

Project Report

on

“ ONLINE LIBRARY MANAGEMENT SYSTEM”



SRI BALAJI UNIVERSITY

SCHOOL OF COMPUTER STUDIES

Program: Masters of Computer Application

2023 Batch

SUBMITTED BY:

Nitin Yadav (MCA2302036)

Shyam Thakkar (MCA2302015)

Tanmay Hande (MCA2302094)

CERTIFICATE

Certified that the Project Report entitled “**ONLINE LIBRARY MANAGEMENT SYSTEM**”, submitted by **Nitin Yadav, Shyam Thakkar, Tanmay Hande** of MCA, is their own work and has been carried out under my supervision. It is recommended that the candidates may now be evaluated for their work by the University.

Name 1: Nitin Yadav

Roll no: MCA2302015

Name 2: Shyam Thakkar

Roll no: MCA2302036

Name 3: Tanmay Hande

Roll no: MCA2302094

Date: - 10/10/2024

Place:- SBUP

Dr.G.Y.Shitole

(Principal)

Prof. Rajasmita Panda

(Assistant Professor)

ACKNOWLEDGEMENT

We feel immense pleasure to introduce “**ONLINE LIBRARY MANAGEMENT SYSTEM**” as our major project. I express my sincere thanks to our instructor **Prof. Rajasmita Panda** who guided us to the successful completion of this project report. We take this opportunity to express our deep sense of gratitude for their individual guidance, constant encouragement and immense motivation which have sustained our efforts at all stages of this project report. We are grateful and appreciate all the staff members of the School of Computer Application for their cooperation and support.

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Finally, we would wish to thank everyone involved in this project time.

ABSTRACT

The Online Library Management System is a web-based application designed to automate the management of library operations. Built using HTML, CSS, PHP, and MySQL, the system aims to provide a streamlined solution for both librarians and users, making it easier to manage books, users, and transactions. Our objective is to create an efficient platform that enhances accessibility to library resources while simplifying the management process for administrators.

This system proves to be a significant improvement over the traditional manual processes. Users can browse, reserve, and borrow books without having to physically visit the library, while library staff can manage book inventories, track user transactions, and maintain records efficiently. The system benefits educational institutions, public libraries, and organizations that aim to provide easy access to a wide range of learning resources.

The primary aim of the project is to replace the existing manual system with an automated solution that leverages computerized tools to store, retrieve, and manage valuable data for longer periods. This not only improves the overall performance of the library but also ensures the availability of resources to users with minimal effort and better service delivery. The system is designed to offer a user-friendly experience while ensuring that data is securely stored and easily accessible for future

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Chapter 1: INTRODUCTION TO THE LANGUAGES USED

1.1 HTML & CSS

➤ HTML:

Html stands for Hyper Text Markup Language. It is the standard markup language for creating Web pages, which describes the structure of a Web page. HTML consists of a series of elements that tell the browser how to display the content. These elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

Developer of HTML: Tim Berners-Lee

➤ CSS :

CSS stands for Cascading Style Sheets. This language describes how HTML elements are to be displayed on screen, paper, or in other media. It saves a lot of work, and can also control the layout of multiple web pages all at once. External stylesheets are stored in CSS files with .css extension. Developer of CSS : World Wide Web Consortium (W3C)

1.2 INTRODUCTION TO PHP:

Certainly PHP (Hypertext Preprocessor) is a widely used server-side scripting language primarily designed for web development. It is used to create dynamic web pages by embedding PHP code within HTML. When a user requests a web page that contains PHP code, the server processes the PHP code and sends the resulting HTML to the user's web browser, which displays the page.

Chapter 2:-INTRODUCTION TO "LIBRARY MANAGEMENT SYSTEM"

➤ Introduction:

The "Library Management System" is a web-based application designed to provide efficient and reliable services for managing library operations. The platform is tailored to help educational institutions, public libraries, and other organizations manage their book inventories, user data, and transactions seamlessly. Our primary objective is to make the system user-friendly, allowing both administrators and users to access library resources without hassle.

We provide a secure platform where users can easily browse, borrow, and return books, while librarians can manage book inventories and user records effectively. The system replaces manual, time-consuming processes with an automated and streamlined approach. This eliminates the need for physical visits for basic tasks such as checking book availability or updating borrowing records, offering an online solution for modern libraries.

➤ Purpose:

The Library Management System is designed to help both libraries and users by making the management and access to library resources more convenient and effective. It serves as a hub where librarians can manage the library's catalog, check user records, and track borrowing history. Users can also browse books, check availability, and borrow or reserve books online without needing to visit the library in person.

This system simplifies library operations and provides a structured and secure environment where both users and librarians can interact with ease. The purpose is to offer a solution that allows quick access to information and promotes efficient handling of library resources. The platform also ensures transparency by keeping track of every transaction, making it easier for users to access and manage their accounts and book loans.

➤ Scope:

The proposed Library Management System aims to address the limitations of the current manual or semi-automated systems used in libraries. The system will be designed to improve the overall user experience and enhance the efficiency of managing library resources.

The scope includes developing a user-friendly interface for both library staff and users, ensuring easy navigation and functionality. The system will also incorporate a feedback mechanism, enabling users to review the services provided by the library, which will offer valuable insights for improving the system's performance and user satisfaction.

In addition to managing books and user accounts, the system will also allow for the integration of other services like overdue notifications, automatic updates of borrowing records, and secure management of sensitive data. Overall, the proposed system aims to provide a reliable, secure, and easy-to-use platform for managing library resources.

➤ Advantages:

- **Convenience:** The Library Management System allows users to check the availability of books, reserve or borrow them, and even return them from the comfort of their homes, eliminating the need for physical visits.
- **Efficient Resource Management:** Librarians can manage book inventories, user records, and borrowing transactions efficiently through an integrated system that automates repetitive tasks.
- **Time-Saving:** The system saves time for both users and library staff by automating processes such as checking availability, issuing returns, and managing overdue books.
- **Reduced Errors:** Manual errors in managing library records can be reduced as the system ensures data accuracy and transparency.
- **Accessibility:** Users can access the platform 24/7, allowing them to browse and borrow books at their convenience, anytime, anywhere.
- **Information Access:** The system provides detailed information about the available books, including book descriptions, availability, and borrowing history.

➤ Existing System

- **Time-Consuming:** Book borrowing, returns, and catalog management rely on manual record-keeping, which consumes significant time and effort.
- **Prone to Errors:** Manual processes increase the chances of human errors, such as incorrect book entries, lost records, or misplaced books.
- **Difficulty in Tracking:** Tracking book availability, due dates, and borrower information can be inefficient and prone to inconsistencies, leading to lost or overdue books.
- **Limited Accessibility:** Users must physically visit the library to check the availability of books or to borrow /return them, reducing convenience.

➤ SRS - SOFTWARE REQUIREMENT SPECIFICATION:

A Software Requirements Specification (SRS) is a detailed document that outlines what the software is expected to do and how it should perform. It covers the functionality and requirements needed to satisfy both business and user needs.

➤ Use

To create a platform where librarians can efficiently manage library operations and where Users can easily access and borrow books and other resources. The Library Management System is designed to bridge the gap between users and library resources, ensuring that information is accessible and operations are smooth for everyone involved.

