

**MINOR PROJECT REPORT
ON**

"Library Management System"

In partial fulfillment for the award of the degree

Of

BACHELOR OF COMPUTER APPLICATION

[B.C.A]

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Affiliated to

Veer Narmad South Gujarat University

List of Abbreviations

- GUI: Graphical user interface.
- DMS: Database management system.
- LMS: library management system.
- HTML: Hypertext Markup Language.
- CSS: Cascading style sheets.
- RDMS: Relational database management system.
- PHP: Hypertext Preprocessor
- AJAX: Asynchronous JavaScript and XML
- UML: Unified Modeling Language

Acknowledgement

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of people whose ceaseless cooperation made it possible, whose constant guidance and encouragement crown all efforts with success.

We are grateful to our project guide **Prof. Pratiksha Patel** for the guidance, inspiration and constructive suggestions that helped us in the preparation of this project. We also thank **my friends** who have helped in successful completion of the project.

I also like to thank our **all the professor** who are always ready to give best guide. They are the person who gives solution whenever needed.

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Introduction

A library is a collection of well-organized information and resources that is made available for borrowing to a certain group of people. With the advent of technology, it is very important to make all systems more user-friendly. Library Management System (LMS) is a software program that allows physical libraries to be converted into digital libraries. A Library Management System (LMS) allows the user to keep track of both the books and the customers. The system's deployment in the company will significantly decrease data entry, time, and deliver easily computed results. It assists in keeping track of all information on the books in the library, including their pricing, status, and total quantity. Instead of utilizing the manual writing system, the user will find it easier to use this automated system

The main purpose of the project is to build an online LMS system by using different software methodologies. The LMS with the basic and necessary features like the admin/librarian can add/delete book, can add/delete author, can issue books, can manage books and users, and users/students can search and borrow books. For Frontend part of the project used HTML, CSS, JavaScript and Bootstrap framework and for the Backend part used PHP and MySQL database. For Unified modeling language (UML) design in online site ucidchart.

Tools used for the project

I used HTML, CSS, JavaScript and Bootstrap framework for Frontend part. Frontend development is a type of computer programming that focuses on the coding and building of a website, which will be visible to the user. It's about ensuring that a website's visual elements are functioning. And for the Backend part uses PHP and MySQL. The server side of a program and anything that connects between the database and the browser is referred to as back-end development.

Php

PHP is a scripting language developed by Rasmus Lerdorf in 1994. Originally, he wrote several C programs to execute various tasks on his static website, which he had constructed for himself on the internet. He had unknowingly established the groundwork for a new programming language. The primary goal was to connect with the servers and databases where his static files were stored.

PHP is a server-side programming language that is free, open sourced and object oriented. PHP is a good option for developing websites.

Sql

SQL stands for Structured Query Language, and it is a programming language that may be used to store, alter, and retrieve data from a database system. A relational database.

A relational database management system (RDBMS) allows users to obtain access to data.

MySql

MySQL is a SQL-based relational database management system. MySQL enables users to manage, save, change, and remove data, as well as organize data. MySQL has an integrated tool called MySQL Workbench that simplifies the process of developing, designing, and constructing databases. MySQL comes in a variety of forms and is updated often. MySQL, being an open-source platform, provides a large and active community of users and developers.

Bootstrap

Bootstrap is a framework that works with HTML, CSS, and JavaScript to create dynamic and device-friendly webpages. It's a simple and quick web development framework to use. It's a framework for front-end development. For websites and applications, developers may create multifunctional, user-friendly, and beautiful front-end designs.

Bootstrap comes with ready-to-use components that make it easier for developers to design websites on a tight schedule. Developers don't have to start from the beginning, and they may tweak particular components depending on one's suggestions to make it unique. Whether an expert or a novice in web design, a user may effortlessly install Bootstrap. Users do not need to be experts in internet technology (HTML, CSS, or JavaScript) to get started; they may start with the basics.

JavaScript

JavaScript is a scripting language for beginners with a wide variety of features. As one gets more experience with JavaScript, one will be able to create games, animated 2D and 3D images, database-driven systems, and more.

Objective

The purpose of a library management system is to manage & track the daily work of the library such as issuing books, return books, due calculations, etc.

Helps With Multitasking

Makes Library Cost-Effective

Eliminates/Reduces Errors in Data Management

Easy Accessibility

Unified Modeling Language

it is abbreviated as UML, which stands for Unified Modeling Language. It is a standardized modeling language consisting of an integrated set of diagrams that was developed to assist system and software developers in specifying, visualizing, constructing, and documenting the artifacts of software systems, as well as for business modeling and other non-software systems. With the Unified Modeling Language (UML), users may model big and complex systems using best engineering techniques that have been shown to work in previous modeling projects.

