

LIBRARY MANAGEMENT SYSTEM

PROJECT Report

Submitted by

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ABSTRACT

Library Management System is a systematic way of managing the movement of books and maintaining students' data for library. The project is developed in PHP, which mainly focuses on three components – Student, Book issue, and Book return. It consists of several modules for adding new student (admission), student list, adding new book, book list, issuing book, issue list, updating stock, returning book and return list.

This “Library Management System” project provides us with all the necessary information about how library is managed. We can create new book records and retrieve information about books that are currently available in the library. We can also issue books to students and keep track of their progress, as well as check how many books have been distributed and how much stock of books is available in the library. We can also keep a track of the fine for students who return the provided books after the due date with this initiative.

The emphasis has been on presenting information in a simple and understandable manner throughout the project. The project is extremely beneficial to individuals interested in learning more about Library Management Systems.

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1. ISSUED LIST

ISSUED LIST

Show: entries Search:

S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date
1	1000	Madhuja Sinha	Gitanjali	BK2102	03-01-2022
2	1002	Soham Das	Train to Pakistan	BK2103	10-01-2022
3	1001	Ayushi Chouhan	Train to Pakistan	BK2103	27-01-2022
4	1002	Soham Das	In Custody	BK2104	15-12-2021
5	1003	Sithara Swamynathan	The Story Of My Experiments With The Truth	BK2105	09-11-2021
6	1003	Sithara Swamynathan	The Catcher in the Rye	BK2119	17-04-2022

The ISSUED BOOK table is found on the index page of the project. It consists of the list of students who issued any book and did not return it yet.

The main columns of this table include admission no., student's name, issued book's name with code and the date of book issue.

There is a search bar present in the table to easily search for values by typing in the provided box.

2. STUDENT LIST

 **STUDENT LIST**

Show: entries + Add Student

Search:

S.No.	Image	Student Name	Admission No.	Class	Mobile	Action
1		Madhuja Sinha	1000	Twelve	9475861254	
2		Ayushi Chouhan	1001	Ten	8457912458	
3		Soham Das	1002	Eleven	7841258946	
4		Sithara Swamynathan	1003	Five	9774486124	

The STUDENT LIST table is used to display some selected details (i.e., student's image, name, admission no., class and mobile number) about all the students enrolled for library. Complete details of any particular student can be viewed by clicking on the “eye” icon present under the Action column.

There is a search bar present in the table to easily search for values by typing in the provided box.

3. BOOK LIST

 **BOOK LIST**

Show: entries + Add Book

Search:

S.No.	Book Name	Book Code	Author	Publisher	Stock
1	The Guide	BK2100	R.K. Narayan	ABCD Publications	5
2	God of Small Things	BK2101	Arundhati Roy	XYZ Publications	15
3	Gitanjali	BK2102	Rabindranath Tagore	PQRS Publications	5
4	Train to Pakistan	BK2103	Khushwant Singh	AFCBFGUJ Publishers	5
5	In Custody	BK2104	Anita Desai	ASCDF Publication	17
6	The Story Of My Experiments With The Truth	BK2105	Mahatma Gandhi	PQRSdsfvb Publications	9
7	A Fine Balance	BK2106	Rohinton Mistry	PQRS Publications	6
8	A Suitable Boy	BK2107	Vikram Seth	PQRS Publications	15
9	The Interpreter Of Maladies	BK2108	Jhumpa Lahiri	PQRS Publications	8
10	The Glass Palace	BK2109	Amitav Ghosh	PQRSdsfvb Publications	17
11	The Private Life of an Indian Prince	BK2110	Mulk Raj Anand	ABCD Publications	25
12	Midnights Children	BK2111	Salman Rushdie	AFCBFGUJ Publishers	12
13	Maximum City	BK2112	Suketu Mehta	PQRSdsfvb Publications	30
14	The Autobiography of an Unknown Indian	BK2113	Nirad C. Chaudhuri	ABCD Publications	10
15	In Search of Lost Time	BK2114	Marcel Proust	SRMIST	10
16	Ulysses	BK2115	James Joyce	ADSCVFGF Publication	4
17	Don Quixote	BK2116	Miguel de Cervantes	sfcc Publ	14
18	The Great Gatsby	BK2117	F. Scott Fitzgerald	ABXCD SXCV	20
19	War and Peace	BK2118	Leo Tolstoy	PQRS Publications	17
20	The Catcher in the Rye	BK2119	J D Salinger	ABCD Publications	21
21	Ulysses	BK2120	James Joyce	PQRS Publications	18

The BOOK LIST table is used to display the entire details (i.e., book name, code, author, publisher and stock) of all the books that are present in the library. There is a search bar present in the table to easily search for values by typing in the provided box.