➤ Functional Requirements

1. User Registration and Authentication:

- Use: Allow students, teachers, and library staff to create accounts and log in securely.
- Purpose: To personalize user experience and ensure only authorized users can borrow, return, or manage books.

2. Book Borrowing and Return Management:

- Use: Enable users to borrow, reserve, or return books easily through the online platform.
- Purpose: To streamline book borrowing and returning processes for users and ensure proper tracking.

3. Profile Creation for Users:

- Use: Each user (students, teachers, or staff) can create and manage their library profiles, view book history, and track borrowing status.
- Purpose: To provide personalized access to library resources and keep track of individual activities such as borrowed books, overdue fines, etc.

4. Information Display:

- Use: Display information about available books, genres, authors, new arrivals, and announcements related to the library.
- Purpose: To keep users informed about the latest updates and available resources in the library.

➤ Non-Functional Requirements

1. Security and Privacy:

- Purpose: Ensure that user data (borrowing history, personal information) is encrypted and secure. The financial transactions for fines and fees must also be protected.

2. Scalability:

- Purpose: The system should be scalable to handle increasing numbers of users and an expanding collection of books over time.

3. Usability:

- Purpose: The interface should be user-friendly and intuitive, allowing easy navigation for users to search for books, reserve them, or view their borrowing history.

4. Performance:

- Purpose: Ensure quick loading times and responsive searches, especially during high-traffic periods like the start of the school year or exam seasons.

5. Accessibility:

- Purpose: Design the system to be accessible to all users, including those with disabilities, by incorporating features like screen reader compatibility, alternative text, and accessible navigation.

6. Compliance and Regulation:

- Purpose: Ensure the system complies with local data protection regulations and library standards, including protection of personal information.

➤ Software Tools

1. Front-End:

- Tools: HTML, CSS for building the user interface, making it visually appealing and easy to use for both students and library staff.

2. Back-End:

- Tools: PHP and MySQL for handling database management (books, users, reservations, and transactions) and processing book loans and returns.

➤ Deployment

- Operating System: Windows 10 server, with the option for web-hosting for wider accessibility by students and staff from home or on-campus devices.

➤ Feasibility Study

1. Technical Feasibility:

- Infrastructure: Ensure the library has sufficient infrastructure, such as server capacity and a well-maintained database to support the expected number of users.
- Software & Development: Confirm the availability of necessary software (PHP, MySQL, hosting services) for the development and maintenance of the Library Management System.
- Integration: Assess the possibility of integrating the system with external databases, like ISBN databases, to automatically fetch book details during cataloging.

2. Operational Feasibility:

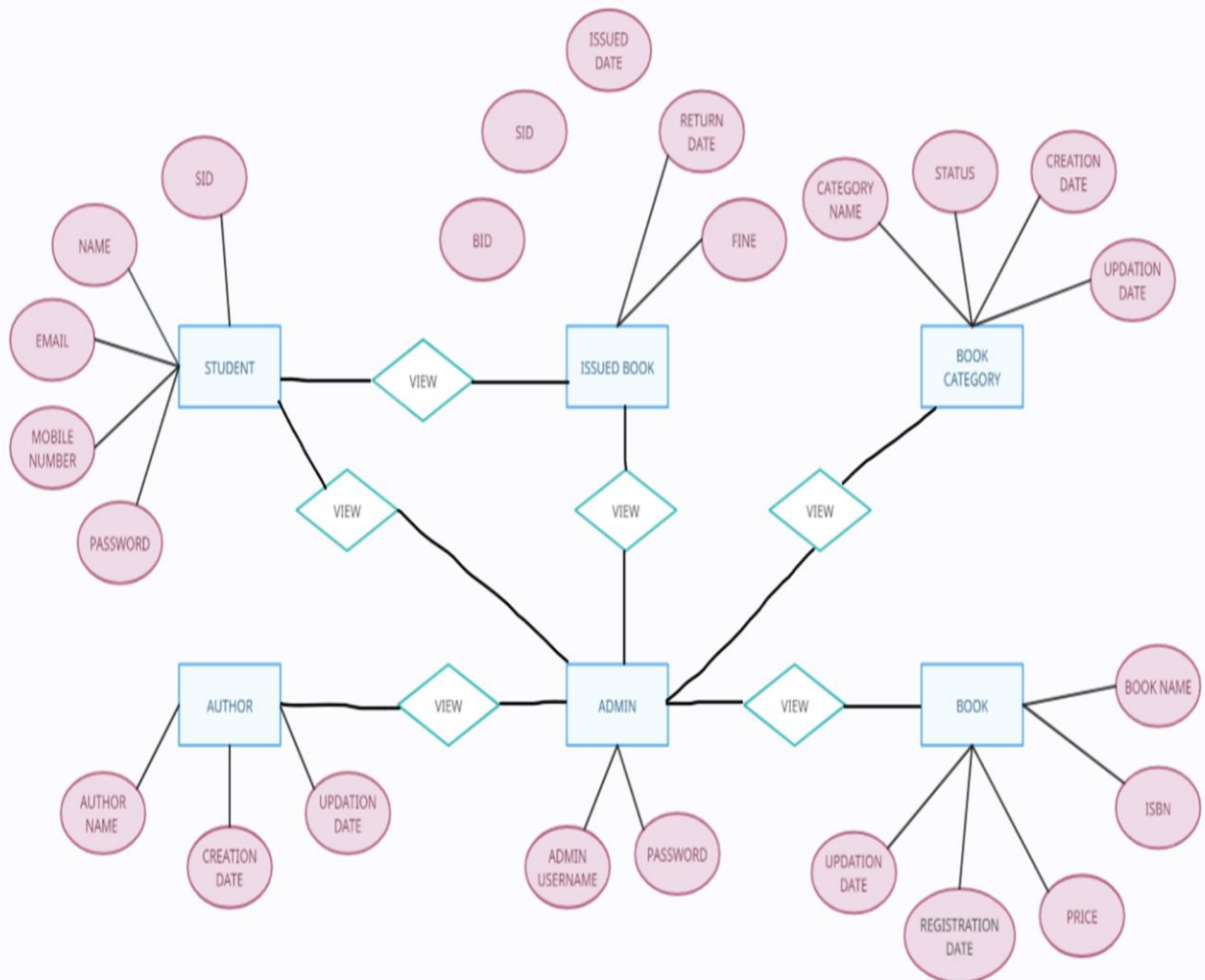
- User Acceptance: Conduct surveys or tests among potential users to ensure that the system will be user-friendly and meets their expectations.
- Training and Support: Provide necessary training to library staff to use the system efficiently, including adding new books, managing returns, and handling user queries.

3. Economic Feasibility:

- Cost Analysis: Evaluate the cost of building, hosting, and maintaining the Library Management System, including any third-party software, licenses, and server hosting fees.
- Return on Investment (ROI): Estimate the benefits, such as improved efficiency, reduced manual workload, and better user satisfaction against the cost of development and operation.

