

KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY
UDYAMBAG BELAGAVI -590008

KARNATAKA, INDIA.



A Course Project Report on
LIBRARY MANAGEMENT SYSTEM

Submitted for the requirements of 4th semester B.E in CSE for
“Software Engineering (18CS45)”

Submitted by

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Under the guidance of

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Asst. Prof., Dept. of CSE

Academic Year 2021 - 2022 (Even semester)

2021-2022

CERTIFICATE



This is to certify that the project titled

“LIBRARY MANAGEMENT SYSTEM”

is a bonafide record of the Project done by **SHIVANI BANKE (2GI20CS140)**, **SHRADHA MALLIKARJUN PATIL (2GI20CS144)**, **SRUSHTI MUDENNAVAR (2GI20CS158)** and **YASH HEREKAR (2GI20CS184)** under my supervision and guidance, in partial fulfilment of the requirements for **Software Engineering (18CS45)** the Outcome Based Education Paradigm in **Computer Science and Engineering** from Gogte Institute of Technology , Belgaum for the academic year 2021-2022.

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Department of CSE

Academic Year 2021 - 2022 (Even semester)

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1. PROBLEM STATEMENT

A library database system is an infrastructure that allows users to search books and book content, add/remove, and download selected books. The problem faced is that library users require an efficient method to find a specific book or keywords within a book given a continuously expanding library.

2. TOOLS USED FOR DEVELOPMENT

Java - GUI and functionality

MySQL - Backend Database

Git - Version control system

Github - Collaboration over the cloud

draw.io - Use-case diagrams and sequence diagram

3. NON FUNCTIONAL REQUIREMENTS

Efficient Requirement

When a library management system will be implemented librarian and user will easily access library as searching and book transaction will be very faster.

Reliable Requirement

The system should accurately performs member registration ,member validation , report generation, book transaction and search

Usability Requirement

The system is designed for a user friendly environment so that student and staff of library can perform the various tasks easily and in an effective way.

Implementation Requirement

In implementing whole system it uses html in front end with php as server side scripting language which will be used for database connectivity and the backend ie the database part is developed using mysql.

Delivery Requirement

The whole system is expected to be delivered in six months of time with a weekly evaluation by the project guide.

4. FUNCTIONAL REQUIREMENTS

NORMAL USER

User Login

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system .The user id and password will be verified and if invalid id is their user is allowed to not enter the system.

Functional requirements

- user id is provided when they register
- The system must only allow user with valid id and password to enter the system
- The system performs authorization process which decides what user level can access to.
- The user must be able to logout after they finished using system.

Register New User

This feature can be performed by all users to register new user to create account.

Functional requirements

- System must be able to verify information
- System must be able to delete information if information is wrong

Register New Book

This feature allows to add new books to the library

Functional requirements

- System must be able to verify information
- System must be able to enter number of copies into table.
- System must be able to not allow two books having same book id.