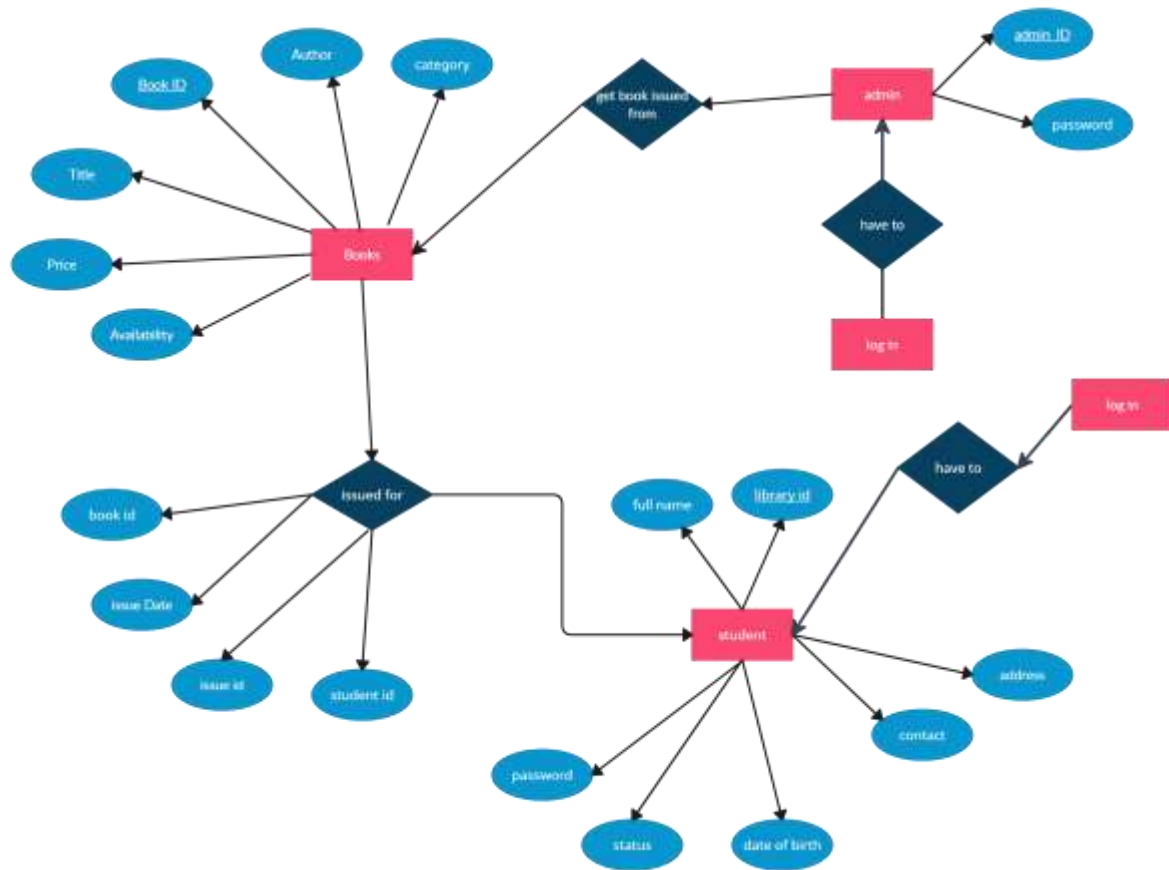
The Unified Modeling Language (UML) is a critical component in developing object-oriented applications and the software development life cycle. The Unified Modeling Language (UML) is a graphical notation system that is used to represent the design of software projects. When project teams use the UML, they may communicate more effectively, explore possible designs, and verify the architectural design of the program.

ER Diagram

An entity-relationship diagram, or ER diagram, is essential for modeling the data stored in a database. It is the basic design upon which a database is built. ER diagrams specify what data we will store: the entities and their attributes. They also show how entities relate to other entities

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> admin	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 K18	-
<input type="checkbox"/> author	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	16.0 K18	-
<input type="checkbox"/> books	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	48.0 K18	-
<input type="checkbox"/> categories	★ Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 K18	-
<input type="checkbox"/> issuebook	★ Browse Structure Search Insert Empty Drop	12	InnoDB	utf8mb4_general_ci	32.0 K18	-
<input type="checkbox"/> register_student	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	16.0 K18	-
<input type="checkbox"/> thought	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	32.0 K18	-
7 tables	Sum	32	InnoDB	utf8mb4_general_ci	176.0 K18	0 B

