

**MINOR PROJECT REPORT
ON**

“Library Management System”

In partial fulfillment for the award of the degree

Of

BACHELOR OF COMPUTER APPLICATION

[B.C.A]

Year 2023–2024

SUBMITTED BY

NIRAJ S. PARADVA

GUIDED BY

Prof. Pratiksha Patel

BCA-5th SEMESTER

Submitted to:



**SHRI SHAMBHUBHAI V. PATEL COLLEGE OF
COMPUTER SCIENCE & BUSINESS MANAGEMENT**

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.

Contents

introduction	Error! Bookmark not defined.
Tools used for the project.....	5
Php	5
Sql.....	6
MySql	6
Bootstrap	6
JavaScript	6
Objective	7
Unified Modelling Language	7
ER Diagram.....	7
data flow diagram	9
flow chart	10
Screen short of site	10
home page	10
Register and login forms (admin, student)	13
student dashboard.....	14
admin dashboard	18
Conclusion.....	25

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.

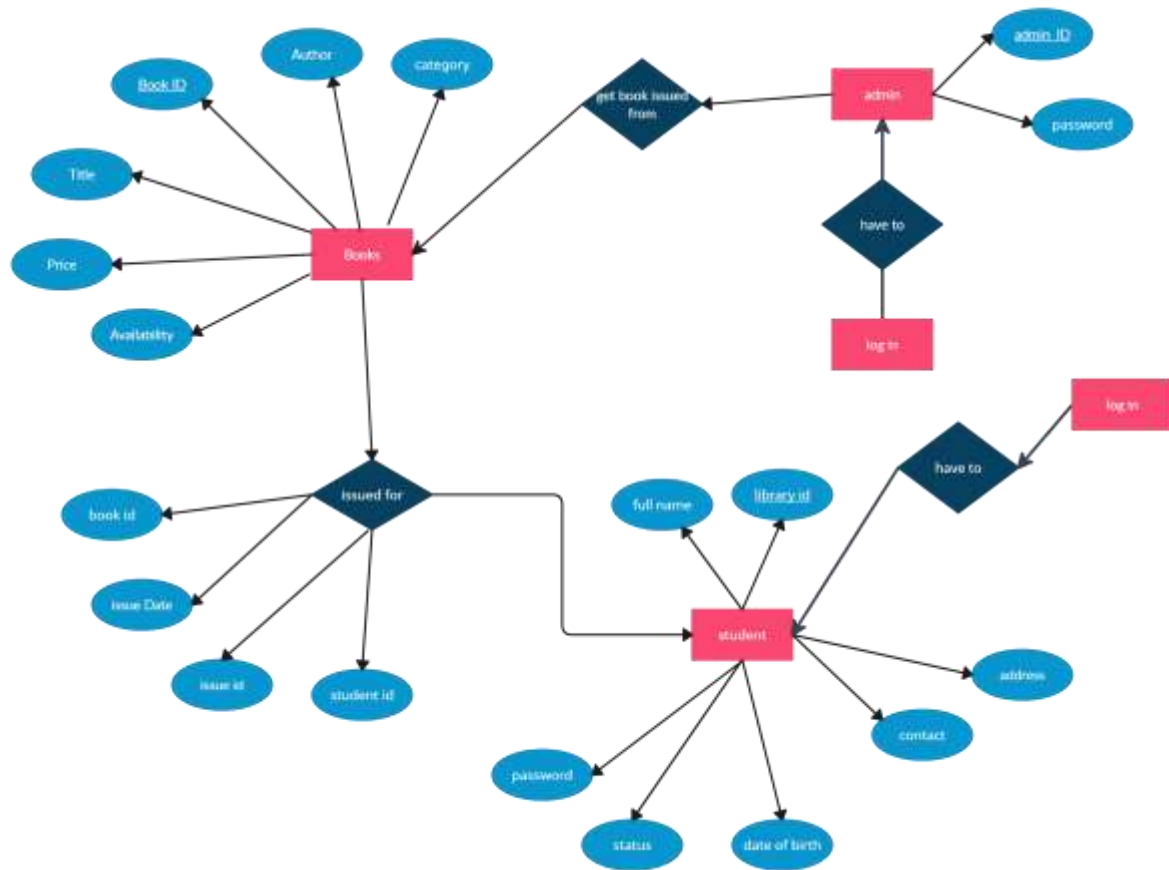
The Unified Modeling Language (UML) is a critical component in developing object-oriented applications and the software development life cycle. The Unified Modeling Language (UML) is a graphical notation system that is used to represent the design of software projects. When project teams use the UML, 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