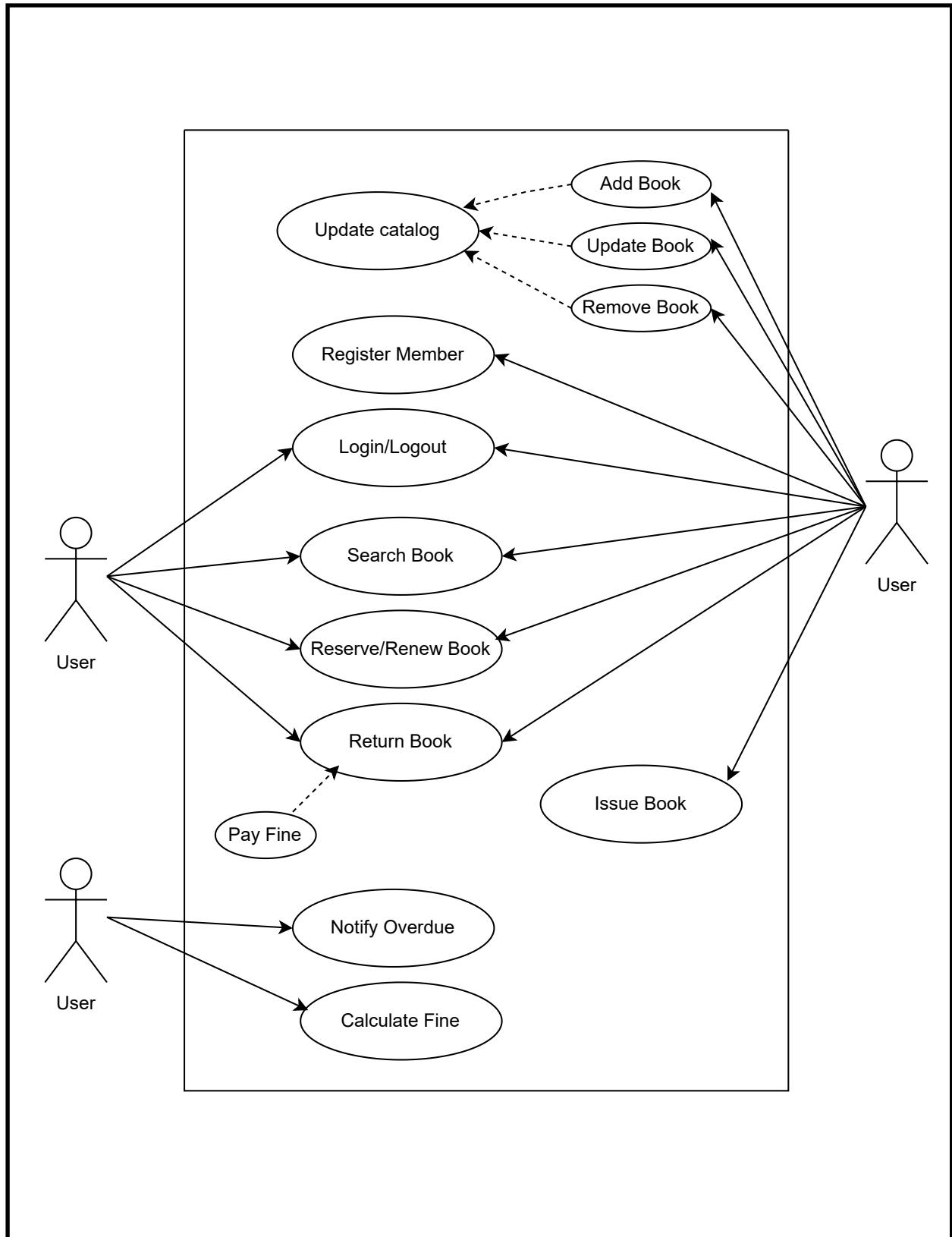
Search Book

This feature is found in book maintenance part . we can search book based on book id , book name ,publication or by author name.

