



# **Bangladesh Army University of Science and Technology (BAUST), Saidpur**

## **Department of Computer Science And Engineering(CSE)**

**Project Title : “BAUST LIBRARY MANAGEMENT SYSTEM”.**

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## □ Introduction:

- A library, the source of knowledge and solutions to questions.
- Maybe available in different libraries but unique in our university system.
- Purpose to make a user-friendly system to interact with every user directly

## ❑ Objective:

- It Improves the resource utilization service level .
- Reduce the duplication of work.
- Fast communication with electronic and computerized service.
- Online facility helps in smooth functioning of library functions.
- Users can check the availability of particular book online.
- Add, Edit , Delete and view library stock.
- Generate customized reports of library items.
- Searching is easy in the online library system.
- The system automatically calculates the late fee depending upon the issue and return of the book.

## ❑ **Problem definition:**

- Manual record collection in the library.
- Time-consuming circulation process.

# ❑ Available Applications

1.Atrium {a}



## Features

- Cataloging and Book Management
- Circulation and Checkouts
- Security and Data Privacy

## Limitations

- Less modern user interface
- Inflexible to library needs

2.Destiny Library Manager {b}



- Digital resources management
- Resource reservation

- Limited support for non-English speakers

3.BAUST central Library {c}



- Integration with educational platforms
- Scanning books with QR code

- Accessing with in certain
- Only students can resister

4.Koha {d}



- Integration capabilities
- User management

- Customizing complexity
- Performance issue

5.Alma{e}



- User experience Customization
- Analytics and reporting

- Expensive for smaller libraries
- Learning curve
- Internet dependency

## □ Stakeholders:

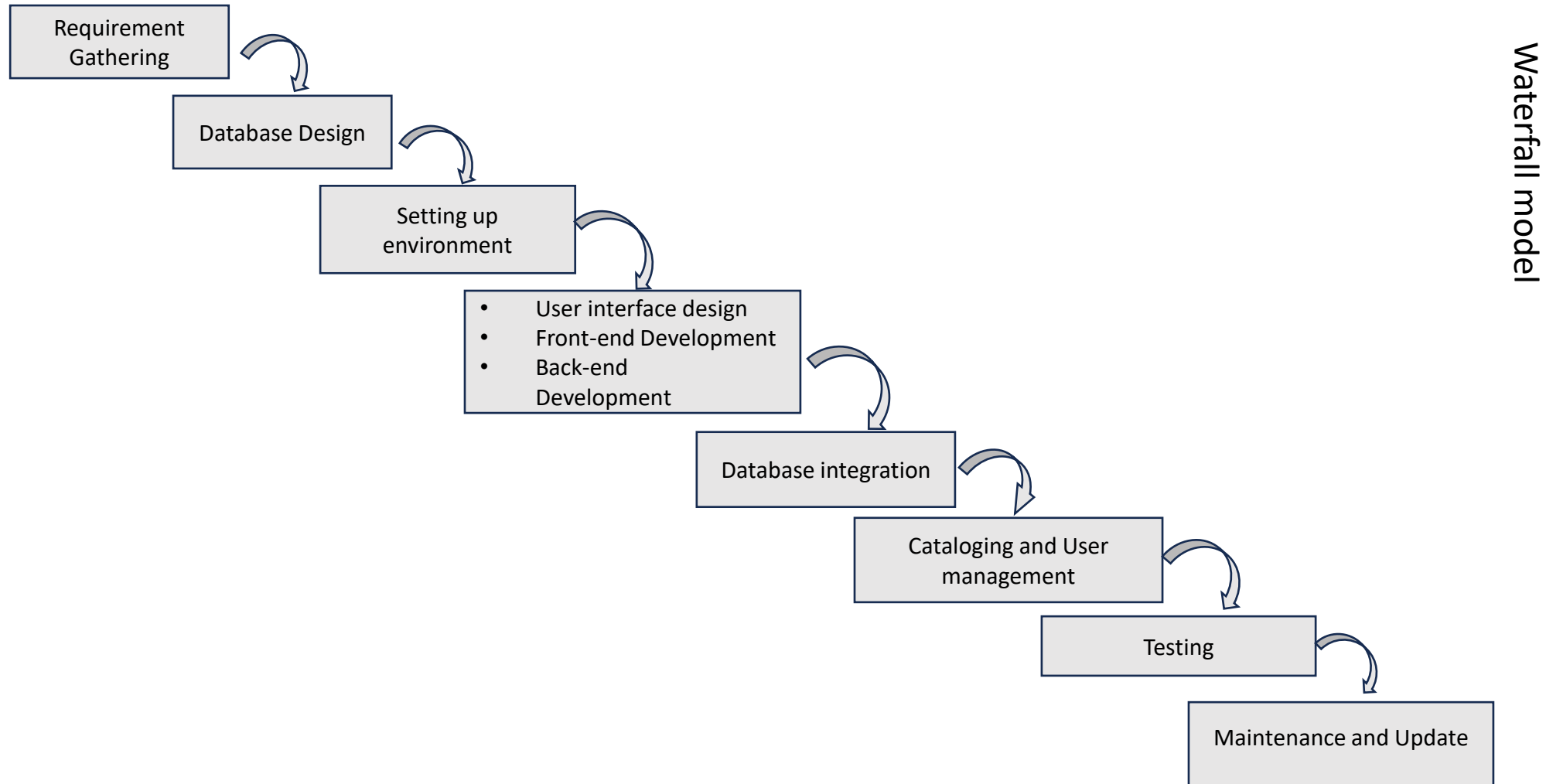
- Librarians and library staffs those who maintain library operations like cataloging and circulation.
- library patrons include students, and teachers who use the resources and services of a system according to their need.
- Library administrators.