4. BOOK ISSUE LIST

ISSUE LIST						
S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date	Status
1	1003	Sithara Swamynathan	God of Small Things	BK2101	25-02-2022	Returned
2	1000	Madhuja Sinha	Gitanjali	BK2102	03-01-2022	
3	1002	Soham Das	Train to Pakistan	BK2103	10-01-2022	
4	1001	Ayushi Chouhan	Train to Pakistan	BK2103	27-01-2022	
5	1002	Soham Das	In Custody	BK2104	15-12-2021	
6	1003	Sithara Swamynathan	The Story Of My Experiments With The Truth	BK2105	09-11-2021	
7	1000	Madhuja Sinha	The Private Life of an Indian Prince	BK2110	27-01-2022	Returned
8	1000	Madhuja Sinha	In Search of Lost Time	BK2114	27-12-2021	Returned
9	1001	Ayushi Chouhan	Don Quixote	BK2116	08-02-2022	Returned
10	1003	Sithara Swamynathan	The Catcher in the Rye	BK2119	17-04-2022	
11	1001	Ayushi Chouhan	Ulysses	BK2120	15-02-2022	Returned

The ISSUE LIST table is used to display the list of all the books that have been issued from the library. It includes book name with code along with the admission no. and name of the student who issued the particular book. Also, the status of the book has been displayed for better understanding of whether the book has been returned by the student or not.

There is a search bar present in the table to easily search for values by typing in the provided box.

5. BOOK RETURN LIST

RETURN LIST							
S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date	Return Date	Fine
1	1003	Sithara Swamynathan	God of Small Things	BK2101	25-02-2022	14-03-2022	0
2	1000	Madhuja Sinha	The Private Life of an Indian Prince	BK2110	27-01-2022	14-03-2022	48
3	1000	Madhuja Sinha	In Search of Lost Time	BK2114	27-12-2021	27-01-2022	3
4	1001	Ayushi Chouhan	Don Quixote	BK2116	08-02-2022	12-04-2022	99
5	1001	Ayushi Chouhan	Ulysses	BK2120	15-02-2022	17-04-2022	93

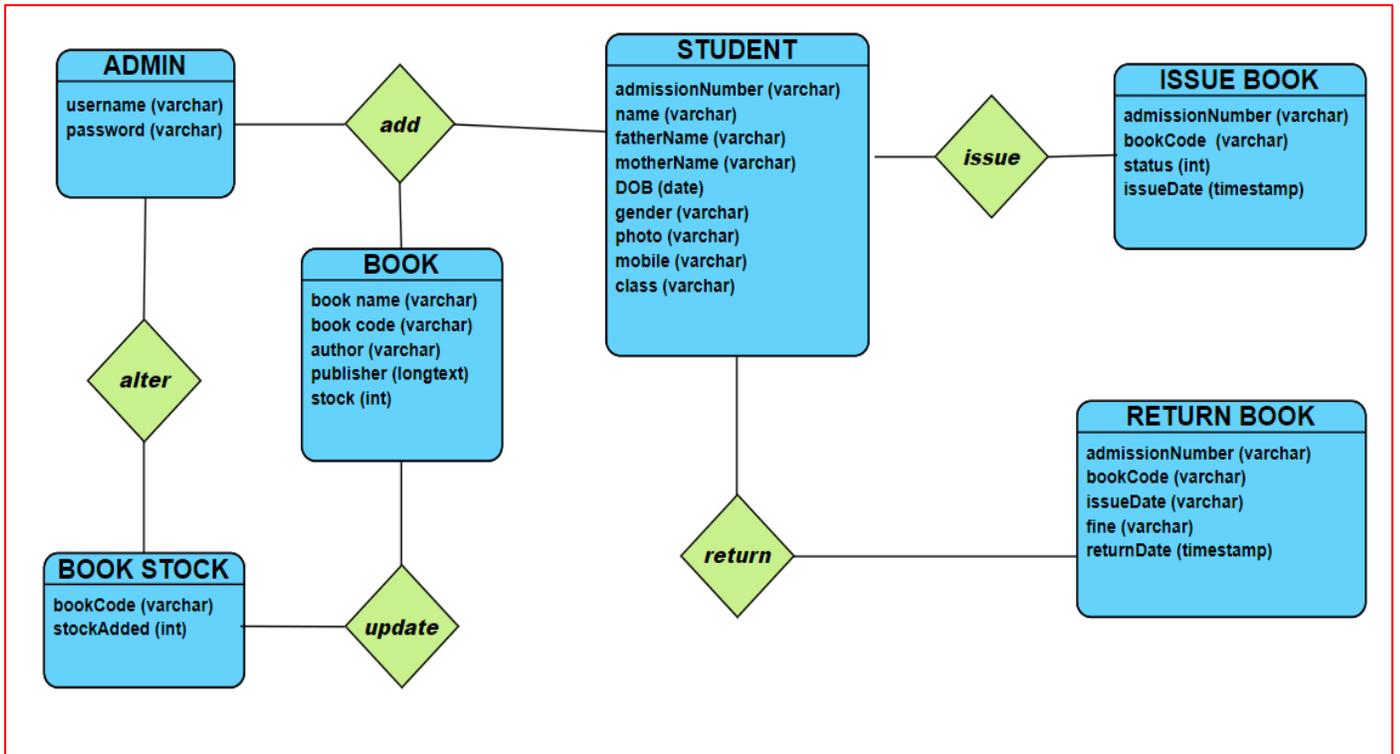
The RETURN LIST table is used to display the list of all the books that were issued from the library and have been returned back to the library by the student. It includes book name with code along with the admission no. and name of the student who issued the particular book. Also, the return date of the book has been displayed along with the fine (incase a student returned the book after 30 days of issuing it).

