Library Management System

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Introduction

A Library Management System is a software built to handle the primary housekeeping functions of a library.

Libraries rely on library management systems to **manage asset collections** as well as relationships with their members. Library management systems help libraries **keep track of** the **books** and their **checkouts**.

Library management systems also involve maintaining the database for **entering new books** and **recording books** that have been borrowed with their respective due dates.

Problems

Search Records
Difficult to manually search records

Space Consuming
Physical records consume a lot of space

File lost
Data can be lost due to human carelessness

Costly
As manual work is required system becomes costly

➔ Business process automation

➔ Be easy to operate

➔ Be scalable

➔ Make functioning of library faster & cost efficient

➔ Meet user requirements

SCOPE OF PROJECT

Functional Requirements

USER:

1. Sign-Up
2. Login
3. Search a book
4. Issue Book
5. Return book & check fine
6. Request a new book
7. View status of requested books

ADMIN:

1. Sign-up
2. Login
3. Search a book
4. Add a new book
5. Delete a book
6. Update book details
7. Approve/Reject a book request

Technologies Used

MongoDB
Fast & Scalable
Schema Less
Data stored as JSON

M

E

Express API
Efficient
Code reusability
Robust API

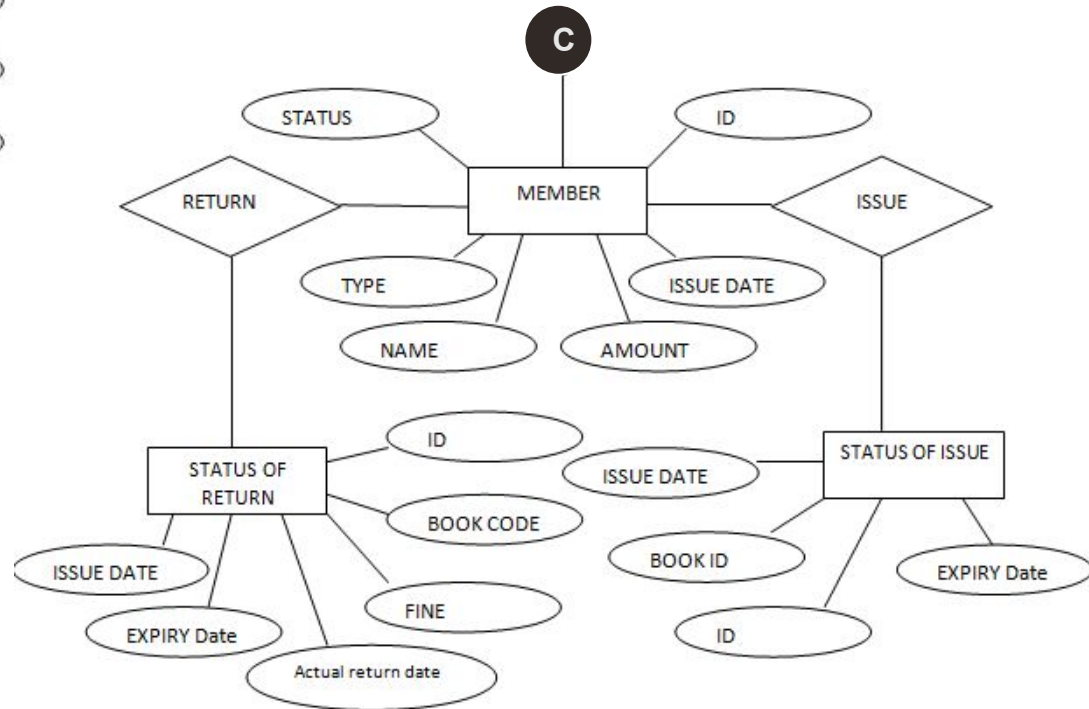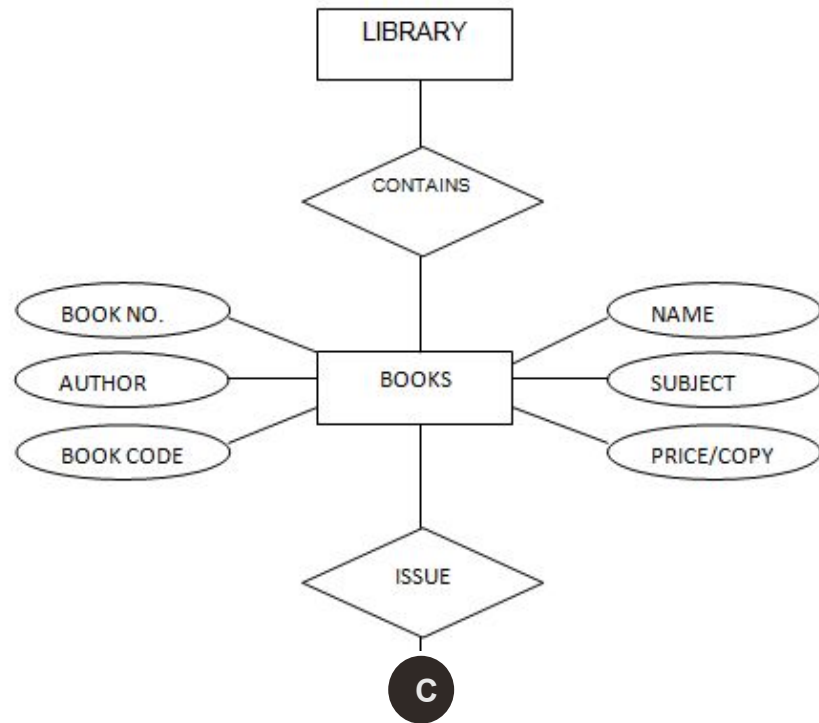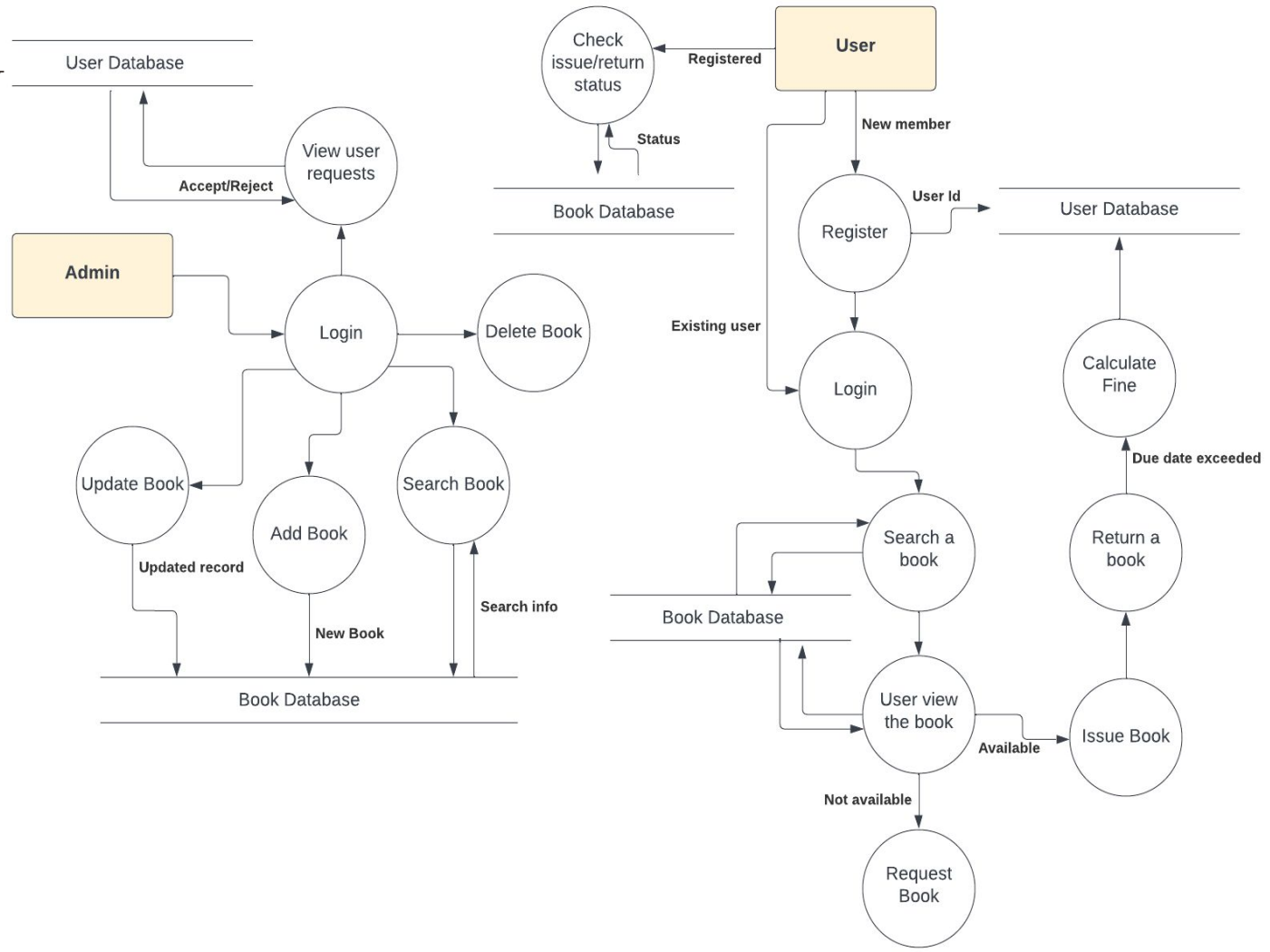**ReactJS**
Virtual DOM
Components
High Performance