## ❑ Issues Encountered :

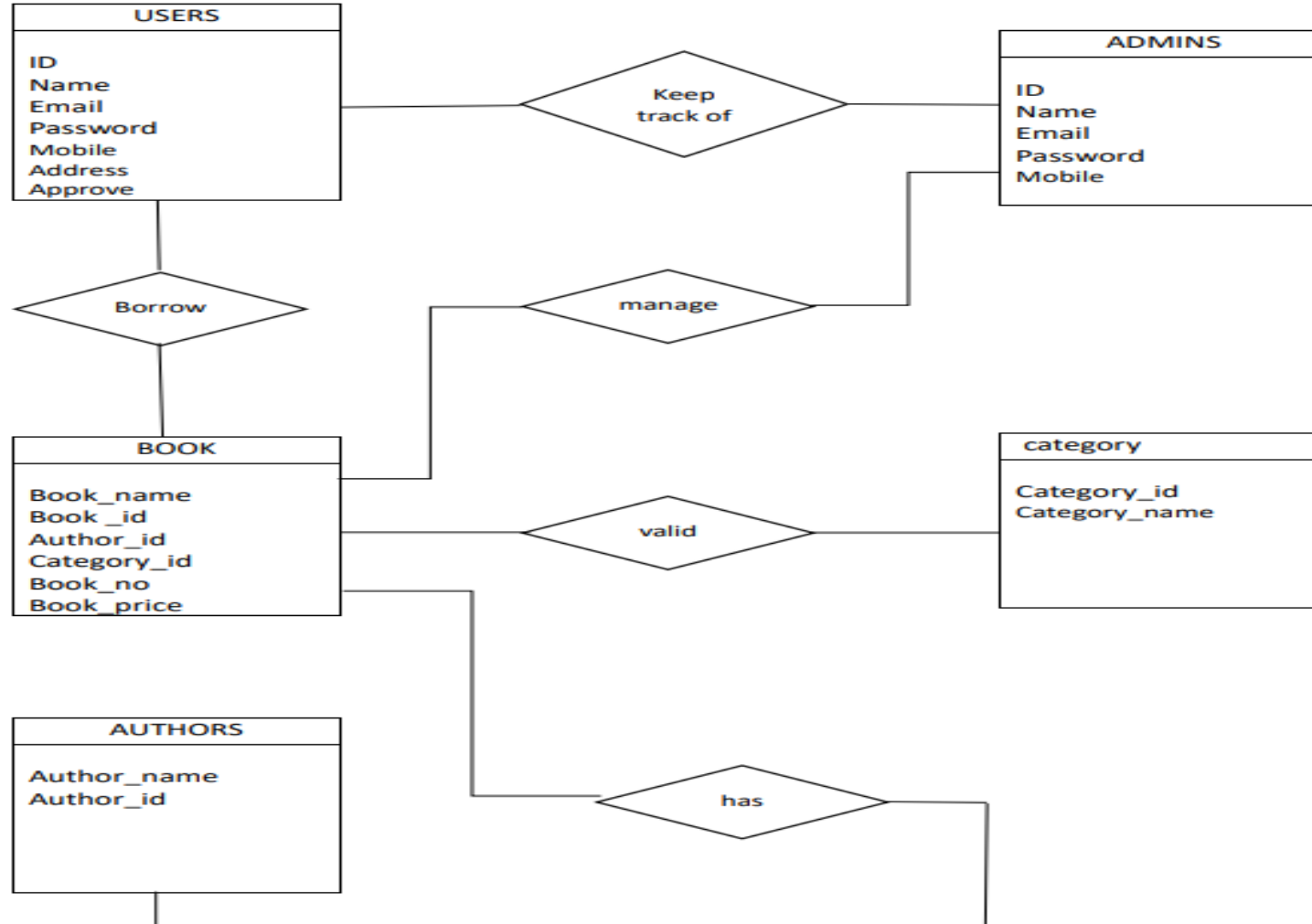
- Data integrity: Problems related to data corruption, data validation, etc.
- Security: Challenges involving users' information securing and unauthorized access.
- Retrieval: Quite complex while dealing with a large set of data and catalog.
- Reporting: Book circulation and customization depending on any kind of updates.