There is a search bar present in the table to easily search for values by typing in the provided box.

LIST OF FIGURES

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1. ER Diagram



2. Form Format

NEW STUDENT

Admission No. :

Student Name :

Father's Name :

Mother's Name :

Date of Birth :

Gender : Male Female Other

Student's Photo : No file chosen

Mobile :

Admission Class :

3. Table Format

STUDENT LIST

Show: entries Search:

S.No.	Image	Student Name	Admission No.	Class	Mobile	Action
1		Madhuja Sinha	1000	Twelve	9475861254	
2		Ayushi Chouhan	1001	Ten	8457912458	
3		Soham Das	1002	Eleven	7841258946	
4		Sithara Swamynathan	1003	Five	9774486124	

LIST OF ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
ER	Entity Relationship
SQL	Structured Query Language
No.	Number
HTML	Hypertext Markup Language
CSS	Cascading Style Sheets
JS	JavaScript
PHP	Hypertext Preprocessor
Db	Database
adm_no	Admission number
AJAX	Asynchronous JavaScript And XML
int	Integer
varchar	Variable character

Chapter -1

INTRODUCTION

A library management system is software that is designed to manage all the functions of a library. It helps librarian to maintain the database of new books and the books that are borrowed by members along with their due dates.

This system completely automates all your library's activities. The best way to maintain, organize, and handle countless books systematically is to implement a library management system software.

A library management system is used to maintain library records. It tracks the records of the number of books in the library, how many books are issued, or how many books have been returned or renewed or late fine charges, etc.

Purpose :- Designing a system to provide automation to library.

Technology Used :-

- Frontend – HTML, CSS, JS
- Backend – PHP, Mysqli, Wamp Server

(Functionalities)

A “librarymanagement” database has been created.

1. Login Page

This page consists of entering username and password to login into the system. There is a condition to **validate** the correct username and password that has been mentioned in the “user” table. Else if any credential is wrong, a message “* Invalid Username or Password” is printed on the screen.

2. Dashboard

This page mainly consists of displaying the different components of the project in a precised manner. The “**mysqli_num_rows**” method has been used to display the **count** of rows for total number of students, books, books issued and books returned. Also, a dropdown menu has been included for convenience in navigation between the pages.

3. New Student (admission)

This page mainly consists of a form to enter student details into the “student” table. The form consists of different input fields such as **text, number, date, radio and file**. Other than this, **select** tag has been used to create a dropdown list. A submit button has been used to submit the form. An **insert** query is executed to add data into the

table and also an **update** query is executed to increment adm_no in “admission_number” table. After submitting the form, an **alert** box appears on top of the screen to ensure the admin that data has been recorded successfully.