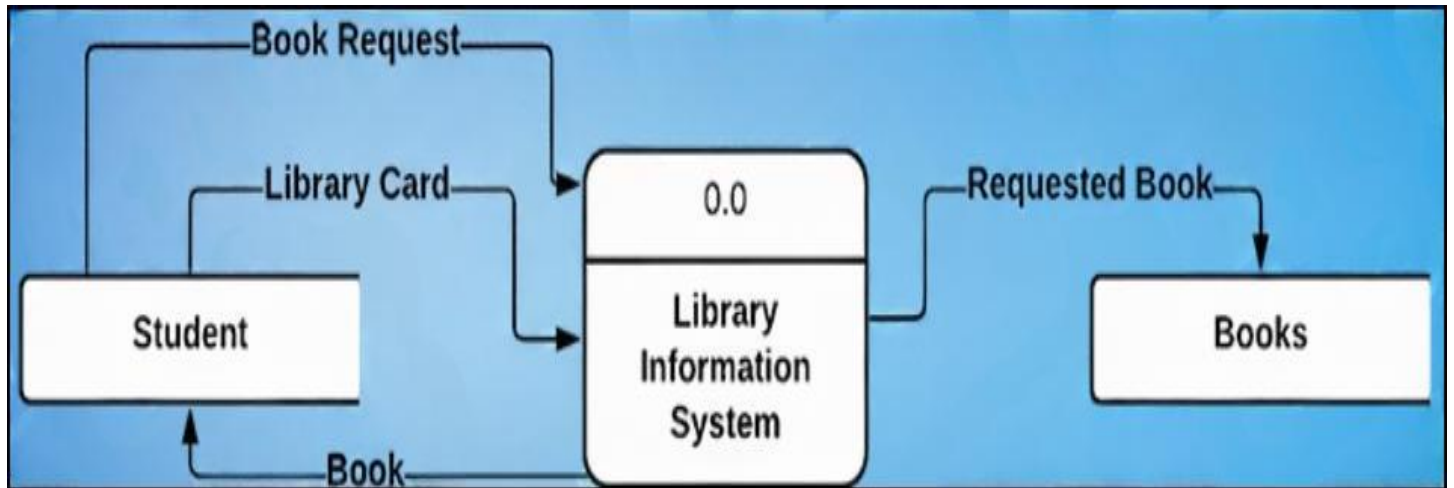
Chapter 3 DIAGRAMS

➤ ENTITY RELATIONSHIP DIAGRAM

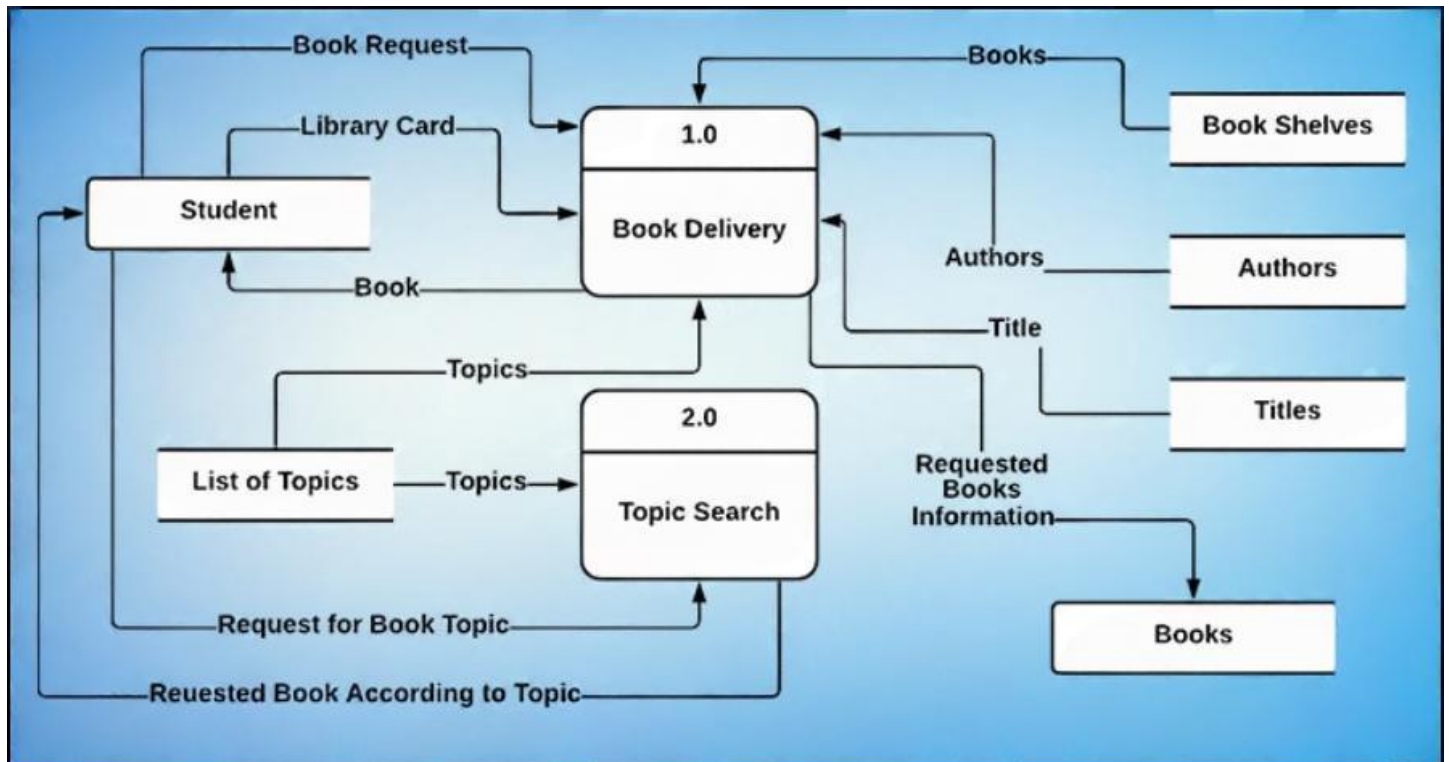


➤ Data Flow Diagram

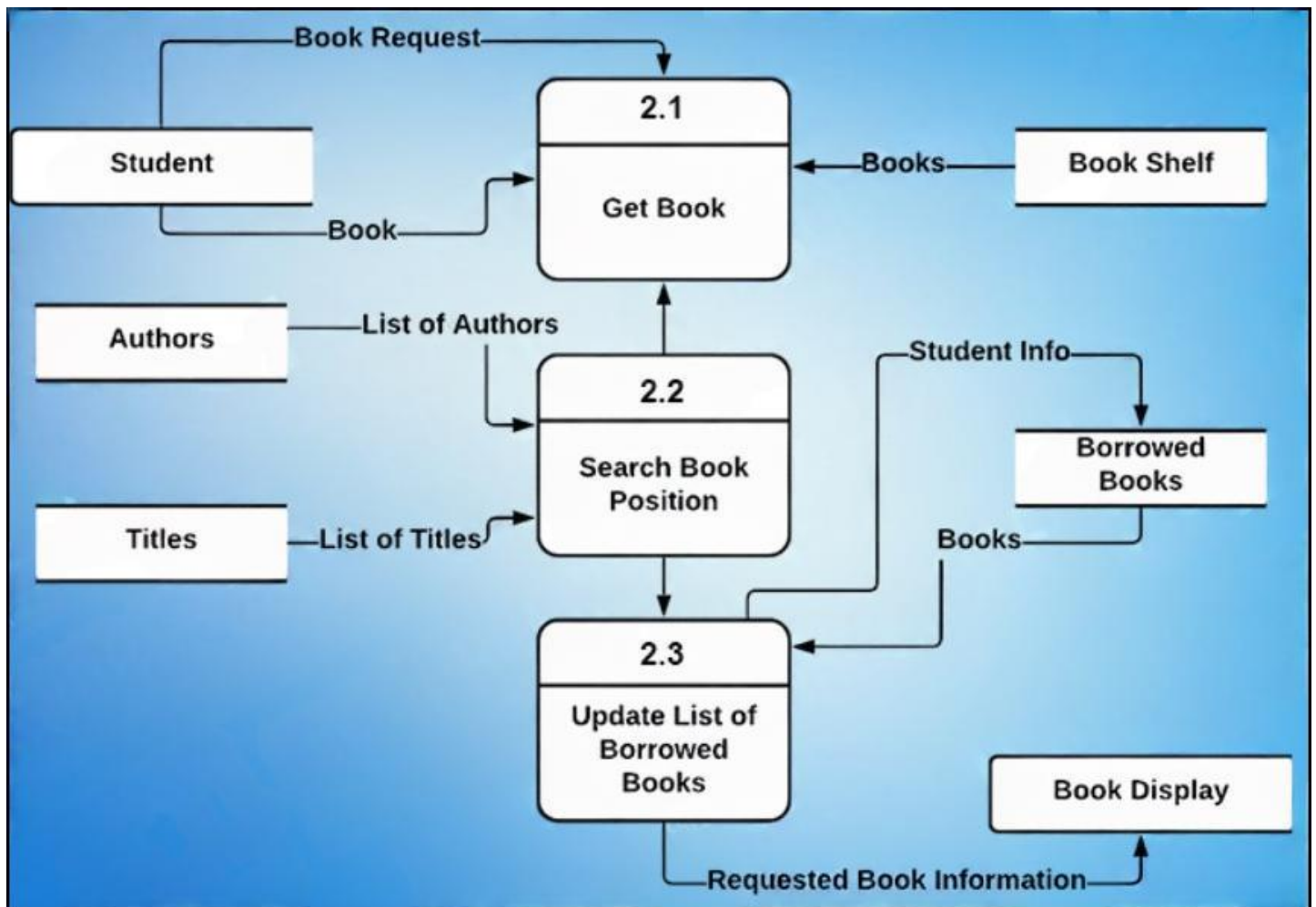
- Level 0



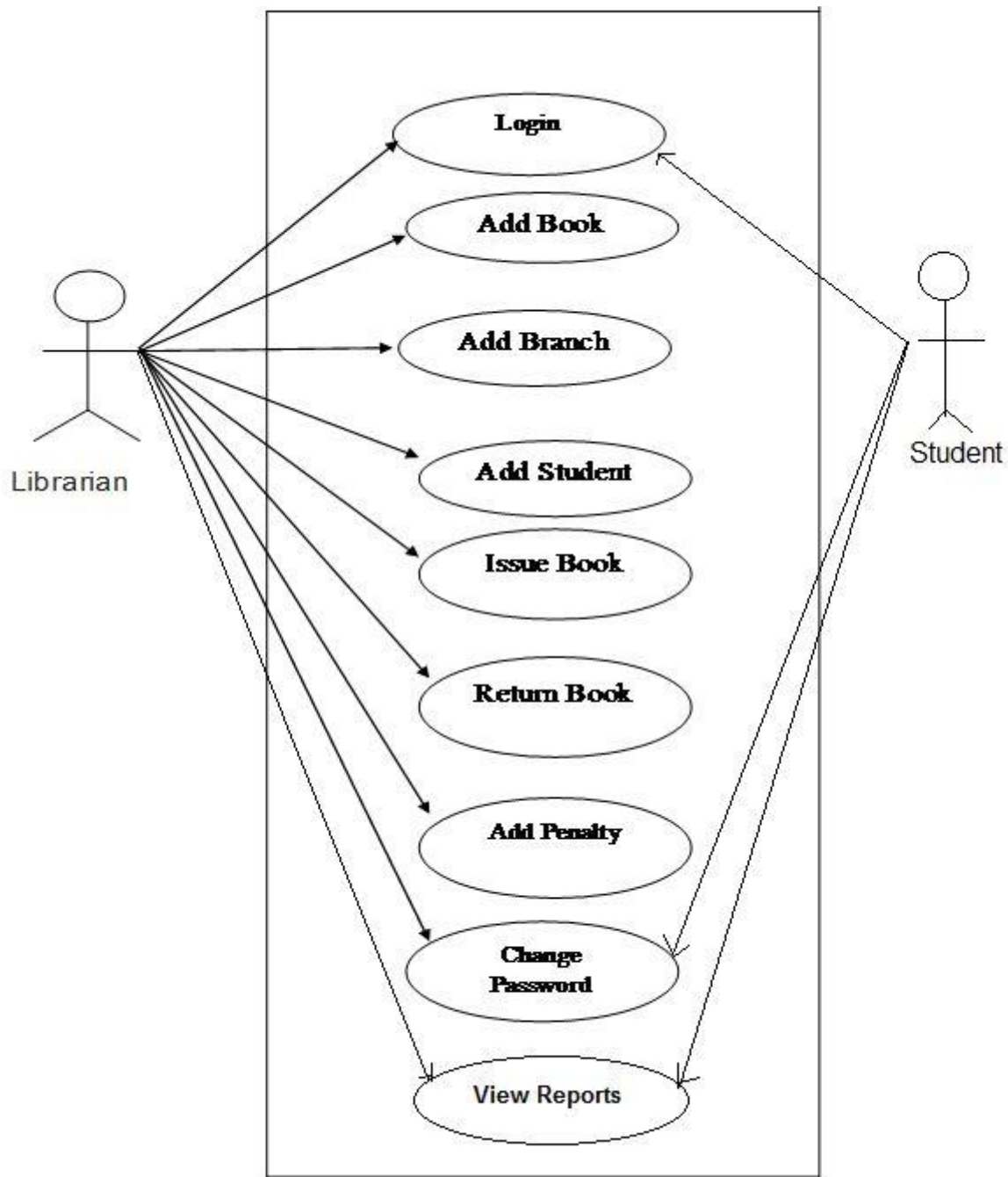
- Level 1



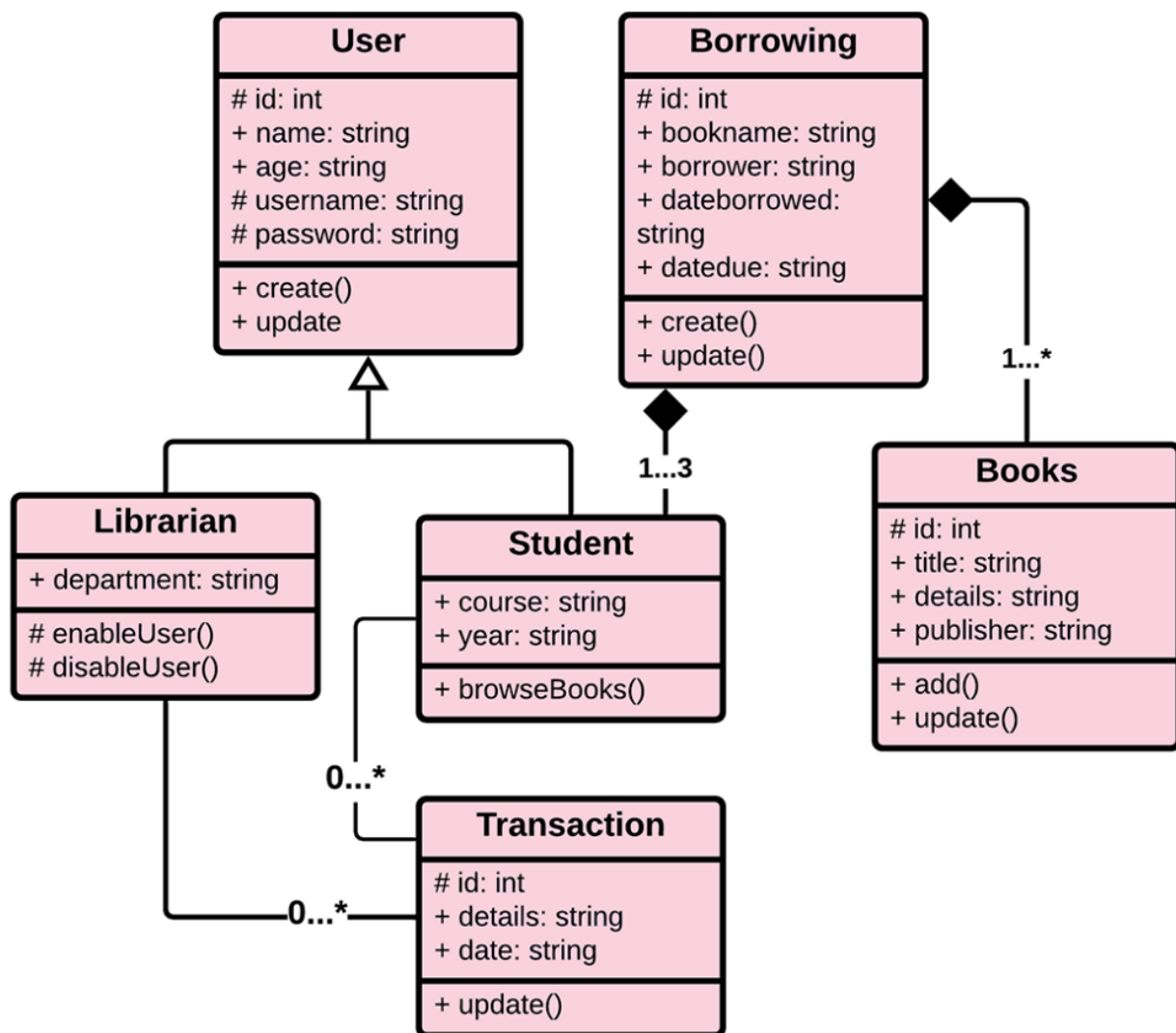
- Level 2



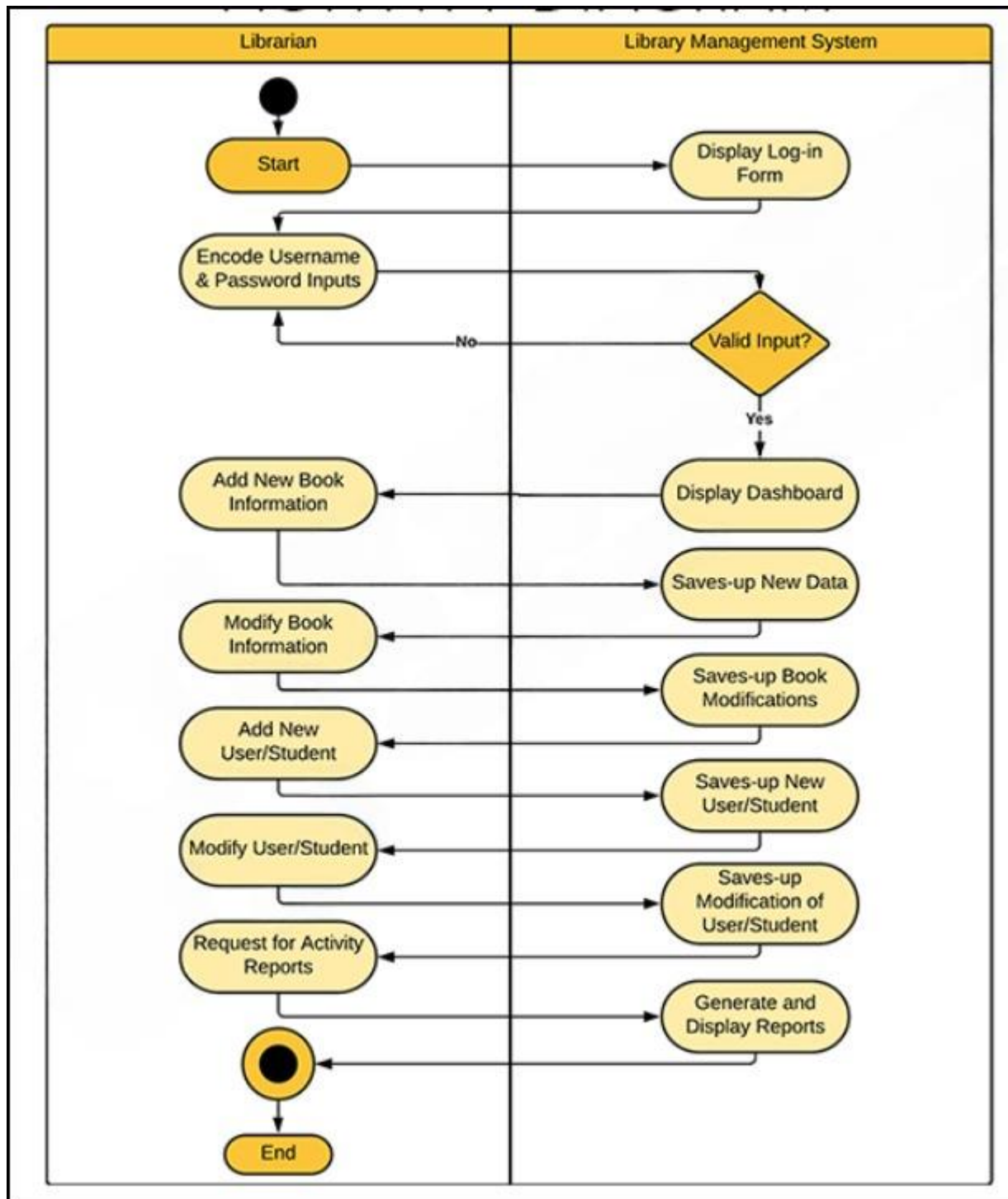
➤ Use Case Diagram