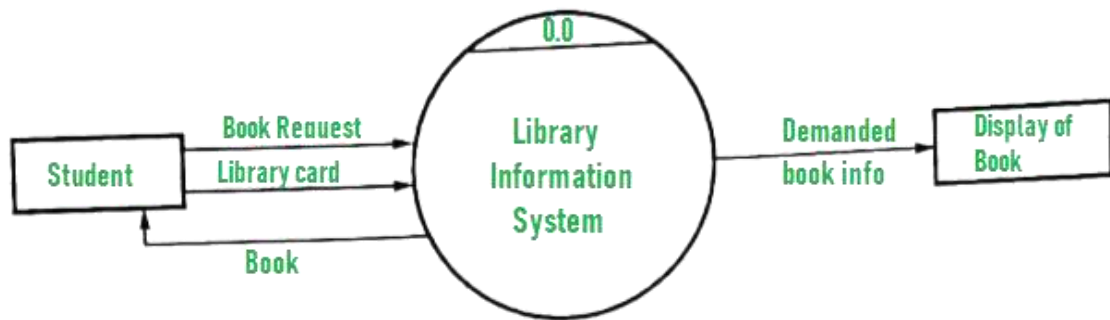
E-R Diagram of Library Management System



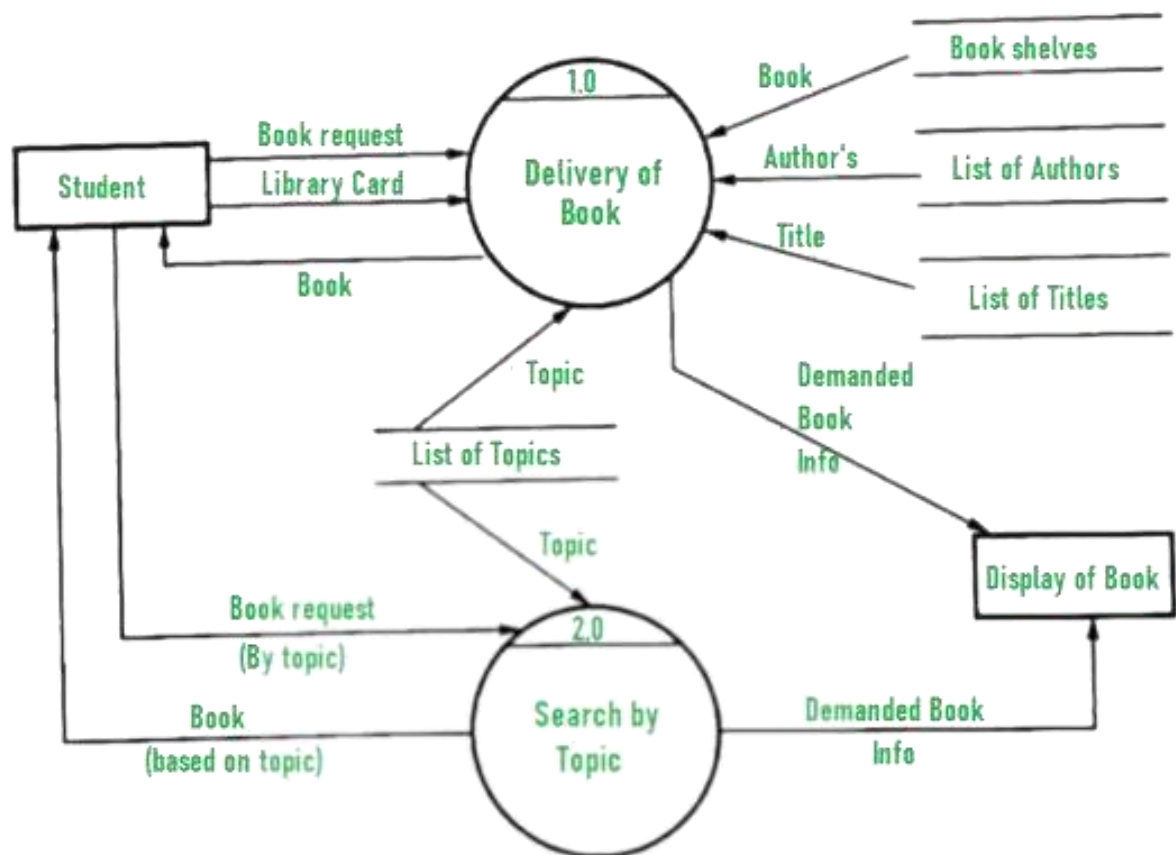
The library database consists of 7 tables,

- ✚ Admin- In this table the admin details is stored. Admin can access all the tables.
- ✚ Register Student- All the information of the users are saved.
- ✚ Books- All the information of the books are saved.
- ✚ Author- All the information of the authors are stored.
- ✚ Category- All the category of books are saved.
- ✚ issuebook- Information's of all issued book to the users are saved.
- ✚ Thought – all the thought who publish and write by student