4. Student List

This page is designed to display some selected columns of students from the “student” table. The **select** query is executed to show the details. An add student **button** is also included to navigate to the new student page. A **search** bar is added for ease in **searching** for specific data. A **filter** bar has been designed using **select** tag to filter data according to the number of entries given. An eye icon is included to view the complete details of the selected student.

5. Student Details

This page uses **select *** query to display the entire details of a student.

6. New Book (introducing new book into library)

This page mainly consists of a form to enter book details into the “book” table. The form consists of input fields like **text and number**. A submit button has been used to submit the form. An **insert** query is executed to add data into the table and also an **update** query is executed to increment bookcode in “book_code” table. After submitting the form, an **alert** box appears on top of the screen to ensure the admin that data has been recorded successfully.

7. Book List

This page is designed to display the details of book from the “book” table. The **select** query is executed to show the details. An add book **button** is also included to navigate to the new book page. A **search** bar is added for ease in **searching** for specific data. A **filter** bar has been designed using **select** tag to filter data according to the number of entries given.

8. Stock Update

This page is concerned with updating the number of a specific book into the stock column of “book” table. To perform this, **update** query has been used. After submitting the form, an **alert** box appears on top of the screen to ensure the admin that data has been recorded successfully.

9. Issue Book

This page consists of a form to **insert** book issue log into “issue_book” table. A pinch of AJAX has been utilized for auto-filling of certain input fields upon selection of book name. After submitting the form, an **alert** box appears on top of the screen to ensure the admin that data has been recorded successfully.

10. Issue List

This page is designed to display the book issue log from the “issue” table. The **select** query is executed to show the details. A **search** bar is added for ease in **searching** for specific data. A **filter** bar has been designed using **select** tag to filter data according to the number of entries given.

11. Return Book

This page consists of a form to enter the admission number for displaying details of the assigned student and the list of books issued by him/her (which has not been returned back to library). Clicking on return takes to return_details page for assurance of the details to be checked before submission.

12. Return Details

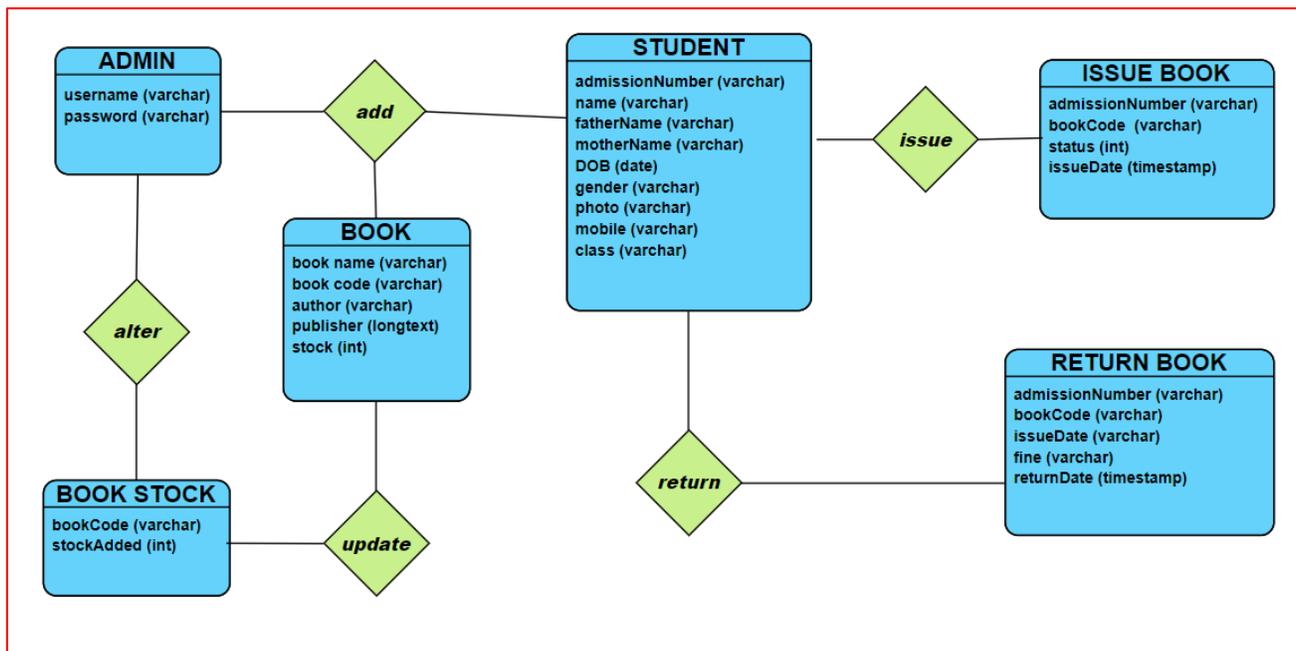
This page consists of a form in which student details as well as details of the book to be returned is displayed. Fine is calculated according to the expected return date (30 days from issue date). Each day exceeded from the expected return date costs Rs 3 as fine. After submitting the form, an **alert** box appears on top of the screen to ensure the admin that data has been recorded successfully.