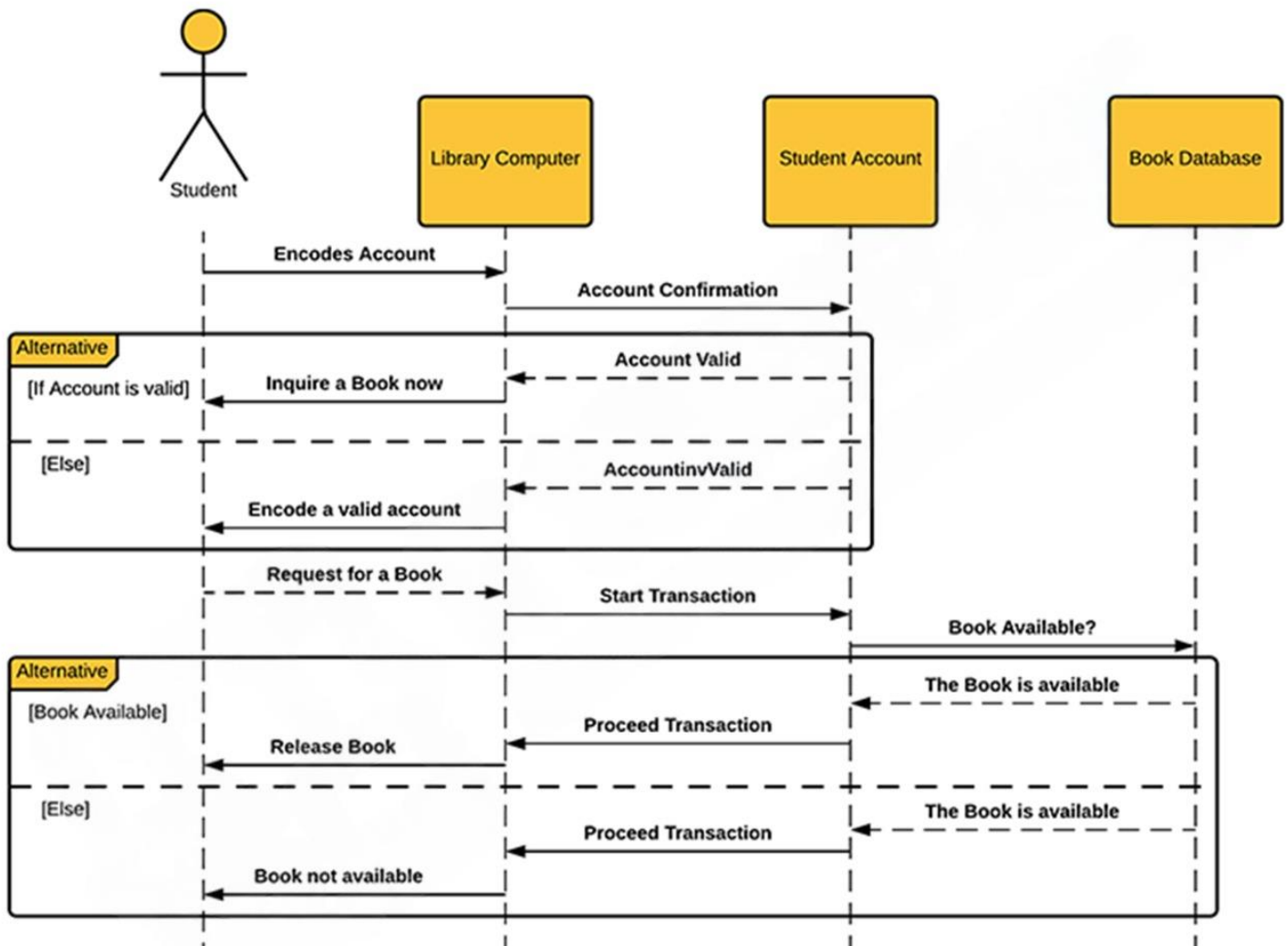
➤ Class Diagram



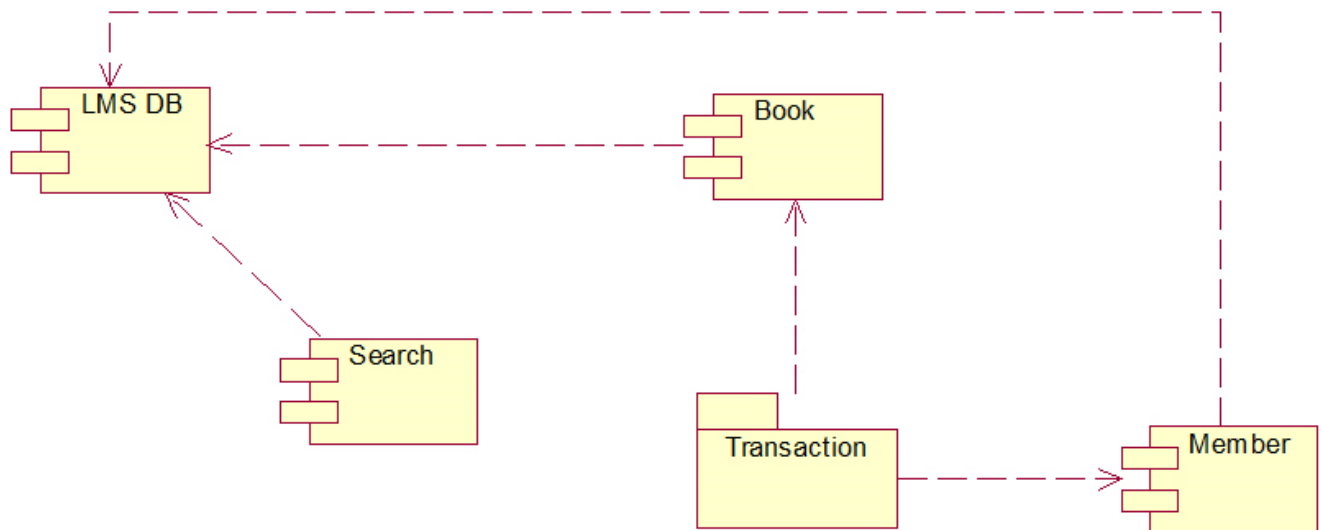
➤ Activity Diagram



➤ Sequence Diagram



➤ Deployment Diagram



Chapter No.4 Data Model

Table Student :-

Column	Type	Collation	Nullable	Default
id	INT	N/A	No	Auto-Increment
StudentId	VARCHAR(100)	utf8_general_ci	No	NULL
FullName	VARCHAR(255)	utf8_general_ci	No	NULL