R

N

NodeJS
Open-source
Fast
Highly Scalable

Entity- Relationship
Diagram

LIBRARY

CONTAINS

BOOK NO.

AUTHOR

BOOK CODE

BOOKS

NAME

SUBJECT

PRICE/COPY

ISSUE

C

STATUS

ID

MEMBER

RETURN

ISSUE

TYPE

ISSUE DATE

NAME

AMOUNT

ID

STATUS OF RETURN

BOOK CODE

ISSUE DATE

STATUS OF ISSUE

ISSUE DATE

BOOK ID

EXPIRY Date

EXPIRY Date

FINE

ID

Actual return date

Data Flow
Diagram

User Database

View user requests

Accept/Reject

Admin

Login

Delete Book

Update Book

Add Book

Search Book

Updated record

New Book

Search info

Book Database

Check issue/return status

Registered

User

New member

Status

Book Database

Register

User Id

User Database

Existing user

Login

Calculate Fine

Due date exceeded

Search a book

Return a book

Book Database

User view the book

Issue Book

Available

Not available

Request Book

5,000+

books and counting….

Books Model

Field Name	Type
name	String
image	String
author	String
book_depository_stars	Integer
isbn	Integer
pages	Integer
publisher	String
category	String
copies	Integer

Issued-Books Model

Field Name	Type
userId	ObjectID
Name	String
image	String
author	String
isbn	Integer
IssuedOn	String
returnDate	String

Returned-Books Model

Field Name	Type
userId	ObjectID
Name	String
author	String
isbn	Integer
IssuedOn	String
returnedOn	String
dueDate	String
fine	Integer

Requested-Books Model

Field Name	Type
name	String
author	String
userEmail	String
status	String

Screenshots

Sneak Peak

Efficient | Easy | Effortless

Library Management System

See More

Why choose us

1

New Books

Find the most trending books featured in our catalogue
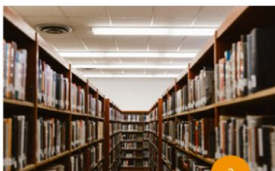
2