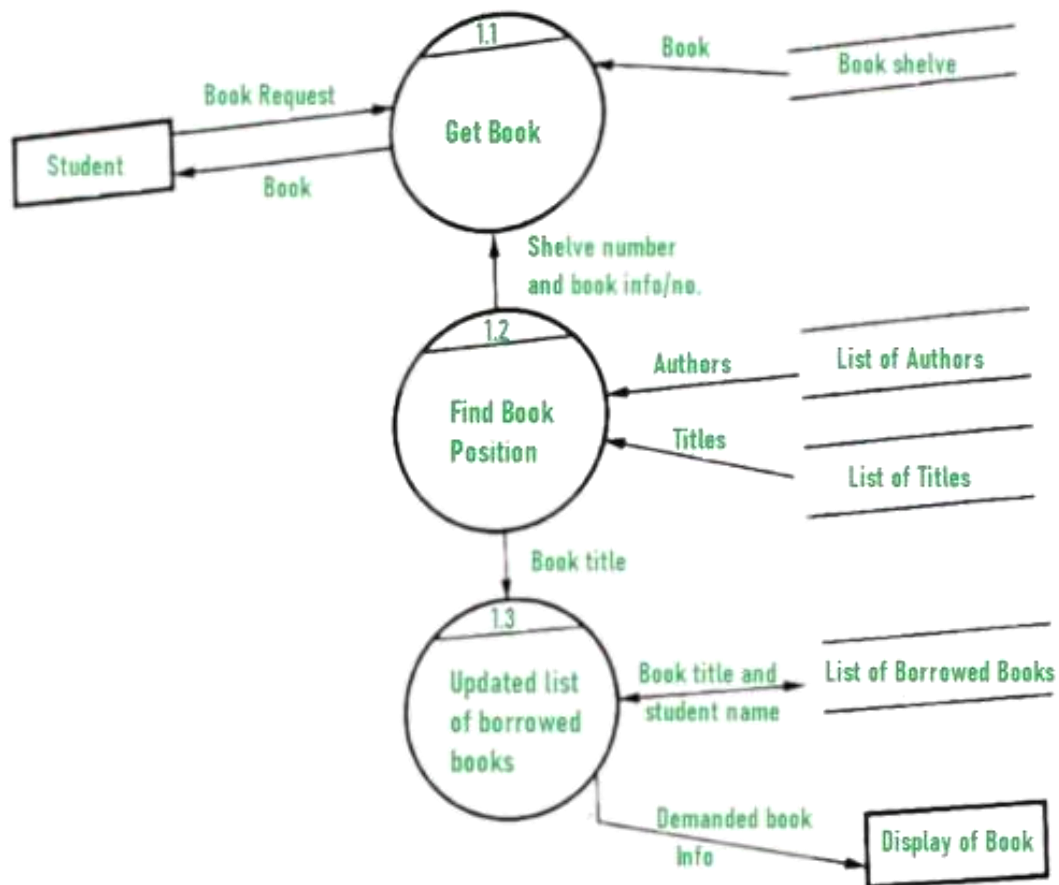
data flow diagram



DFD LEVEL-0

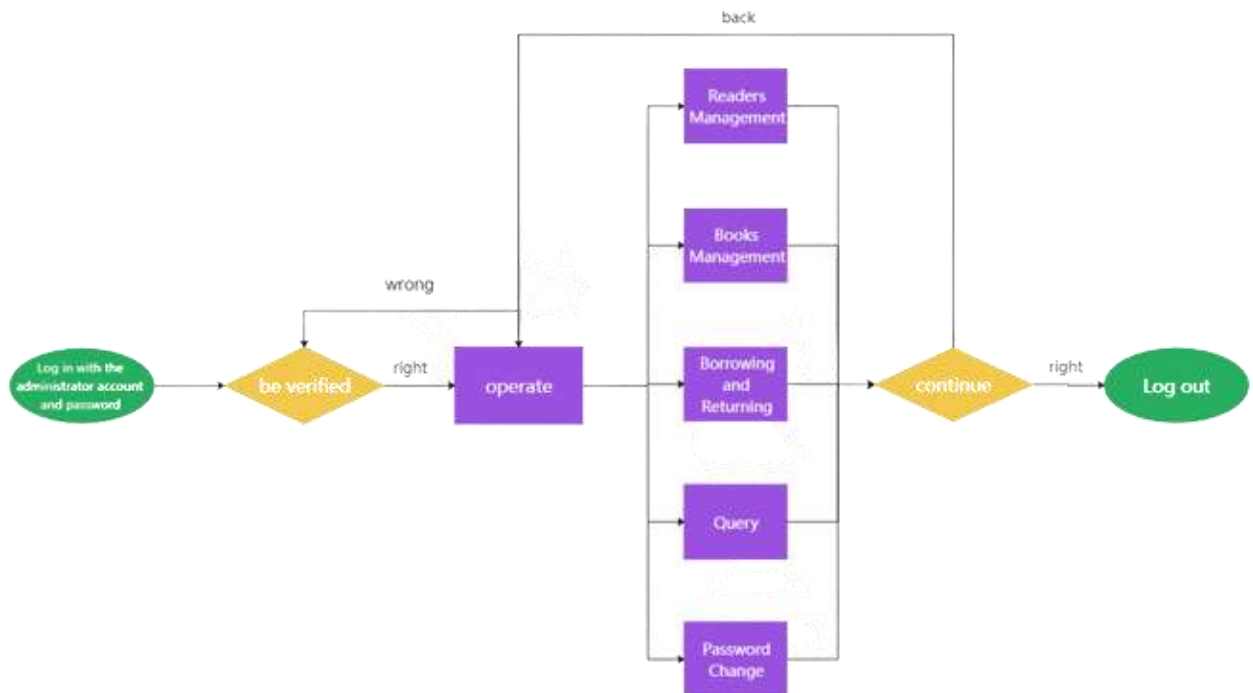


DFD LEVEL-1



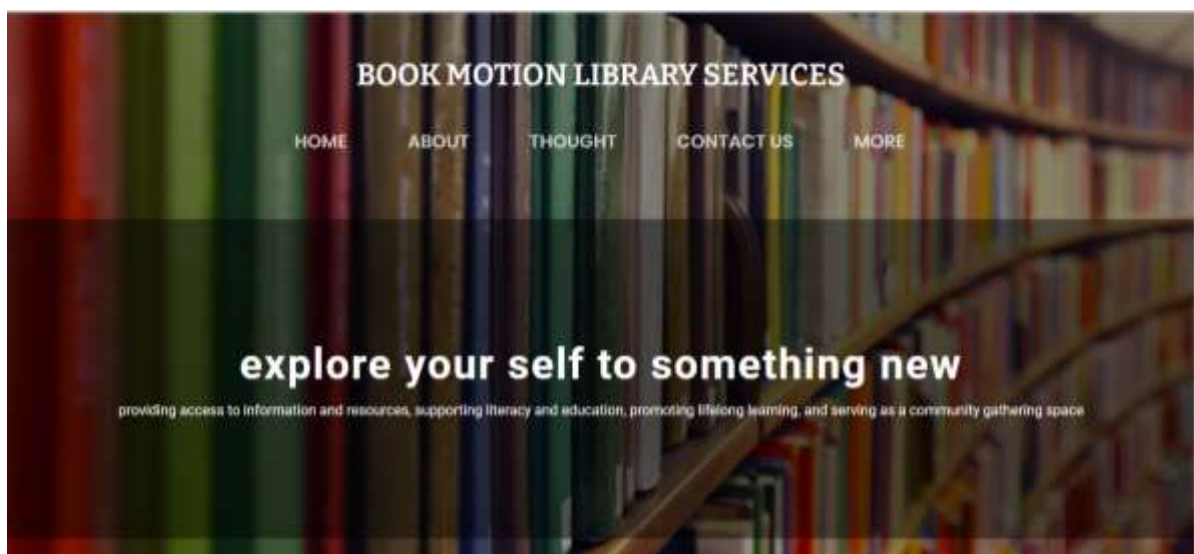
DFD LEVEL-2

Flow chart



Screen short of site

home page



ABOUT US



Join the library

Aut vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zelestis atque dula dolore fe fugiat nulla facilis. Tei nam habent claritatem insitane; est usus legentis in



Help

Sedibus at vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zelestis atque dula dolore fe fugiat nulla legentis in illo qui facit eorum claritatem vestigatis



Ask for librarians

Sedibus at vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zelestis atque dula dolore fe fugiat usus legentis in illo qui facit eorum claritatem vestigatis

THOUGHT



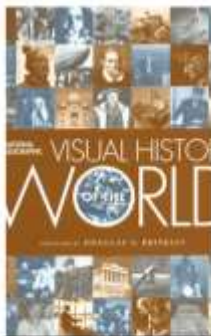
admin test

i wish do success

-nick's cherry

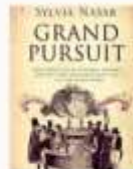
ADD YOUR THOUGHT

MOST POPULER BOOKS



visual history of world

Lorem ipsum dolor sit amet consectetur adipiscing elit. Magnam eum blandit illo aut necessitatibus voluptatum voluptatem explicabo sunt odio ratione inventore autem, porro adipisci iste repudiandae amet quas placerat? Ullam, aliam? A accusamus autem culpa impedit quidem, magni odio doloremque fugit, laboriosam, cumque tempore sit voluptas porro. Aspernatur asperite atque est saepe, totam quo modi nihil delectus iste non distinctio sunt delectum excepturi eum vel. Repudiandae adipisci dolorem inventore, animi debitis beatae corpora quo vitae tempora qua