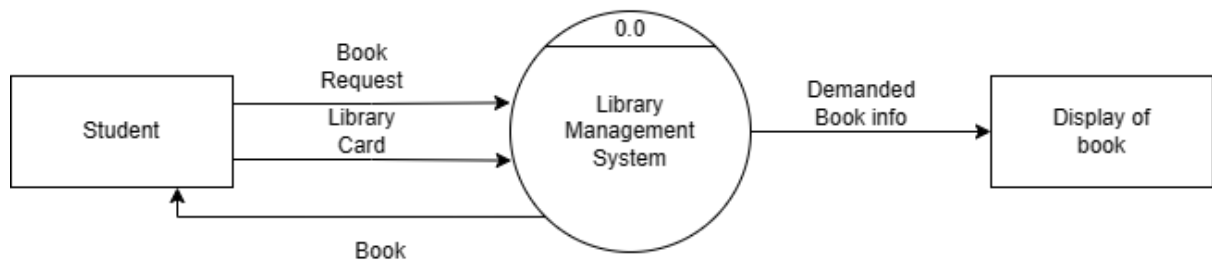
E-R Diagram of Library Management System



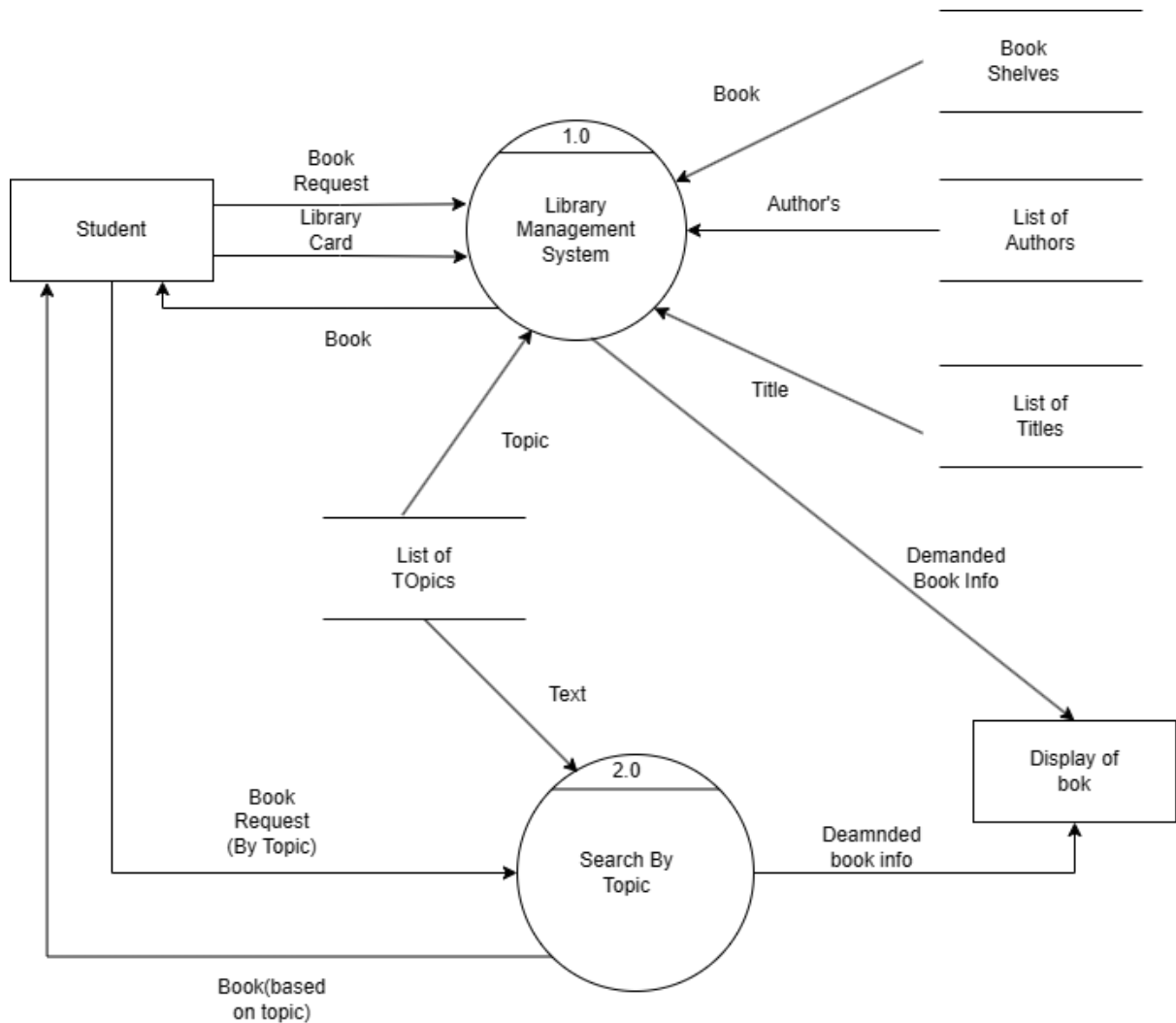
The library database consists of 7 tables,