EmailId	VARCHAR(255)	utf8_general_ci	No	NULL
MobileNumber	VARCHAR(15)	utf8_general_ci	No	NULL
Password	VARCHAR(255)	utf8_general_ci	No	NULL
Status	TINYINT(1)	N/A	No	1
RegDate	DATETIME	N/A	No	CURRENT_TIMESTAMP
UpdationDate	DATETIME	N/A	Yes	NULL

Table Issued_Book:-

Column	Type	Collation	Nullable	Default
id	INT	N/A	No	Auto-Increment
Bookid	INT	N/A	No	NULL
Studentid	INT	N/A	No	NULL
Issuedate	DATETIME	N/A	No	CURRENT_TIMESTAMP
Returndate	DATETIME	N/A	Yes	NULL
Returnstatus	TINYINT(1)	N/A	No	0
Fine	DECIMAL(10,2)	N/A	Yes	0.00

Table Category:-

Column	Type	Collation	Nullable	Default
ID	INT	N/A	No	Auto-Increment
CategoryName	VARCHAR(255)	utf8_general_ci	No	NULL
Status	TINYINT(1)	N/A	No	1
CreationDate	DATETIME	N/A	No	CURRENT_TIMESTAMP
UpdationDate	DATETIME	N/A	Yes	NULL