Large Bookbase

More than 5000+ books with an ever increasing collection

3

Accessibility

With this website on your fingertips get all updates instantly
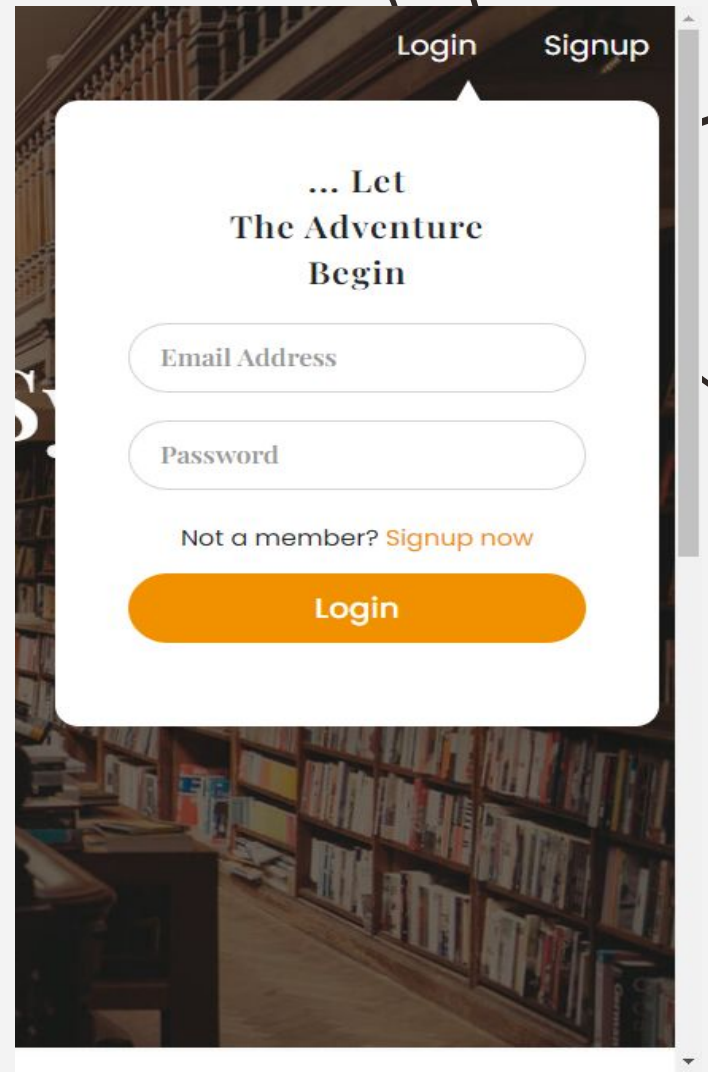
Login   Signup

