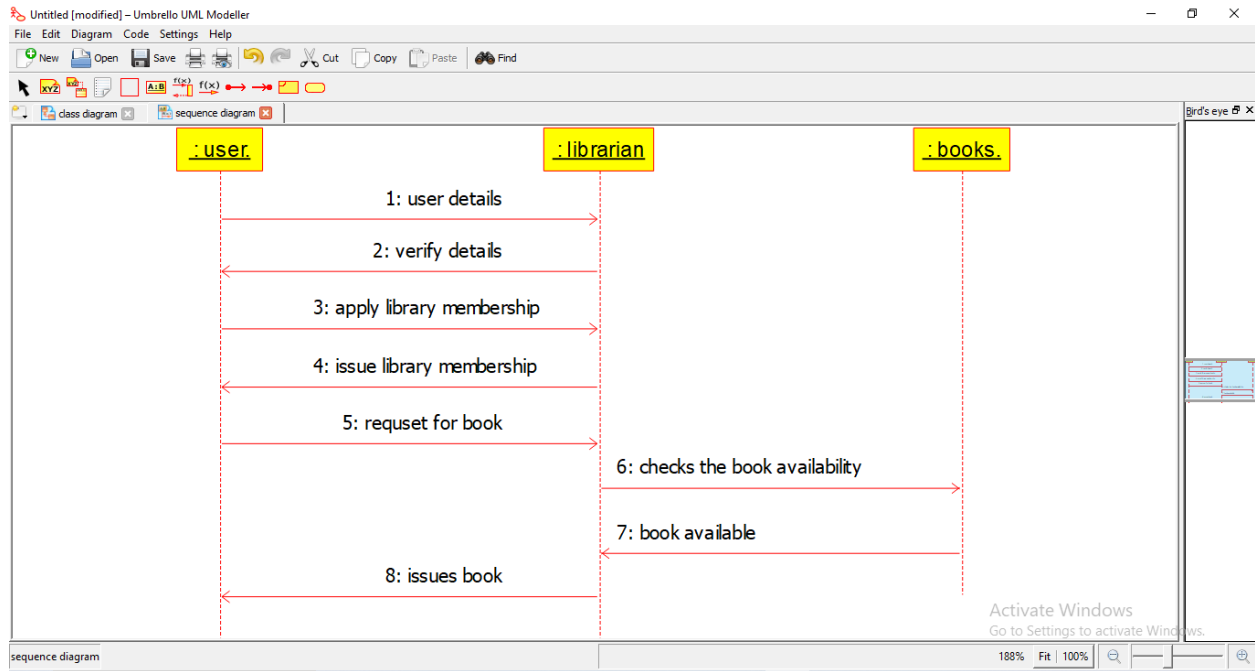
ACTIVITY DIAGRAM:



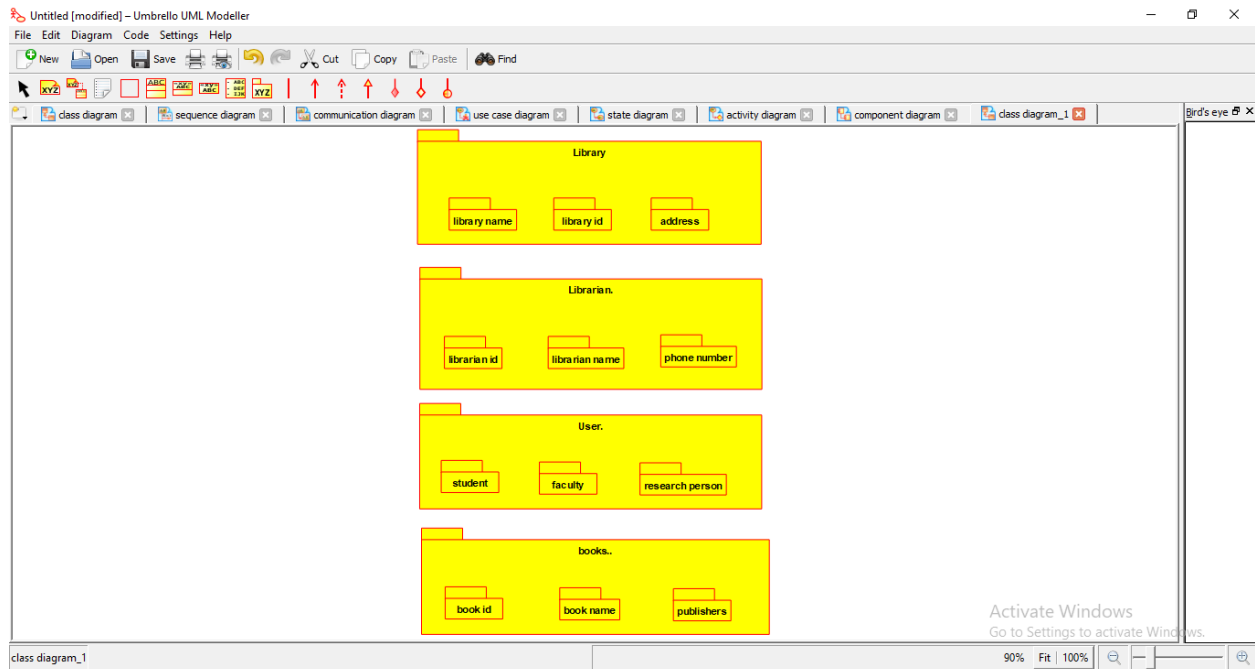
COMMUNICATION DIAGRAM:



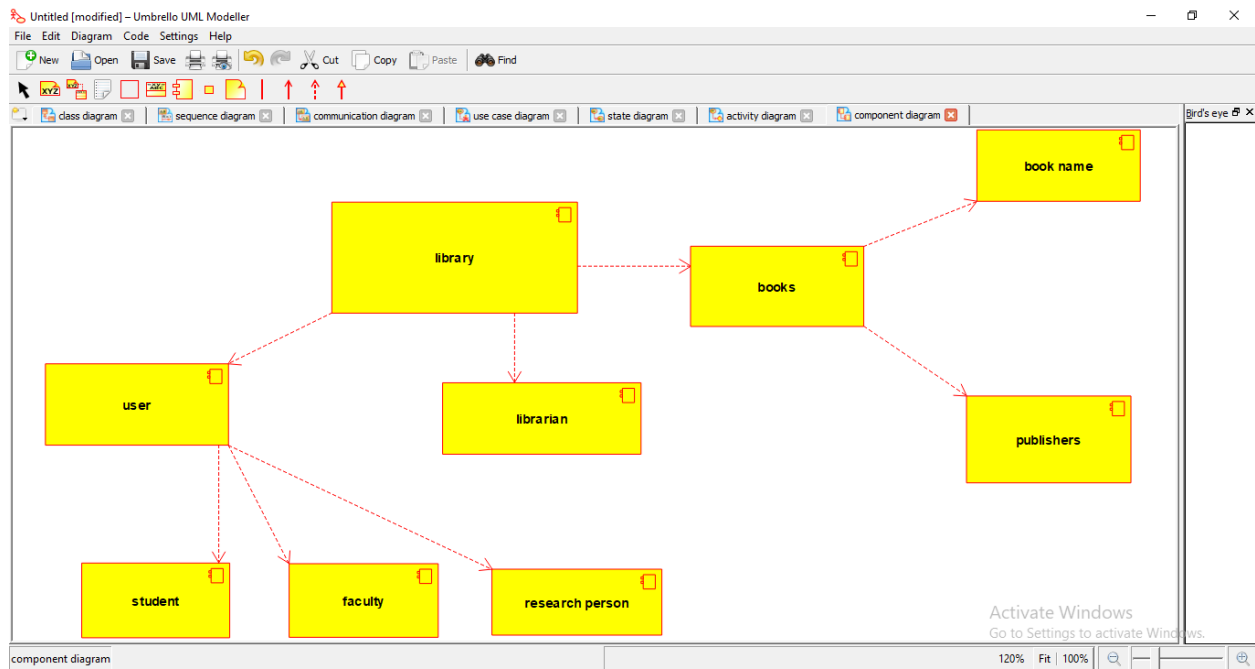
SEQUENCE DIAGRAM:



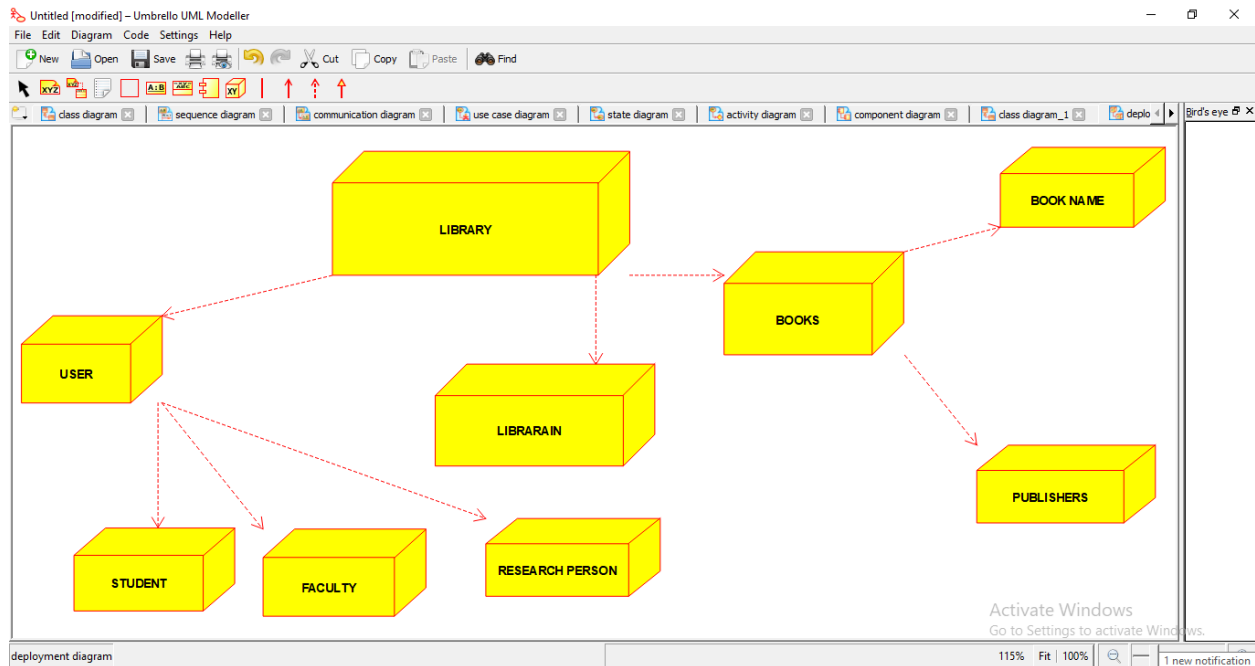
PACAGE DIAGRAM:



COMPONENT DIAGRAM:



DEPLOYMENT DIAGRAM:



RESULT:

The Library Management System automates book cataloging, checkouts, returns, and user management, ensuring smooth library operations. It enhances user experience while reducing manual effort in tracking books and fines.