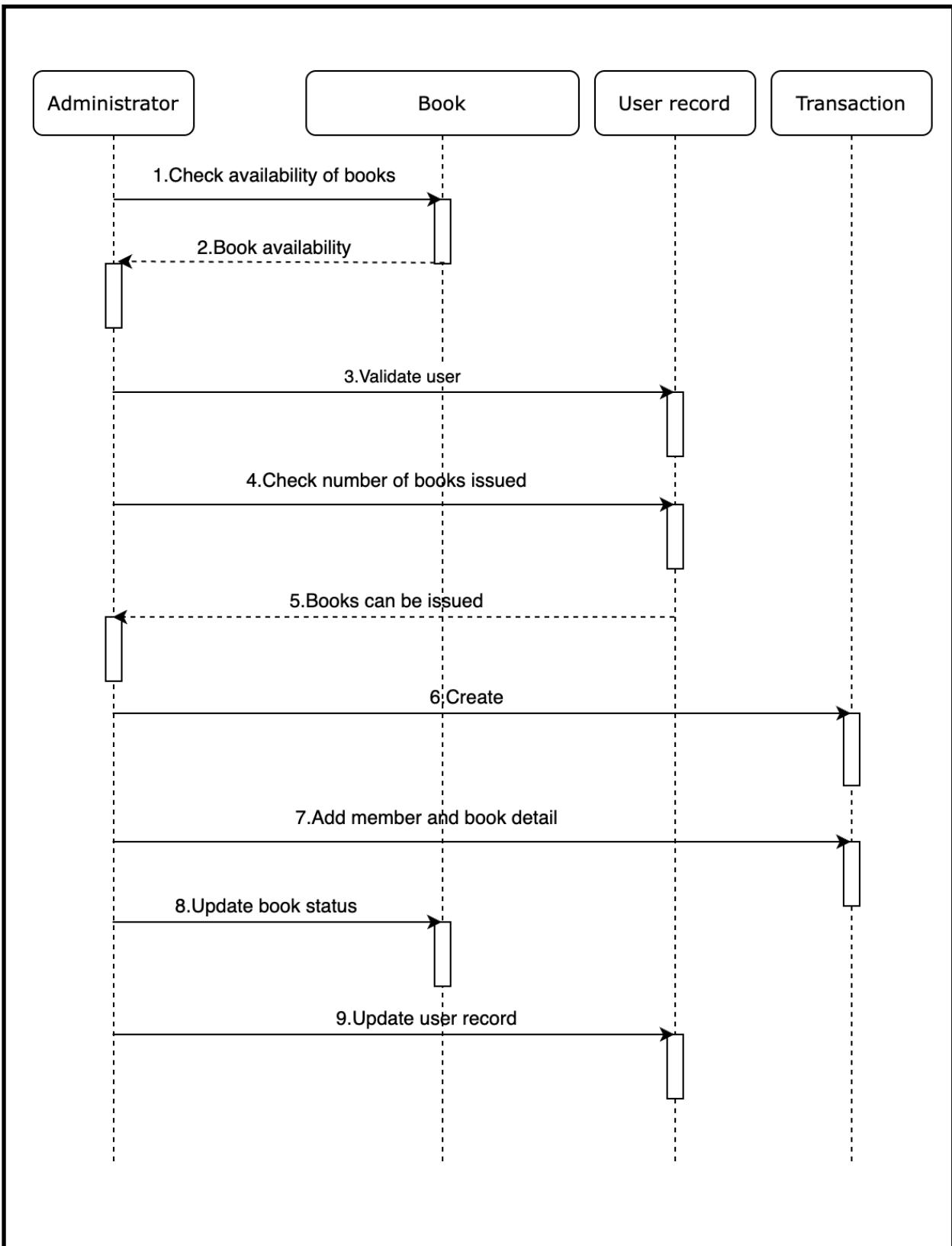
Functional requirements

- System must be able to search the database based on select search type
- System must be able to filter book based on keyword entered
- System must be able to show the filtered book in table view

5. USE-CASE DIAGRAM



6. SEQUENCE DIAGRAM



7. STORY CARD/ TASK CARD/ TEST CARD

USER STORY

Search books

As a user, I want to issue books by searching the book in the library database system so that I can borrow books more conveniently.

Acceptance Criteria

1. Books in library can be search by multiple ways such as by title, author, recommendations and so on
2. Books current borrowing states can be showed
3. Book's detailed information such as location should be shown

TASK CARD

Task 1: Searching for a book

The search function should enable students to go to the library section easily. The user should be able to search by names of authors, subjects or even by publishers or can define search field with search filters based on need. The search result will inform the user whether the resource is available and where to find it.

In case the book is checked out ,it can also send notifications when a particular book is available.