... Let The Adventure Begin

Email Address

Password

Not a member? Signup now

Login

Smantha

aryan@email.com

Books

Issued

Returned

Request Book

Logout

Search Search

Fantasy
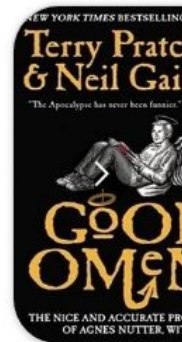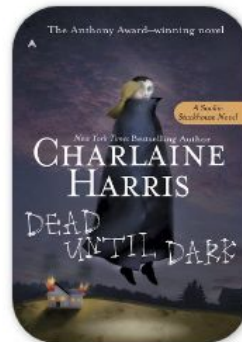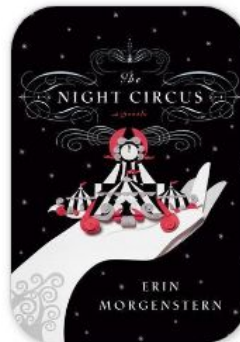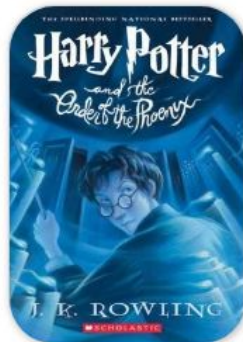
Fiction
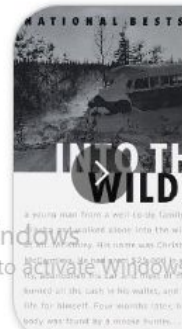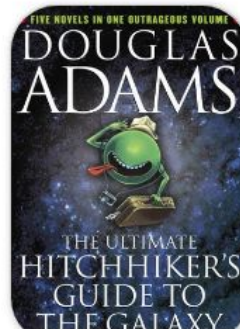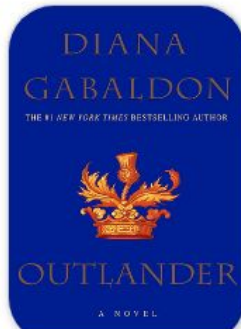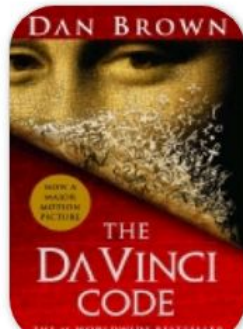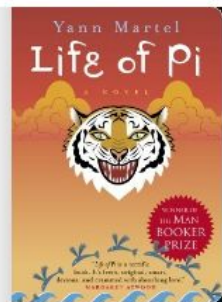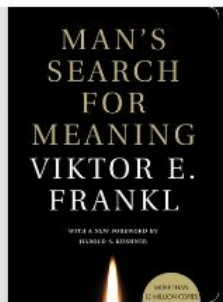
Issued Books

Issue Date :
4/5/2022

Return Date :
18/5/2022

Return Book
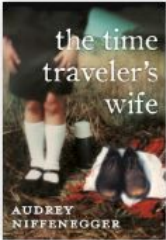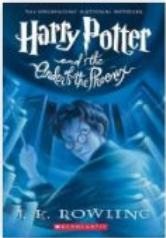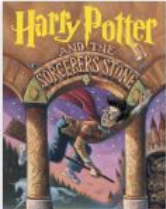
Returned Books

#	Cover	Title	Author	Issue date	Return date
1		The Time Traveler's Wife	Audrey Niffenegger (Goodreads Author)	27/4/2022	11/5/2022
2		Harry Potter and the Order of the Phoenix	J.K. Rowling, Mary GrandPré (Illustrator)	27/4/2022	11/5/2022
3		Harry Potter and the Sorcerer's Stone	J.K. Rowling, Mary GrandPré (Illustrator)	28/4/2022	12/5/2022

Smantha

aryan@email.com

Books

Issued

Returned

Request Book

Logout

Request Books

Smantha

aryan@email.com

Books

Issued

Returned

Request Book

Logout

Book Name

Author's Name

Submit

#	Book Name	Author	Status
1	The Clean Code	Oracle	Approved
2	newBook	newAuthor	Rejected
3	Complete Reference	J. W. Martin	Pending

keerat

k3mongo@gmail.com

Books

Add Book

Requested Books

Logout

Add a Book

Book Details

Book Name

Author

Isbn

Category

Rating

Book Image

Submit

keerat

k3mongo@gmail.com

Books

Add Book

Requested Books

Logout

#	Book Title	Author	User	Accept	Decline
1	Complete Reference	J. W. Martin	aryan	Accept	Reject

Requested Books Page

Future Scope

01. **Online Fine Payment**

LMS will also serve as a platform to pay their fine via online payment.

02. **Barcode Scanning**

To read the barcode & update when books are scanned while issuing or returning.

03. **Book Maintenance Status**

Adding status for trash books or books under maintenance.

Thank You

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