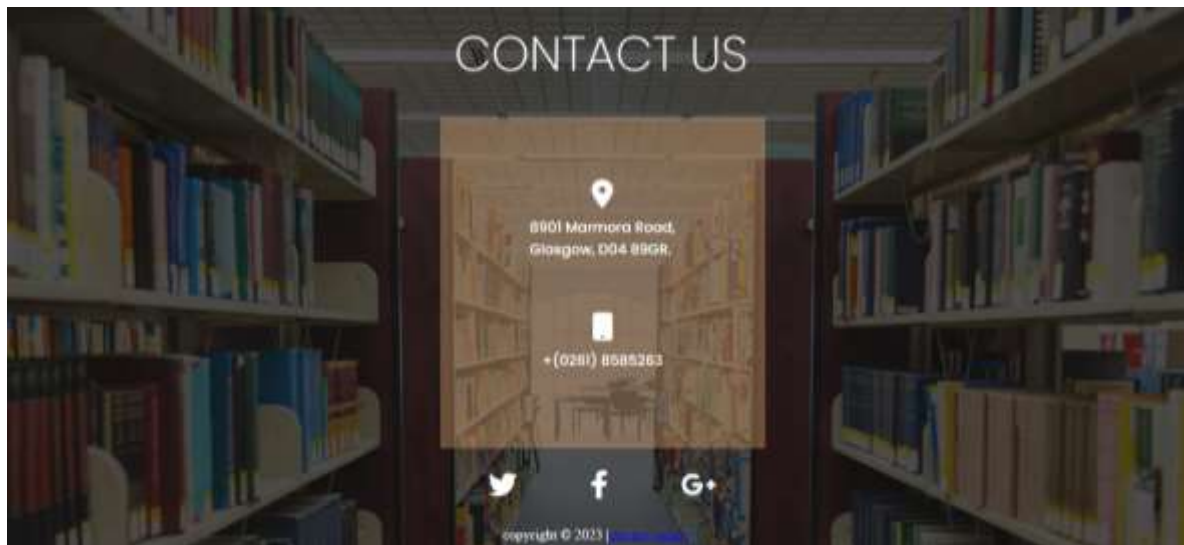
grand pursuit



circus stars



downton abbey



Register and login forms (admin, student)

A screenshot of a login form. The form is a light gray rectangle with rounded corners, centered on a dark gray background. At the top left of the form is a blue circle, and at the bottom right is an orange circle. The form has the following elements: a 'login here' link in green and blue text; a 'student mail' label above a text input field containing 'mnhgringtest'; a 'Password' label above a password input field; a 'target password' label above another password input field; a white 'submit' button; and a gray 'i am not a member' link at the bottom.



login Here

admin name

password

login admin



STUDENT MEMBERSHIP FORM

First Name Last Name

☒ Male
 ☐ Female
 ☐ Prefer Not To Say


id www
 Email Address

Contact Number
 Address

Password
 Confirm Password


submit

student dashboard


BOOK MOTION LIBRARY SERVICES
Log Me Out


DASHBOARD
ISSUED BOOKS
ACCOUNT

User Dashboard




4

Book List



1


Book Not Return Yet



3

Book Issued



➤ book list


BOOK MOTION LIBRARY SERVICES
Log Me Out


DASHBOARD
ISSUED BOOKS
ACCOUNT

Book List

Find Books

Id	Image	Book Name	Categorie	Author	Price	Issue
7		Art	Romance	Mona Lisa	25	Available
2		Elite	It	Bell Charley	20	Available


➤ live search books


BOOK MOTION LIBRARY SERVICES
Log Me Out

DASHBOARD
ISSUED BOOKS
ACCOUNT

Book List

Find Books

Id	Image	Book Name	Categorie	Author	Price	Issue
6		Rich Poor	Business	Maria Menila	12	Available