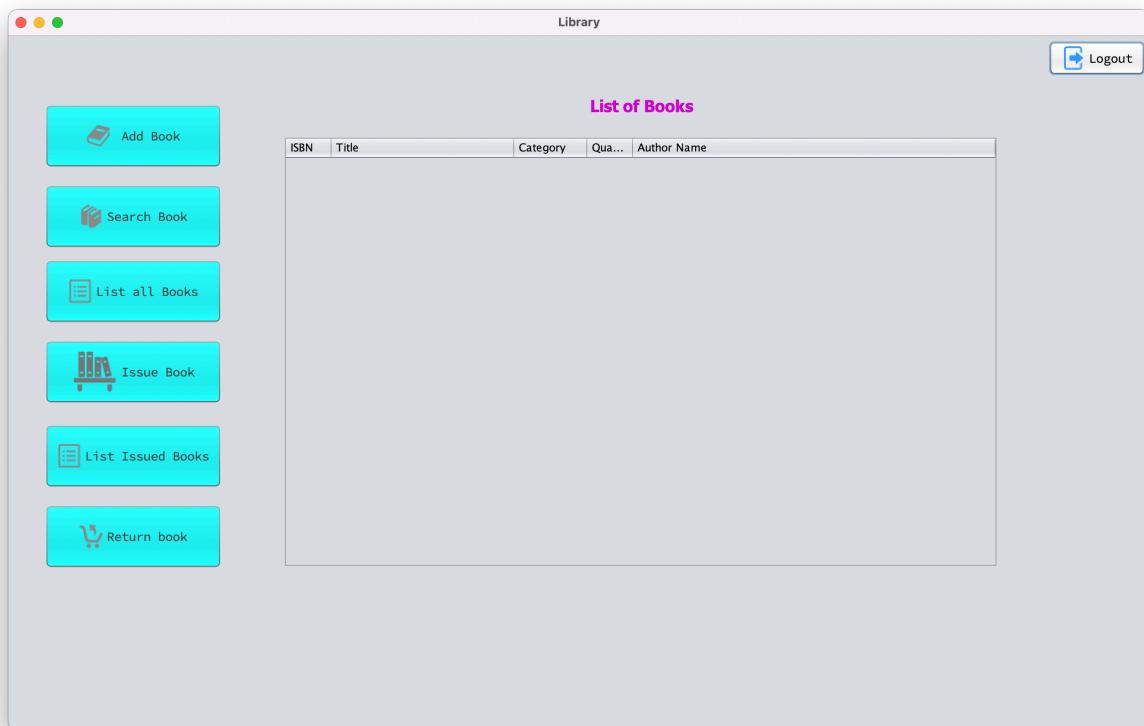
TEST CARD

Input	book's details including author's name, year, Title , ISBN, genre, etc
Test Case 1	Testing author's name is valid or not
Test Case 2	Testing book's title is valid or not
Test Case 3	Testing if the specified book is stored in the library or not
Test Case 4	Testing if the specified book is currently available or not.
Output	Successful if available or Error message otherwise.

8. SCREENSHOTS



Login Page



Home page

Library

[Logout](#)

Add Book

[Add Book](#)

[Search Book](#)

[List all Books](#)

[Issue Book](#)

[List Issued Books](#)

[Return book](#)

Book ISBN:

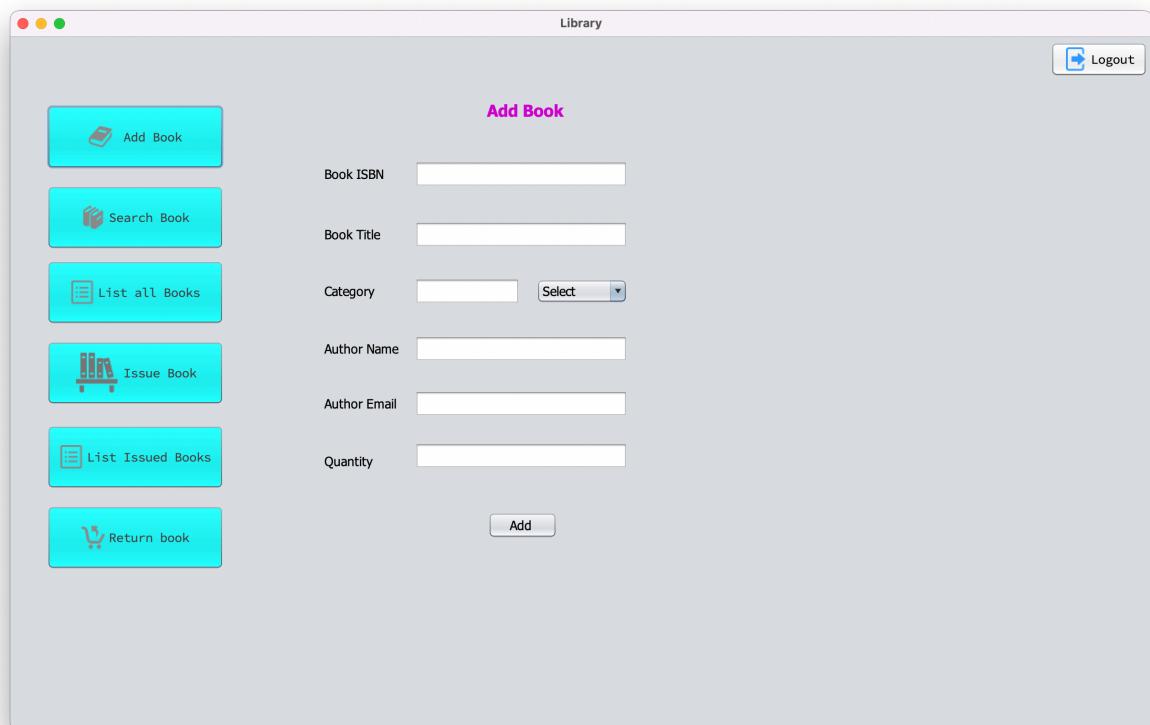
Book Title:

Category: Select

Author Name:

Author Email:

Quantity:



Add Book

Library

[Logout](#)

Search Book

[Add Book](#)

[Search Book](#)

[List all Books](#)

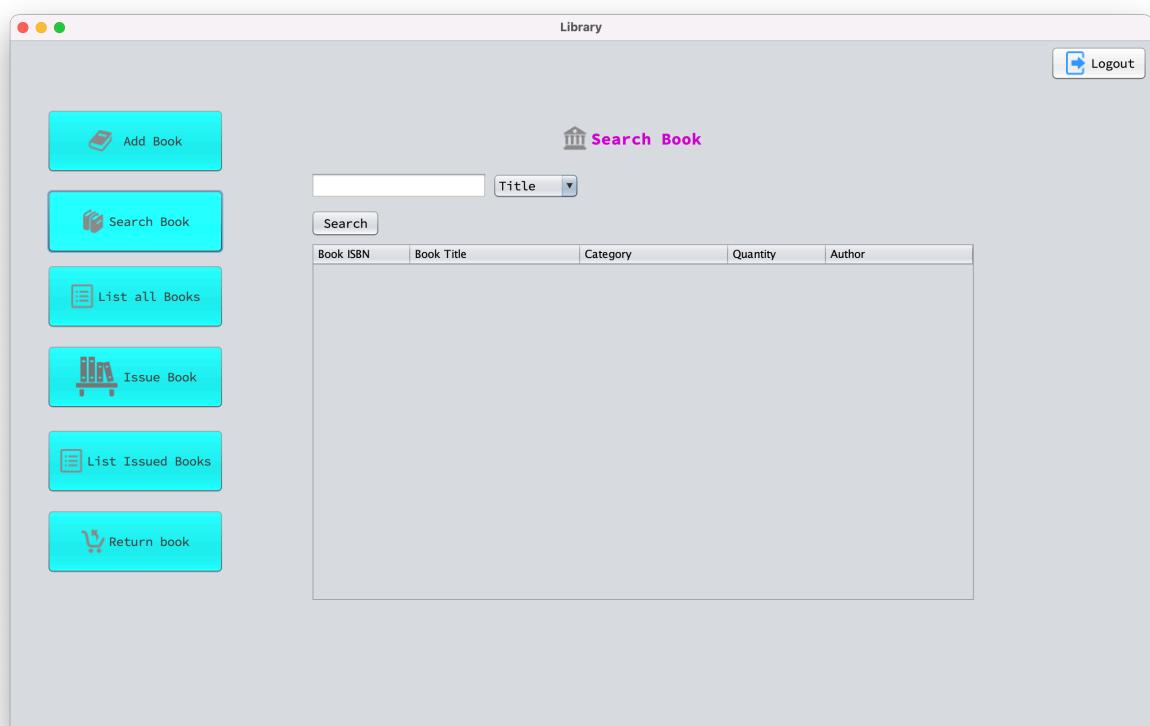
[Issue Book](#)

[List Issued Books](#)

[Return book](#)

Title

Book ISBN	Book Title	Category	Quantity	Author



Search Book

Library

[Logout](#)

[Add Book](#)

[Search Book](#)

[List all Books](#)

[Issue Book](#)

[List Issued Books](#)

[Return book](#)

List of Books

Book ISBN	Book Title	Category	Quantity	Author
100	Fundamentals of dat...	Database Management	4	Ramez Elmasri
101	Higher Engineering M...	math	10	B.S.Grewal
102	Advanced Engineerin...	math	15	Erwin Kreyszig
103	Data Structures: A Ps...	Data Structures	20	Behrouz Forouzan
104	Data Structures Usin...	Data Structure	20	Augenstein
105	Digital Principles and ...	Digital Electronics	15	Donald P Leach
106	Digital Systems Princi...	Digital Electronics	20	Ronald J Tocci
107	Head First Java	Java	20	Kathy Sierra
108	Java Fundamentals A...	Java	20	Herbert Schildt
109	Computer Organization	CO	20	Carl Hamacher
110	A Beginner's Guide to...	Web	20	Jennifer Niederst

List All Books

Library

[Logout](#)

[Add Book](#)

[Search Book](#)

[List all Books](#)

[Issue Book](#)

[List Issued Books](#)

[Return book](#)