# System architecture



## ❑ Database Design:



# Tools and Technology:

## 1. Programming Language:

- ☐ PHP( Sublime Text) – [f]

## 2. Database Management System:

- ☐ MySQL(XAMPP, SQLYOG) – [h]

## 3. Web Development:

- ☐ HTML
- ☐ CSS
- ☐ JavaScript

# ❑ Implementation:

## User

Library Management System (LMS)

Admin Login Register Login

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

Library Timing

- Opening: 8:00 AM
- Closing: 8:00 PM
- (Sunday Off)

What We provide ?

- Full furniture
- Free Wi-fi
- News Papers
- Discussion Room
- RO Water
- Peacefull Environment

User Login Form

Email ID:

suraiyashorna67@gmail.com

Password:

.....

Login | Not registered yet ?

Fig1: user login form

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# Register login

Library Management System (LMS)

Admin Login Register User Login

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

**Library Timing**

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**What We provide ?**

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- RO Water
- Peacefull Environment

**User Registration Form**

Full Name:

Email ID:

Password:

Mobile:

ID:

Type:

Address:

**Fig2: User registration form**

# Admin login

Library Management System (LMS)

Admin Login Register Login

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

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Admin Login Form

Email ID:

suraiyashorna67@gmail.com

Password:

.....

Login

Fig3: Admin login form

# Admin Dashboard

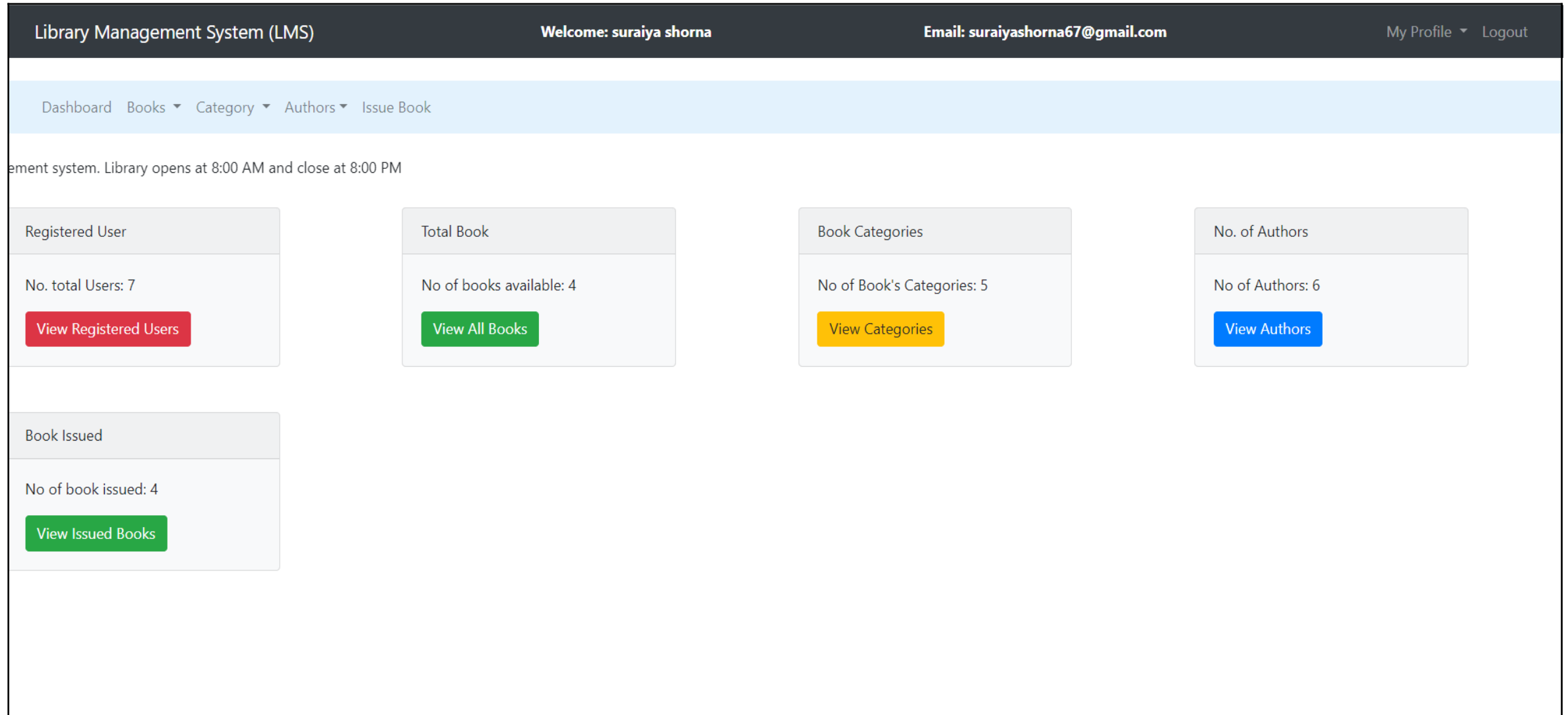


Fig4: Admin Dashboard

# Book

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾ Logout

Dashboard Books ▾ Category ▾ Authors ▾ Issue Book

This is library mangement system. Library opens at 8:00 AM and closes at 8:00 PM

Add a new Book

Book Name:

Author ID:

Category ID:

Book Number:

Book Price:

Add Book

Fig5: Add a new book



This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

## Manage Books

[Search](#)[Full List](#)

Name	Author	Category	ISBN No.	Price	Action
ssssss	3	4	3	34	<a href="#">Edit</a> <a href="#">Delete</a>
dsa	2	4	6	200	<a href="#">Edit</a> <a href="#">Delete</a>
cse	3	2	1	54	<a href="#">Edit</a> <a href="#">Delete</a>
EEE	3	4	1	67	<a href="#">Edit</a> <a href="#">Delete</a>
Data structure	102	2	6541	300	<a href="#">Edit</a> <a href="#">Delete</a>
...	...	...	...	...	...

Fig6: Manage books

# Category

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾ Logout

Dashboard

Books ▾

Category ▾

Authors ▾

Issue Book

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

Add a new Category

Category Name:

Add Catogry

**Fig7: Add a new category**

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾Logout

DashboardBooks ▾Category ▾Authors ▾Issue Book