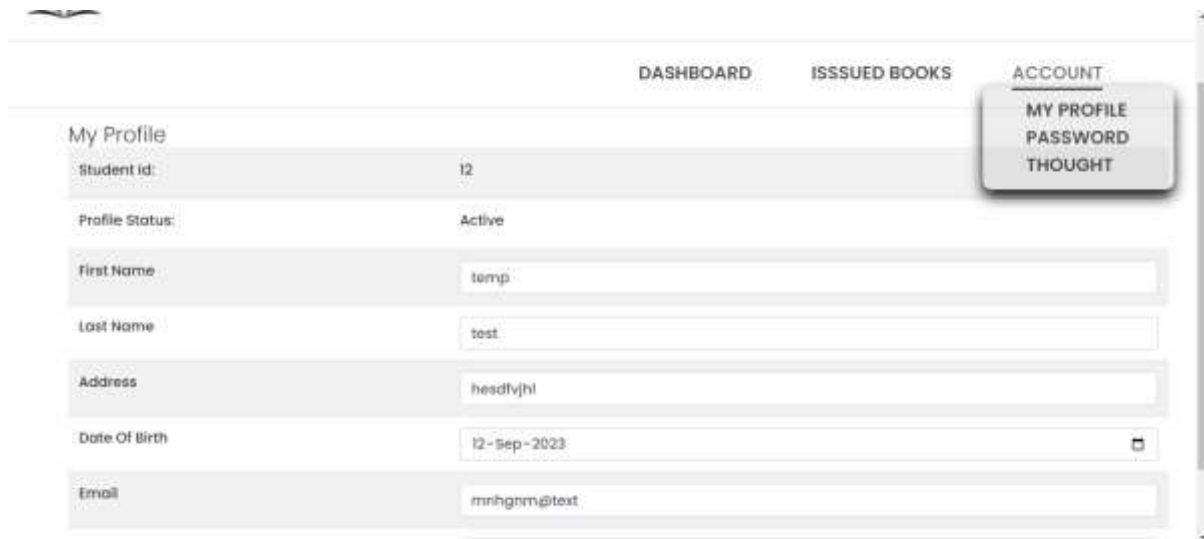
➤ student book return status



Return Report

Issue Id	Book Isbn Number	Issue Date
15	100025	2023-09-15

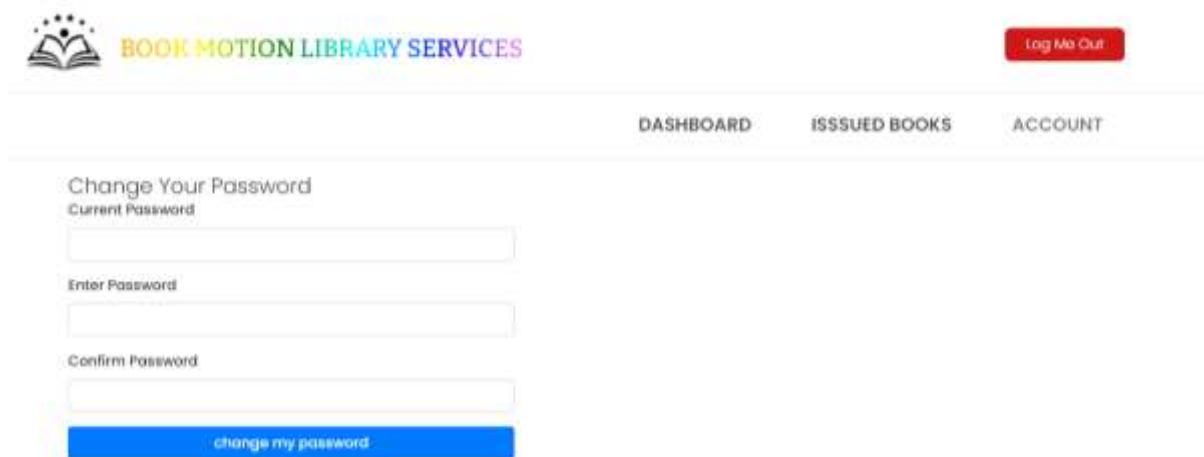
➤ student profile & update



The screenshot shows the 'My Profile' page of the Book Motion Library Services system. At the top, there is a navigation bar with three tabs: 'DASHBOARD', 'ISSUED BOOKS', and 'ACCOUNT'. The 'ACCOUNT' tab is selected, and a dropdown menu is open, showing three options: 'MY PROFILE', 'PASSWORD', and 'THOUGHT'. The 'MY PROFILE' option is highlighted. Below the navigation bar, the 'My Profile' section is displayed. It contains a table with the following information:


Student id:	12
Profile Status:	Active
First Name	<input type="text" value="temp"/>
Last Name	<input type="text" value="test"/>
Address	<input type="text" value="hesdfvjhl"/>
Date Of Birth	<input type="text" value="12-Sep-2023"/>
Email	<input type="text" value="mrhgnm@test"/>

➤ change password



The screenshot shows the 'Change Your Password' page of the Book Motion Library Services system. At the top, there is a navigation bar with three tabs: 'DASHBOARD', 'ISSUED BOOKS', and 'ACCOUNT'. The 'ACCOUNT' tab is selected. Below the navigation bar, the 'Change Your Password' section is displayed. It contains three input fields for 'Current Password', 'Enter Password', and 'Confirm Password'. Below the input fields, there is a blue button labeled 'change my password'.

➤ Add thought by student

 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)

[DASHBOARD](#) [ISSUED BOOKS](#) [ACCOUNT](#)

Add Your Thought

My Thought

Thought Title


Chose Image For Thought

[Choose File](#) No file chosen

Write Your Thought




publish

➤ Show and manage thought


 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)

[DASHBOARD](#) [ISSUED BOOKS](#) [ACCOUNT](#)

My Thoughts


Image	Title	Description	Delete Your Thought
	Admin Test	I Wish Its Success	Delete
	Wendicredv Rvef Dhvnehsd Evfhn Shfsdvc	Welv Elg Y5tjhbcddjrib Bhnikbygtfdrh Rtr Tbh T Uty Ebjlyvt	Delete
	New Thought	Digital Photo	Delete


Admin dashboard


 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)


DASHBOARDSTUDENT LISTCHANGE PASSWORD


Admin Dashboard


4
Book Manage


1
Book Not Return Yet By Student


4
Manage Author






4
Manage Categories


13
Book issue By Student

➤ Book list and maintain

Book List [Add New Book](#)