Issue Book

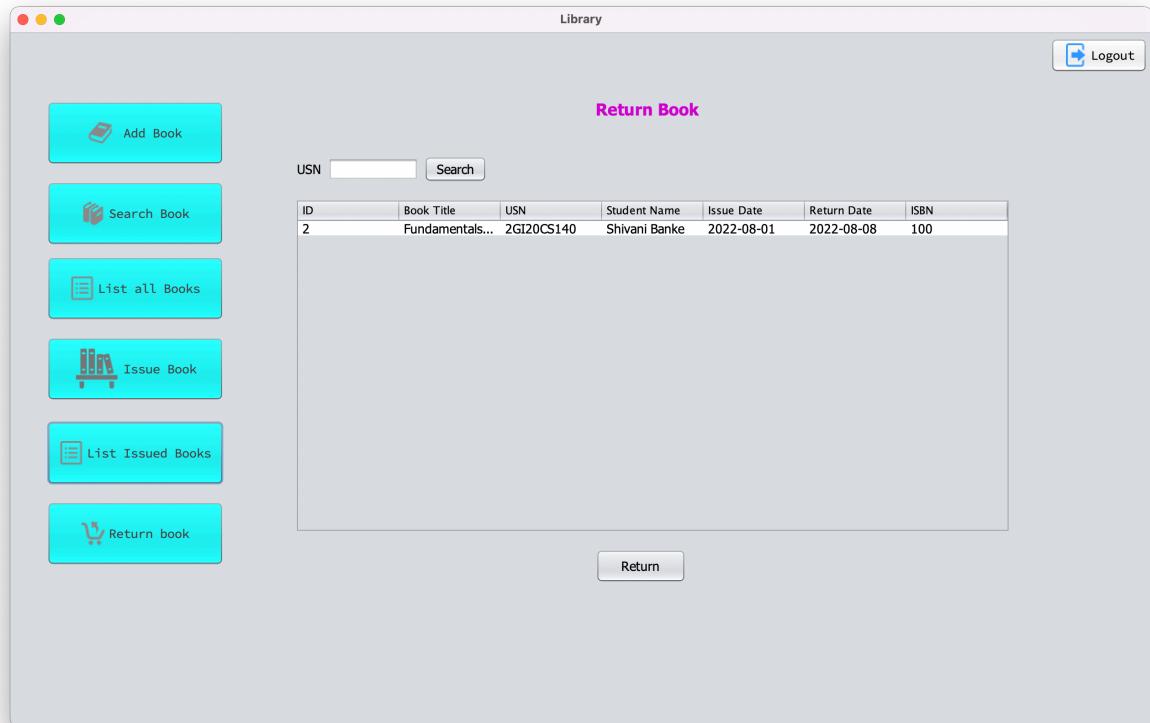
Search Book ISBN

Book ISBN	Book Title	Category	Quantity	Author
100	Fundamentals of data...	Database Management	4	Ramez Elmasri