Table Book:-

Column	Type	Collation	Nullable	Default
ID	INT	N/A	No	Auto-Increment
BookName	VARCHAR(255)	utf8_general_ci	No	NULL
CatID	INT	N/A	No	NULL
AuthorID	INT	N/A	No	NULL
ISBNNumber	VARCHAR(20)	utf8_general_ci	No	NULL
BookPrice	DECIMAL(10,2)	N/A	No	0.00
RegDate	DATETIME	N/A	No	CURRENT_TIMESTAMP
UpdationDate	DATETIME	N/A	Yes	NULL

Table Author:-

Column	Type	Collation	Nullable	Default
ID	INT	N/A	No	Auto-Increment
AuthorName	VARCHAR(255)	utf8_general_ci	No	NULL
CreationDate	DATETIME	N/A	No	CURRENT_TIMESTAMP
UpdationDate	DATETIME	N/A	Yes	NULL

Table Admin:-

Column	Type	Collation	Nullable	Default
ID	INT	N/A	No	Auto-Increment
FullName	VARCHAR(255)	utf8_general_ci	No	NULL
AdminEmail	VARCHAR(255)	utf8_general_ci	No	NULL
Username	VARCHAR(100)	utf8_general_ci	No	NULL
Password	VARCHAR(255)	utf8_general_ci	No	NULL
UpdationDate	DATETIME	N/A	Yes	NULL

Chapter 4: USER INTERFACE

4.1 User Login Form



Online Library
Management System

[ADMIN LOGIN](#)[USER SIGNUP](#)[USER LOGIN](#)

USER LOGIN FORM

LOGIN FORM

Enter Email ID

Password

[Forgot Password](#)

LOGIN

 | [Not Registered Yet?](#)

4.2 User Sign-up form



Online Library
Management System

[ADMIN LOGIN](#)[USER SIGNUP](#)[USER LOGIN](#)

USER SIGNUP

SIGNUP FORM

Enter Full Name

Mobile Number :


Enter Email


Enter Password

Confirm Password


Register Now


4.3 User Dashboard

 Online Library Management System [LOG ME OUT](#)


DASHBOARDACCOUNT ISSUED BOOKS


DASHBOARD


0
Book Issued


0
Books Not Returned Yet


4.4 User Manage Issued Book

 Online Library Management System [LOG ME OUT](#)

DASHBOARDACCOUNT ISSUED BOOKS

MANAGE ISSUED BOOKS


Issued Books

10  records per page Search:

#	Book Name	ISBN	Issued Date	Return Date	Fine in(USD)
No data available in table					

Showing 0 to 0 of 0 entries Previous Next

4.5 User My Profile



Online Library
Management System

LOG ME OUT

DASHBOARD

ACCOUNT

ISSUED BOOKS

MY PROFILE

My Profile

Student ID : SID016

Reg Date : 2024-10-06 20:10:55

Last Updation Date : 2024-10-06 20:13:40

Profile Status : Active

Enter Full Name

Nitin Yadav

Mobile Number :


8999169333

Enter Email

shyamthakkar129@gmail.com

Update Now

4.6 User Change Password



Online Library
Management System

LOG ME OUT

DASHBOARD

ACCOUNT

ISSUED BOOKS

USER CHANGE PASSWORD

Change Password


Current Password

Enter Password

Confirm Password

Chnage

4.7 Admin Login Form


Online Library Management System

[ADMIN LOGIN](#)
[USER SIGNUP](#)
[USER LOGIN](#)

ADMIN LOGIN FORM


LOGIN FORM

Enter Username

Password

LOGIN


4.8 Admin Dashboard


Online Library Management System

LOG ME OUT


[DASHBOARD](#)
[CATEGORIES ▾](#)
[AUTHORS ▾](#)
[BOOKS ▾](#)
[ISSUE BOOKS ▾](#)
[REG STUDENTS](#)
[CHANGE PASSWORD](#)

DASHBOARD




2

Books Listed




6

Times Book Issued




3

Times Books Returned




6

Registered Users




2

Authors Listed




6

Listed Categories



4.9 Add Book Category



Online Library
Management System

LOG ME OUT

DASHBOARD

CATEGORIES

AUTHORS

BOOKS

ISSUE BOOKS

REG STUDENTS

CHANGE PASSWORD

ADD CATEGORY

Category Info

Category Name

Status


Active

Inactive

Create

©Online Library Management System

4.10 Manage Book Category



Online Library
Management System

LOG ME OUT

DASHBOARD

CATEGORIES

AUTHORS

BOOKS

ISSUE BOOKS

REG STUDENTS

CHANGE PASSWORD

MANAGE CATEGORIES

Categories Listing

10 records per page

Search:

#	Category	Status	Creation Date	Updation Date	Action
1	Romantic	Active	2017-07-05 00:05:25	2017-07-06 21:30:42	<div>EditDelete</div>
2	Technology	Active	2017-07-05 00:05:39	2017-07-08 22:43:03	<div>EditDelete</div>
3	Science	Active	2017-07-05 00:05:55	0000-00-00 00:00:00	<div>EditDelete</div>
4	Management	Inactive	2017-07-05 00:06:16	0000-00-00 00:00:00	<div>EditDelete</div>
5	Casual	Active	2024-10-06 20:12:43	0000-00-00 00:00:00	<div>EditDelete</div>


Showing 1 to 5 of 5 entries

Previous

1

Next

4.11 Manage Book Authors


Online Library Management System
LOG ME OUT

DASHBOARD
CATEGORIES ▾
AUTHORS ▾
BOOKS ▾
ISSUE BOOKS ▾
REG STUDENTS
CHANGE PASSWORD

MANAGE AUTHORS

Authors Listing

10 ▾ records per page


Search:

#	Author	Creation Date	Updation Date	Action
1	Anuj kumar	2017-07-08 18:19:09	2017-07-08 20:46:59	Edit Delete
2	Chetan Bhagatt	2017-07-08 20:00:23	2017-07-08 20:45:09	Edit Delete
3	Anita Desai	2017-07-08 20:05:08		Edit Delete
4	HC Verma	2017-07-08 20:05:21		Edit Delete
5	R.D. Sharma	2017-07-08 20:05:36		Edit Delete
6	fvdfwrer	2017-07-08 20:52:03		Edit Delete

Showing 1 to 6 of 6 entries

Previous
1
Next

4.12 Add Book Authors


Online Library Management System
LOG ME OUT

DASHBOARD
CATEGORIES ▾
AUTHORS ▾
BOOKS ▾
ISSUE BOOKS ▾
REG STUDENTS
CHANGE PASSWORD

ADD AUTHOR

Author Info

Author Name

Add

©Online Library Management System

4.13 Add Book



ADD BOOK

Book Info

Book Name*

Category*

Select Category

Author*

Select Author

ISBN Number*

An ISBN is an International Standard Book Number.ISBN Must be unique

Price*

Add

4.14 Manage Book



MANAGE BOOKS

Books Listing

10 records per page


Search:

#	Book Name	Category	Author	ISBN	Price	Action
1	PHP And MySql programming	Technology	Anuj kumar	222333	20	Edit Delete
2	physics	Science	HC Verma	1111	15	Edit Delete

