

EXPERIMENT.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.

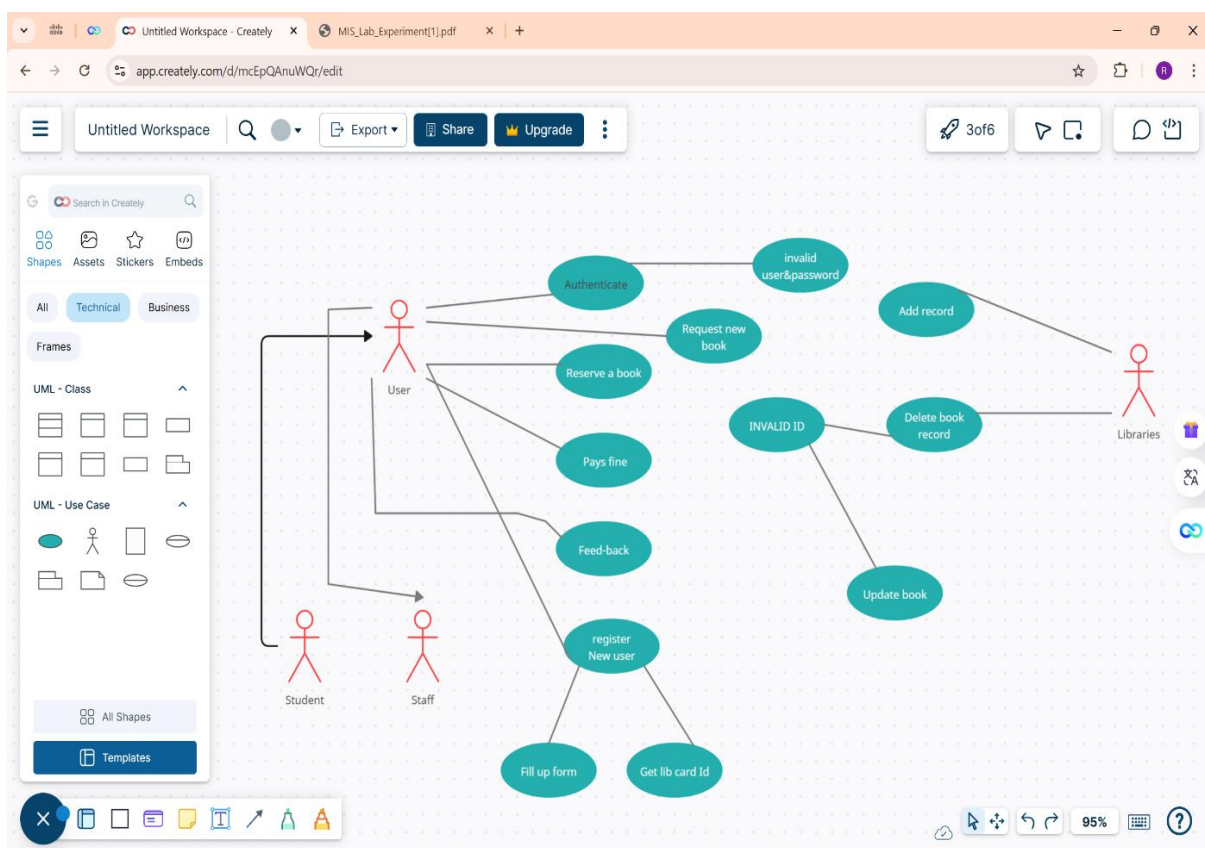
Aim:

To design a use case diagram for a Library Management System that automates library operations such as cataloguing books, managing checkouts and returns, invoicing, user management, and enabling book searches based on properties like Book ID, Title, Author, and Publisher.

Procedure:

1. Identify the actors: **Librarian, User, and System.**
2. Define the use cases: **Search Books, Check Out Books, Return Books, Manage Catalogue, Manage Users, and Generate Invoices.**
3. Establish relationships: User interacts with the system to search, check out, and return books; Librarian manages the catalogue, users, and invoices.
4. Validate the flow: User searches for books → Checks out or returns books → Librarian manages catalogue and users → System generates invoices.
5. Ensure all functionalities are represented in the use case diagram.

Output:



Result:

The use case diagram captures the interactions between the **User**, **Librarian**, and **System** in a Library Management System. It highlights key functionalities such as searching for books, checking out and returning books, managing the catalogue and users, and generating invoices.