Find Books

Id	Image	Book Name	Categorie	Author	Isbn Number	Price	Issue	Register Date	Action
9		Art	5	7	100002	25	Available	2023-09-12	Delete Edit
10		Elite	2	2	10003	20	Available	2023-09-12	Delete Edit
11		Nothing Happen	2	4	100025	250	Not Available	2023-09-12	Delete Edit
12		Rich Poor	5	6	10022	12	Available	2023-09-12	Delete Edit

➤ Book edit by admin

Edit Books

Book Id :9

Book Name

art

Categories

romance

Author

mona lisa


Isbn Number

100002

Price


25

Image



publish

➤ Book live search and status

BOOK MOTION LIBRARY SERVICES

Log Me Out

DASHBOARD

STUDENT LIST


CHANGE PASSWORD

Book List


Find Books

g

Add New Book

Id	Image	Book Name	Categorie	Author	Isbn Number	Price	IsIssue	Register Date	Action
11		Nothing Happen	2	4	100025	250	Not Availble	2023-09-12	<div>DeleteEdit</div>

➤ New book add

 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)

[DASHBOARD](#) [STUDENT LIST](#) [CHANGE PASSWORD](#)

Add New Book

Book Name

Categories

Author


Isbn Number

Price

Image

No file chosen

➤ info of book which not return and manage

 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)


[DASHBOARD](#) [STUDENT LIST](#) [CHANGE PASSWORD](#)

Book Return

Enter Sid

Issue Id	Book Isbn Number	Student Id	Issue Date	Return Date	Isissue	Action
15	100025	12	2023-09-15	0000-00-00	Not Return	<input type="button" value="Book Return"/>

➤ register student list, search & manage status

**BOOK MOTION LIBRARY SERVICES**

Log Me Out


DASHBOARDSTUDENT LISTCHANGE PASSWORD

Student Register List

Find Student

Id	Fname	Gender	Dob	Contact	Address	Status	Manage Student
8	Nicxacherry	Male	2023-08-29	1234567	48 Rehgnckm Madhubala	Active	<div>Change StatusDelete</div>
10	Manthakotariya	Female	2011-02-12	7654321	46 Rehgnckm Ejbce	Active	<div>Change StatusDelete</div>
12	Temptest	Male	2023-09-12	7854321	Hesdfvjhl	Active	<div>Change StatusDelete</div>
13	Manthakotariya	Female	2023-09-06	1234567890	23 Janam Nagar ,Surat -2583657	Active	<div>Change StatusDelete</div>

➤ admin password

**BOOK MOTION LIBRARY SERVICES**

Log Me Out

DASHBOARDSTUDENT LISTCHANGE PASSWORD

Admin Password Change


Current Password

Enter Password

Confirm Password

change my password

➤ **manage author**

**BOOK MOTION LIBRARY SERVICES**

Log Me Out

DASHBOARDSTUDENT LISTCHANGE PASSWORD


Author List

Add Author

Find Author

Id	Author Name	Date Of Creation	Action
2	Bell Charley	2023-09-12	Delete
4	Test	2023-09-12	Delete
6	Maria Monila	2023-09-12	Delete
7	Mona Lisa	2023-09-12	Delete

➤ **add author**

**BOOK MOTION LIBRARY SERVICES**

Log Me Out

DASHBOARDSTUDENT LISTCHANGE PASSWORD

Add Author


Enter Name

enter author name

Please fill out this field.

add author

➤ manage categories

 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)


[DASHBOARD](#) [STUDENT LIST](#) [CHANGE PASSWORD](#)

Categories List [Add Category](#)

Find Categories

Id	Category Name	Date Of Creation	Action
2	It	2023-09-12	Delete
5	Romance	2023-09-12	Delete
6	Business	2023-09-12	Delete
7	Management	2023-09-15	Delete

➤ add categories

 **BOOK MOTION LIBRARY SERVICES** [Log Me Out](#)

[DASHBOARD](#) [STUDENT LIST](#) [CHANGE PASSWORD](#)

Add Categories

Enter Name

[add categorie](#)

➤ **book issue for student**



BOOK MOTION LIBRARY SERVICES

Log Me Out

DASHBOARD

STUDENT LIST

CHANGE PASSWORD

Book Issue

Student Id*

ENTER BOOK NAME*

ENTER BOOK isbn Number*

Issue

Conclusion

This project is focused on the development of a system that is both efficient and user friendly when it comes to providing library management service to the users. For achieving the goal, I used PHP, MySQL and JavaScript bootstrap and so on. The challenging part of the project is to design and implement of the database. After overcoming the challenges, I successfully implemented the project and tested it necessary functionalities. All the basic functionality testing is successful which the I planned to do in the LMS. The project is in beginning stage and it's not fully ready to actual use, as there is need to add more functionality to ensure good user experience. As example currently the user can't borrow a book directly by themselves. They need to put a request to the admin and the admin can only issue a book to the user. Despite its flaws, the LMS can perform the essential functions required by a library management system.

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<https://www.youtube.com/>

- i) Code with harry
- ii) Cyber warier
- iii) Phpgurukul