13. Return List

This page is designed to display the book return log from the “return” table. The **select** query is executed to show the details. A **search** bar is added for ease in **searching** for specific data. A **filter** bar has been designed using **select** tag to filter data according to the number of entries given.

Chapter - 2

ENTITY RELATIONSHIP DIAGRAM



The above ER Diagram states the relationship between all the modules of the project “Library Management System”.

The project starts with the ADMIN login which contains two inputs – Username (varchar) and Password (varchar). The main actor for the entire project is the admin. ADMIN is responsible for adding books to the library list.

This BOOK includes the following details – Book name (varchar), Book code (varchar), Author (varchar), Publisher (varchar) and Stock (int).

Also, the ADMIN alters (updates) the stock of the book which takes in the following entries for updation – Book code (varchar) and Stock (int).

When the stock of any book is updated, it is reflected in the “book” database table i.e., the stock of the book in the “book” table gets updated.

ADMIN will also add students who can avail library services. The details of a STUDENT include – Admission number (varchar), Name (varchar), Father’s name (varchar), Mother’s name (varchar), DOB (date), Gender (varchar), Photo (varchar), Mobile (varchar) and Class (varchar).

STUDENT can issue book. ISSUE BOOK includes the following details to be stored – Admission number (varchar), Book code (varchar), Status (int) and Issue date (timestamp).

STUDENT can return book. RETURN BOOK includes the following details to be stored – Admission number (varchar), Book code (varchar), Issue date (varchar), Fine (int) and Return date (timestamp).

Chapter - 3

NORMALIZED DATABASE TABLE

1. user

id	UserID	Password	doc
1	Madhuja01	user1	2022-01-28 00:04:29

Contains the list of admin credentials who can access the admin panel for Library Management System.

2. admission_number

id	adm_no
1	1004

Contains the current admission number for new student so that no two students can be allocated the same admission number. This admission number is auto-filled in the “new_student” page and cannot be manipulated.

3. student

id	admission_no	studentname	fathename	mothername	gender	dob	mobile	image	class	doc
1	1000	Madhuja Sinha	Manoj Sinha	Sushma Sinha	female	2000-12-01	9475861254	1000.jpg	Twelve	2022-01-26 12:19:46
2	1001	Ayushi Chouhan	Awadhesh Chouhan	Bindu Singh	female	2001-04-01	8457912458	1001.jpg	Ten	2022-01-26 12:22:38
3	1002	Soham Das	Shekhar Das	Anita Das	male	2001-09-26	7841258946	1002.jpg	Eleven	2022-03-14 12:25:32
4	1003	Sithara Swamynathan	Hemant Swamynathan	Savita Swamynathan	female	2001-09-08	9774486124	1003.jpg	Five	2022-03-14 12:26:30

Contains the details of all students eligible to avail library services.

4. book_code

id	bookcode	doc
1	2121	2022-03-14 00:00:00

Contains the current book code for new book so that no two books can be allocated the same book code. This book code preceded by “BK” is auto-filled in the “new_book” page and cannot be manipulated.