- 🚩 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

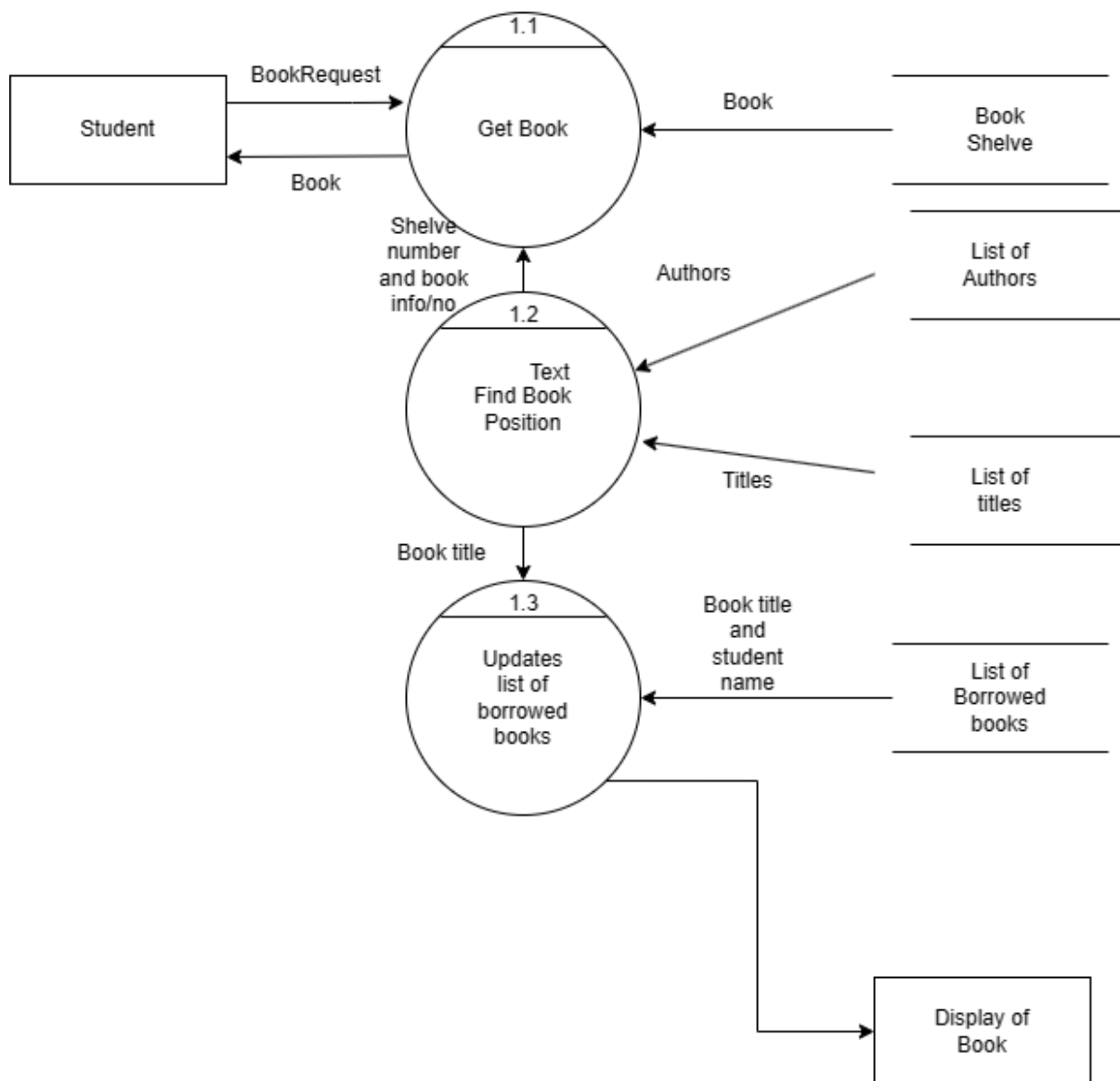


DFD LEVEL-0



DFD LEVEL-1

Flow chart



Level 2

Screen short of site

home page

BOOK MOTION LIBRARY SERVICES

[HOME](#)[ABOUT](#)[THOUGHT](#)[CONTACT US](#)[MORE](#)

explore your self to something new

providing access to information and resources, supporting literacy and education, promoting lifelong learning, and serving as a community gathering space

[HOME](#)[ABOUT](#)[THOUGHT](#)[CONTACT US](#)[MORE](#)

ABOUT US



Join the library

Aut vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zlobent augee duis dolore to feugiat nulla facilisis. Tqui nam habenti claritatem insitiam; uti uos legentis in



Help

Sed elit at vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zlobent augee duis dolore to feugiat nulla legentis in it qui facti eorum claritatem vestigatio



Ask for librarian

Sed elit at vero eros et accumsan et justo odio dignissim qui blandit praesent luptatum zlobent augee duis dolore to feugiat uos legentis in it qui facti eorum claritatem vestigatio

THOUGHT



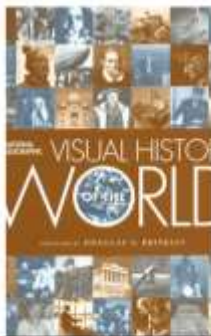
admin test

i wish do success

- nicks cherry

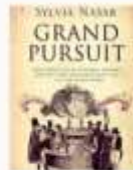
ADD YOUR THOUGHT

MOST POPULER BOOKS



visual history of world

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



grand pursuit



circus stars



downton abbey

CONTACT US



8901 Marmora Road,
Glasgow, G04 89GR



+ (0281) 8585263



copyright © 2023 | [privacy policy](#)

Register and login forms (admin, student)



A login form titled "login here" in a colorful font. It features a "student mail" label above a text input field containing "minhngminh@gmail.com". Below this is a "Password" label above a password input field. A "forgot password" link is positioned below the password field. At the bottom, there is a white "submit" button and a grey "i am not a member" button. The form is set against a dark grey background with blue and orange circular accents.

login here

student mail

minhngminh@gmail.com

Password

forgot password

submit

i am not a member



A login form titled "login here" in a colorful font. It features an "admin name" label above a text input field containing "admin". Below this is a "Password" label above a password input field. At the bottom, there is a white "login admin" button. The form is set against a dark grey background with blue and orange circular accents.

login here

admin name

admin

Password

login admin



A registration form titled "STUDENT MEMBERSHIP FORM" in a colorful font. It contains several input fields: "First Name" and "Last Name" (both with person icons), "Gender" with radio buttons for "Male", "Female", and "Prefer Not To Say", "Age" with a dropdown menu, "Email Address" (with an envelope icon), "Contact Number" (with a phone icon), "Address" (with a location pin icon), "Password" (with a lock icon), and "Confirm Password" (with a lock icon). A white "submit" button is at the bottom. The form is set against a dark grey background with blue and orange circular accents.