This is library mangement system. Library ope

Manage Category

Search

Full List

Name	Action
Electrical Engineering	<a href="#">Edit</a> <a href="#">Delete</a>
Machanical	<a href="#">Edit</a> <a href="#">Delete</a>
ME	<a href="#">Edit</a> <a href="#">Delete</a>
Electrical Engineering	<a href="#">Edit</a> <a href="#">Delete</a>
cse	<a href="#">Edit</a> <a href="#">Delete</a>

Fig8: Manage Category

# Author

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾ Logout

Dashboard Books ▾ Category ▾ Authors ▾ Issue Book

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

Add Author

Author Name:

Add Author

Fig9: Add Author

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾ Logout

Dashboard

Books ▾

Category ▾

Authors ▾

Issue Book

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

Manage Author

SearchFull List

Author ID	Name	Action
118	fatema	<a href="#">Edit</a> <a href="#">Delete</a>
116	shorna	<a href="#">Edit</a> <a href="#">Delete</a>
113	abc	<a href="#">Edit</a> <a href="#">Delete</a>
112	Haru	<a href="#">Edit</a> <a href="#">Delete</a>
107	suraiya	<a href="#">Edit</a> <a href="#">Delete</a>
101	...	

Fig10: Manage Author

# Issue book

Library Management System (LMS)

Welcome: suraiya shorna

Email: suraiyashorna67@gmail.com

My Profile ▾ Logout

Dashboard Books ▾ Category ▾ Authors ▾ Issue Book

This is library mangement system. Library opens at 8:00 AM and close at 8:00 PM

Issue Book

Book Name:

Author ID:

-Select author- ▾

Book Number:

Student ID:

Issue Date:

2323-10-29

Issue Book

**Fig11: Issue Book**

## ❑ **Limitation:**

- i) User needs to wait for admin's approval which is not always convenient because of a large number of users.
- ii) Library management systems can become quite complex, especially when integrating with various hardware, such as barcode scanners and RFID systems. Managing this complexity can be a limitation.

## ❑ **Future scope:**

- I. User-Centric Design
- II. Responsive Web Design
- III. Modern User Authentication
- IV. Personalization

# Conclusion

- Our library management system will be essential for efficiently organizing and managing library resources.
- We briefly explained about existing ones and will try to include and improve in our system.
- We will try to ensure smooth library operations.



# References

- ❖ Atrium book system: <https://booksys.com/atrium> [a]
- ❖ Destiny Library Manager: <https://www.follettlearning.com/education-technology/library-management-system> [b]
- ❖ BAUST Central Library: <http://library.baust.edu.bd/> [c]
- ❖ Koha: <https://koha-community.org/> [d]
- ❖ Alma: <https://exlibrisgroup.com/products/alma-library-services-platform/> [e]
- ❖ PHP: <https://www.php.net/docs.php> [f]
- ❖ Sublime Text: <https://www.sublimetext.com/docs/> [g]
- ❖ MySQL: <https://dev.mysql.com/doc/> [h]