Showing 1 to 2 of 2 entries

Previous
1
Next

4.15 Issue New Book


Online Library Management System

LOG ME OUT

DASHBOARD
CATEGORIES ▾
AUTHORS ▾
BOOKS ▾
ISSUE BOOKS ▾
REG STUDENTS
CHANGE PASSWORD

ISSUE A NEW BOOK

Issue a New Book

Srtudent Id*


ISBN Number or Book Title*

▾

Issue Book

©Online Library Management System

4.16 Manage Issued Books


Online Library Management System

LOG ME OUT

DASHBOARD
CATEGORIES ▾
AUTHORS ▾
BOOKS ▾
ISSUE BOOKS ▾
REG STUDENTS
CHANGE PASSWORD

MANAGE ISSUED BOOKS

Issued Books

10 ▾ records per page
Search:

#	Student Name	Book Name	ISBN	Issued Date	Return Date	Action
1	Clide Louie	physics	1111	2017-07-15 23:32:55	Not Return Yet	Edit
2	Andrew Braza	physics	1111	2017-07-15 11:53:23	2017-07-15 16:52:29	Edit
3	Andrew Braza	physics	1111	2017-07-15 11:43:40	Not Return Yet	Edit
4	Andrew Braza	PHP And MySql programming	222333	2017-07-15 11:42:27	2017-07-15 16:45:23	Edit
5	Andrew Braza	PHP And MySql programming	222333	2017-07-15 11:39:47	2017-07-15 16:45:20	Edit

Showing 1 to 5 of 5 entries

Previous
1
Next

4.17 Mange Registered Student



MANAGE REG STUDENTS

Reg Students

10 ▾ records per page

Search:

#	Student ID	Student Name	Email id	Mobile Number	Reg Date	Status	Action
1	SID002	Andrew Braza	andrew1@gmail.com	9865472555	2017-07-11 21:07:05	Active	Inactive
2	SID005	John Roberts	john@yahoo.com	8569710025	2017-07-11 21:11:27	Blocked	Active
3	SID010	Rey Tejada	rey@gmail.com	8585856224	2017-07-15 19:10:30	Active	Inactive
4	SID011	Clide Louie	CLIDE@gmail.com	4672423754	2017-07-15 23:30:59	Active	Inactive
5	SID012	Clive Dela Cruz	clive21@yahoo.com	0945208280	2019-04-11 19:16:30	Active	Inactive
6	SID015	SHYAM THAKKAR	shyam@gmail.com	8999169333	2024-10-05 19:11:58	Active	Inactive
7	SID016	Nitin Yadav	shyamthakkar129@gmail.com	8999169333	2024-10-06 20:10:55	Active	Inactive

Showing 1 to 7 of 7 entries

Previous 1 Next

4.18 Admin User Change Password



USER CHANGE PASSWORD

Change Password

Current Password

Enter Password

Confirm Password

Chnage

Chapter No 5 Test Case

Module Testing

1. User Authentication Module

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks	Pass/Fail
1.1	User Signup with valid details	Name: John, Email: john@example.com, Password: 12345	User should be registered successfully	User registered successfully; received confirmation message	Pass
1.2	User Signup with missing required fields	Name: John, Email: "", Password: 12345	Error message: "Email is required"	Error validation is working correctly	Pass
1.3	User Login with valid credentials	Email: john@example.com, Password: 12345	User should be redirected to the dashboard	Successful login; redirected to the dashboard	Pass
1.4	User Login with invalid credentials	Email: john@example.com, Password: wrongPassword	Error message: "Invalid login credentials"	Error message displayed as expected	Pass
1.5	User Login with non-existing email	Email: nonexistent@example.com, Password: 12345	Error message: "Email not found"	User unable to login with non-existing email	Pass
1.6	Password Recovery with registered email	Email: john@example.com	Password recovery link should be sent to the email	Recovery email received; reset link working	Pass
1.7	Password Recovery with unregistered email	Email: unregistered@example.com	Error message: "Email not found"	Error validation works for unregistered emails	Pass

2. User Profile Management Module

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks	Pass/Fail
2.1	View user profile	Logged in user: john@example.com	User profile details should be displayed correctly	Profile page loaded with accurate user information	Pass
2.2	Edit user profile with valid details	Name: John Doe, Email: john@example.com	Profile details should be updated successfully	User profile updated; changes reflected on subsequent login	Pass
2.3	Change password with valid current password	Current Password: 12345, New Password: newPass123	Password should be changed successfully	Password change confirmed; user can login with the new password	Pass
2.4	Change password with incorrect current pass	Current Password: wrongPass, New Password: newPass123	Error message: "Incorrect current password"	Error message displayed; password remains unchanged	Pass

3. Book Management Module

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks	Pass/Fail
3.1	Add a new book with valid details	Title: "Book A", Author: "Author A", ISBN: "123456789"	Book should be added to the system successfully	New book visible in the book list	Pass
3.2	Add a new book with missing required fields	Title: "", Author: "Author A", ISBN: "123456789"	Error message: "Title is required"	Error validation message displayed	Pass
3.3	Update book details with valid details	Book ID: 1, Title: "Updated Title"	Book details should be updated successfully	Title updated in the database; visible on search	Pass
3.4	Delete a book with valid book ID	Book ID: 1	Book should be deleted successfully	Book no longer present in the book list	Pass
3.5	Search books by title	Search Query: "Book A"	All books with title "Book A" should be displayed	Accurate results displayed	Pass
3.6	Search books by non-existing title	Search Query: "Non-existing"	No books should be found	Empty result displayed	Pass

4. Book Issue/Return Module

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks	Pass/Fail
4.1	Issue a book with valid details	Book ID: 1, Student ID: 1001	Book should be issued successfully	Book status updated to "Issued"	Pass
4.2	Issue a book that is already issued	Book ID: 1, Student ID: 1002	Error message: "Book is already issued"	Duplicate issue attempt blocked; validation message shown	Pass
4.3	Return a book with valid issue ID	Issue ID: 1	Book should be marked as returned	Book status updated to "Returned"	Pass
4.4	Issue a book to non-existing student ID	Book ID: 1, Student ID: 9999	Error message: "Invalid Student ID"	Error validation works correctly	Pass
4.5	View all issued books	Logged in as Admin	List of all issued books should be displayed	Accurate issued book list displayed	Pass

5. Category Management Module

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks	Pass/Fail
5.1	Add a new category with valid details	Category Name: "Fiction"	Category should be added successfully	New category visible in the category list	Pass
5.2	Add a category with missing category name	Category Name: ""	Error message: "Category name is required"	Validation message displayed	Pass
5.3	Edit a category name with valid details	Category ID: 1, New Name: "Science Fiction"	Category name should be updated successfully	Name changed; reflected in book categories	Pass
5.4	Delete a category with valid category ID	Category ID: 1	Category should be deleted successfully	Category removed from list	Pass
5.5	View all categories	Logged in as Admin	List of all categories should be displayed	All categories accurately shown	Pass

Chapter No 6 Conclusion & Future Scope

➤ Conclusion

A library management system is a valuable tool for libraries of all sizes. It automates tasks, improves accuracy, enhances accessibility, and provides data for better decision-making. By choosing the right system, providing training, and maintaining it regularly, libraries can reap the benefits of improved efficiency and cost savings.

➤ Future Scope

To enhance "THE LIBRARY MANAGEMENT SYSTEM," several improvements can be implemented:

1. Two-Factor Authentication
2. Feedback System
3. Automated Reporting
4. Payment System for Fine Payoff

Chapter No 7 Bibliography & Reference

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