STUDENT MEMBERSHIP FORM

First Name

Last Name

Gender

Male

Female

Prefer Not To Say

Age

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 Manila	12	Available

➤ student book return status



BOOK MOTION LIBRARY SERVICES

Log Me Out

DASHBOARD

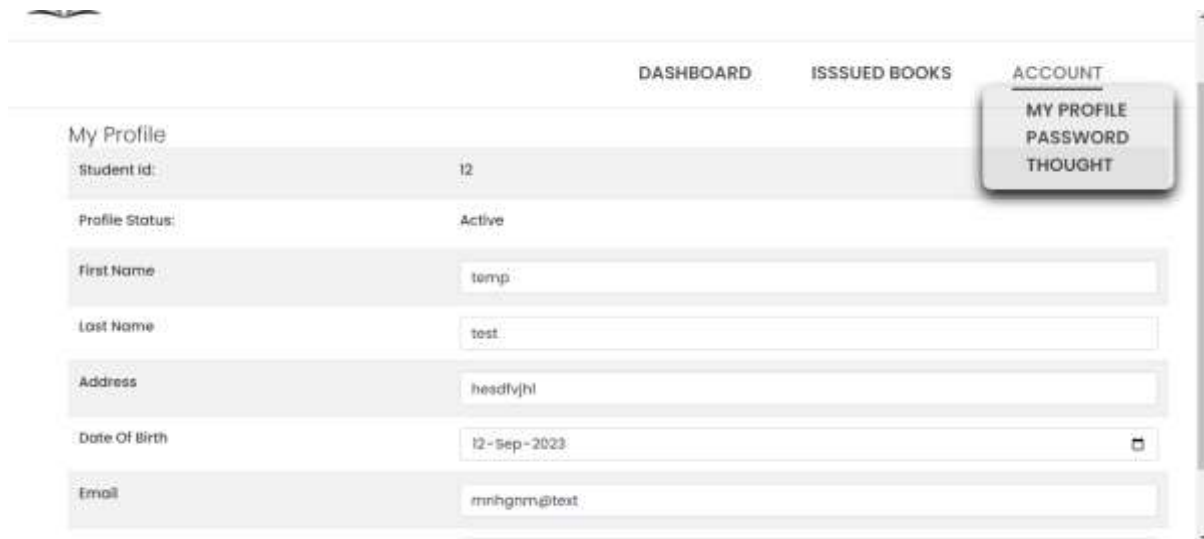
ISSUED BOOKS

ACCOUNT

Return Report

Issue id	Book isbn Number	Issue Date
15	100025	2023-09-15

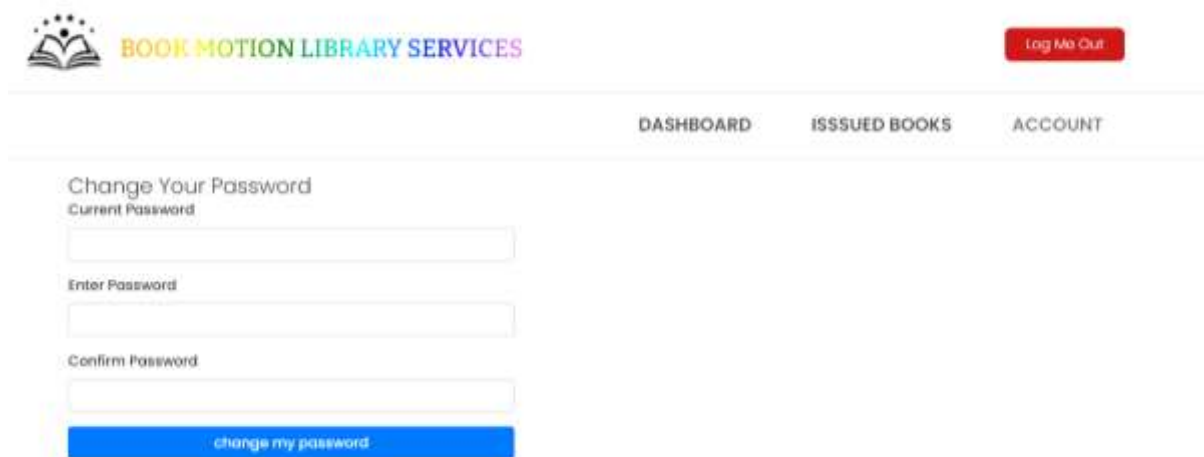
➤ student profile & update



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 contains a form with the following fields:

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="mrhghnm@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 contains a form with the following fields:


Change Your Password

Current Password

Enter Password

Confirm 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>Delete</div> <div>Edit</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 Rehgnekm Madhubala	Active	Change Status Delete
10	Manthakotariya	Female	2011-02-12	7654321	46 Rehgnekm Ejbce	Active	Change Status Delete
12	Tempest	Male	2023-09-12	7854321	Hesdfvjnl	Active	Change Status Delete
13	Manthakotariya	Female	2023-09-06	1234567890	23 Janam Nagar ,Surat -2583657	Active	Change Status Delete

➤ 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.

References

1. design idea

<https://demo.templatemonster.com/demo/53902.html?off=consourse> for attractive design.

2. uml reference

<https://www.scaler.com/topics/er-diagram-for-library-management-system/> for uml designs

3. uml designing

<https://app.createely.com/> for designing my uml in simple and batter way

4. logic reference

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

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