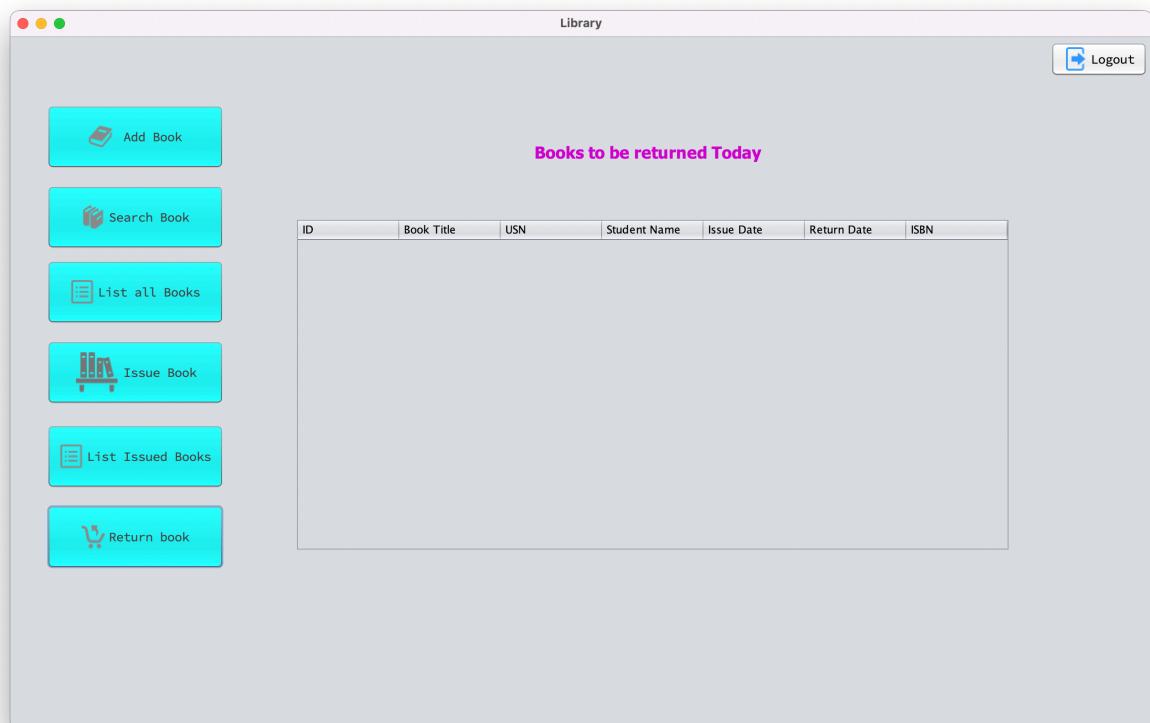
Search Student : USN

USN	Name
2GI20CS140	Shivani Banke

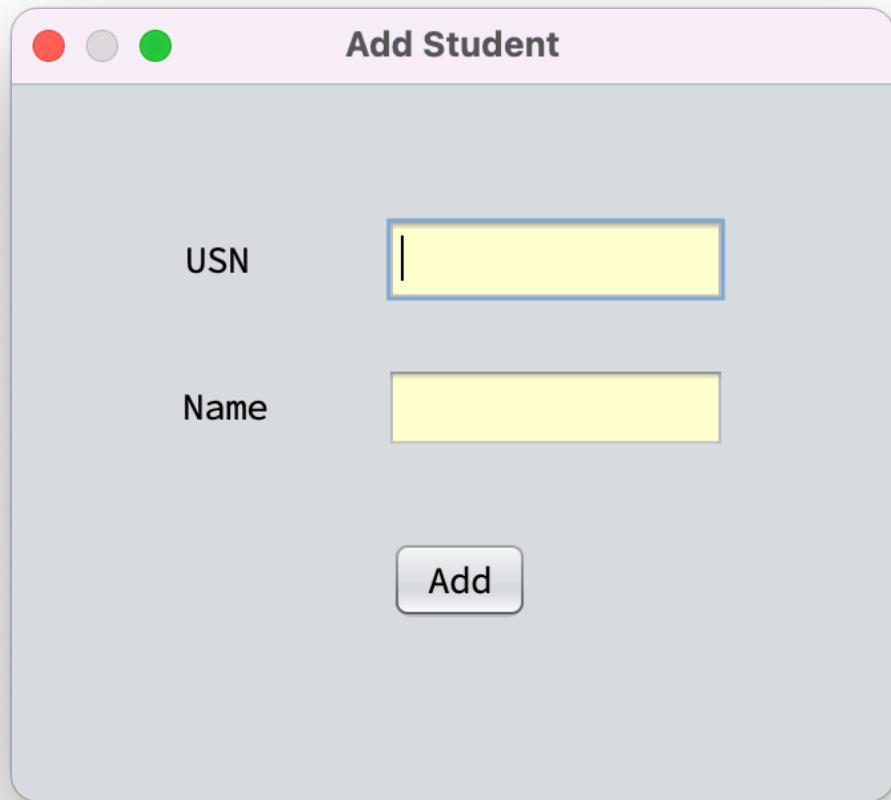
Issue Book



List Issued Books



Return Book



Add Student

9. CONCLUSION

The Internet has become a major resource in modern life, thus library management system has gained significance not only from the management staff but also from the student's point of view. For the management, library system generates new books opportunities and for the student, it makes comparative selecting possible. As per a survey, most students of online library system are impulsive and usually make a decision to stay on a site within the first few seconds. If the management looks poor or like hundreds of other management the student is most likely to skip to the other site. Hence, the project has been designed to provide the user with easy navigation, retrieval of data and necessary feedback as much as possible.

10. REFERENCES

- [1] IAN SOMMERVILLE, SOFTWARE ENGINEERING NINTH EDITION
- [2] KATHY SIERRA & BERT BALES, HEAD FIRST JAVA, O' REILLY, 2ND EDITION AND ONWARDS.