5. book

id	bookname	bookcode	author	publisher	stock	doc
1	The Guide	BK2100	R.K. Narayan	ABCD Publications	5	2022-01-26 22:42:39
2	God of Small Things	BK2101	Arundhati Roy	XYZ Publications	15	2022-01-26 22:43:45
3	Gitanjali	BK2102	Rabindranath Tagore	PQRS Publications	5	2022-01-26 22:44:26
4	Train to Pakistan	BK2103	Khushwant Singh	AFCBFGUJ Publishers	5	2022-01-26 22:46:04
5	In Custody	BK2104	Anita Desai	ASCDF Publication	17	2022-01-26 22:46:52
6	The Story Of My Experiments With The Truth	BK2105	Mahatma Gandhi	PQRSdsfvb Publications	9	2022-01-26 22:47:55
7	A Fine Balance	BK2106	Rohinton Mistry	PQRS Publications	6	2022-01-26 22:50:39
9	A Suitable Boy	BK2107	Vikram Seth	PQRS Publications	15	2022-01-26 22:51:43
10	The Interpreter Of Maladies	BK2108	Jhumpa Lahiri	PQRS Publications	8	2022-01-26 22:54:09
11	The Glass Palace	BK2109	Amitav Ghosh	PQRSdsfvb Publications	17	2022-01-26 22:55:07
12	The Private Life of an Indian Prince	BK2110	Mulk Raj Anand	ABCD Publications	25	2022-01-26 22:55:44
13	Midnights Children	BK2111	Salman Rushdie	AFCBFGUJ Publishers	12	2022-01-26 22:56:33
14	Maximum City	BK2112	Suketu Mehta	PQRSdsfvb Publications	30	2022-01-26 22:57:12
15	The Autobiography of an Unknown Indian	BK2113	Nirad C. Chaudhuri	ABCD Publications	10	2022-01-26 22:57:55
16	In Search of Lost Time	BK2114	Marcel Proust	SRMIST	10	2022-03-14 12:48:58
17	Ulysses	BK2115	James Joyce	ADSCVGFPG Publication	4	2022-03-14 12:52:57
18	Don Quixote	BK2116	Miguel de Cervantes	sfcc Publ	14	2022-03-14 12:54:57
19	The Great Gatsby	BK2117	F. Scott Fitzgerald	ABXCD SXCV	20	2022-03-14 12:55:42
22	War and Peace	BK2118	Leo Tolstoy	PQRS Publications	17	2022-03-14 21:22:48
23	The Catcher in the Rye	BK2119	J D Salinger	ABCD Publications	21	2022-04-12 10:24:46
25	Ulysses	BK2120	James Joyce	PQRS Publications	18	2022-04-17 18:22:25

Contains the details of all books present in the library.

6. issue

id	admission_no	bookcode	status	doc
1	1000	BK2102	1	2022-01-03 00:42:04
2	1003	BK2105	1	2021-11-09 00:58:31
3	1002	BK2103	1	2022-01-10 00:59:33
4	1000	BK2114	0	2021-12-27 01:00:11
5	1002	BK2104	1	2021-12-15 01:00:33
6	1000	BK2110	0	2022-01-27 01:00:47
7	1001	BK2103	1	2022-01-27 01:16:34
9	1003	BK2101	0	2022-02-25 12:31:34
10	1001	BK2116	0	2022-02-08 10:28:27
11	1003	BK2119	1	2022-04-17 18:24:00
12	1001	BK2120	0	2022-02-15 18:24:57

Contains the list of all the books issued by the students. It consists of only the admission number of the student along with the book code for the issued book. With the help of this detail, the complete detail of student as well as book can be deduced easily.

Also, the status column can have two values – 1 or 0. 1 suggests that the book has been issued and 0 suggests the book has been return back to the library.

Timestamp is used to keep track of the date of issuing book which can be used further for calculating fine at the time of returning.

7. return

id	admission_no	bookcode	issue_date	fine	doc
2	1000	BK2114	27-12-2021	3	2022-01-27 12:45:11
3	1000	BK2110	27-01-2022	48	2022-03-14 12:07:24
4	1003	BK2101	25-02-2022	0	2022-03-14 12:34:35
5	1001	BK2116	08-02-2022	99	2022-04-12 10:30:14
6	1001	BK2120	15-02-2022	93	2022-04-17 18:26:52

Contains the list of all the books returned by the students. It consists of only the admission number of the student along with the book code for the returned book. With the help of this detail, the complete detail of student as well as book can be deduced easily.

Also, timestamp is used to keep track of the date of returning book which can be used further for calculating fine.

The fine column is included which is calculated with the help of timestamp present in “issue” table and “return” table. After 30 days of issuing, each extended day results in a fine of Rs 3.

Chapter - 4

SQL QUERIES AND RESULTS

1. Index Page (Dashboard)

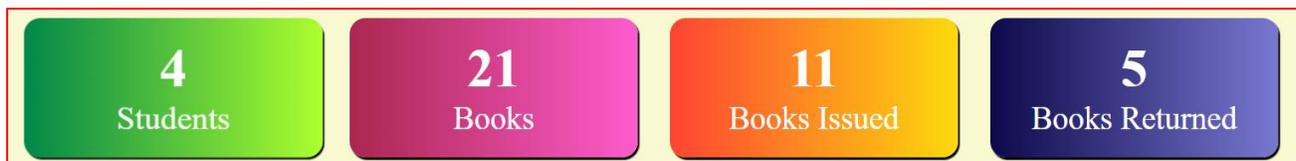
- To get count of rows from the respective Db tables.

```
$row_count1="SELECT 'admission_no' FROM `student`";  
$run1=mysqli_query($con, $row_count1);  
$row1=mysqli_num_rows($run1);
```

```
$row_count2="SELECT 'bookcode' FROM `book`";  
$run2=mysqli_query($con, $row_count2);  
$row2=mysqli_num_rows($run2);
```

```
$row_count3="SELECT 'admission_no' FROM `issue`";  
$run3=mysqli_query($con, $row_count3);  
$row3=mysqli_num_rows($run3);
```

```
$row_count4="SELECT 'admission_no' FROM `return`";  
$run4=mysqli_query($con, $row_count4);  
$row4=mysqli_num_rows($run4);
```



- To view the list of students who have issued some book from the library and still has it with them.

```
SELECT  
student.studentname,book.bookname,issue.admission_no,issue.bookcode,issue.doc  
FROM `student`,`book`,`issue` WHERE issue.admission_no=student.admission_no  
AND issue.bookcode=book.bookcode AND issue.status=1
```

ISSUED LIST

Show: entries

Search:

S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date
1	1000	Madhuja Sinha	Gitanjali	BK2102	03-01-2022
2	1002	Soham Das	Train to Pakistan	BK2103	10-01-2022
3	1001	Ayushi Chouhan	Train to Pakistan	BK2103	27-01-2022
4	1002	Soham Das	In Custody	BK2104	15-12-2021
5	1003	Sithara Swamynathan	The Story Of My Experiments With The Truth	BK2105	09-11-2021
6	1003	Sithara Swamynathan	The Catcher in the Rye	BK2119	17-04-2022

2. New Student Page

- Auto-fill current admission number in the input box.

```
SELECT * FROM `admission_number`
```

Admission No. :

- To insert the values from the form to the “student” database table.

```
INSERT INTO
```

```
`student`(`admission_no`,`studentname`,`fathername`,`mothername`,`gender`,`dob`,`mobile`,`image`,`class`)
```

```
VALUES('$adm','$sname','$fname','$mname','$gend','$db','$mb','$img_name','$adm_class')
```

id	admission_no	studentname	fathername	mothername	gender	dob	mobile	image	class	doc
1	1000	Madhuja Sinha	Manoj Sinha	Sushma Sinha	female	2000-12-01	9475861254	1000.jpg	Twelve	2022-01-26 12:19:46
2	1001	Ayushi Chouhan	Awadhesh Chouhan	Bindu Singh	female	2001-04-01	8457912458	1001.jpg	Ten	2022-01-26 12:22:38
3	1002	Soham Das	Shekhar Das	Anita Das	male	2001-09-26	7841258946	1002.jpg	Eleven	2022-03-14 12:25:32
4	1003	Sithara Swamynathan	Hemant Swamynathan	Savita Swamynathan	female	2001-09-08	9774486124	1003.jpg	Five	2022-03-14 12:26:30

- Update admission number (adm_no+1) in the “admission_number” database table.

```
UPDATE `admission_number` SET `adm_no`='$admnum'
```

id	adm_no
1	1004

3. Student List Page

- To display the selected details of students.

```
SELECT admission_no,studentname,image,class,mobile FROM `student`
```

STUDENT LIST

Show: entries + Add Student

Search:

S.No.	Image	Student Name	Admission No.	Class	Mobile	Action
1		Madhuja Sinha	1000	Twelve	9475861254	
2		Ayushi Chouhan	1001	Ten	8457912458	
3		Soham Das	1002	Eleven	7841258946	
4		Sithara Swamynathan	1003	Five	9774486124	

4. Student Details Page

- To show the complete details of any one selected student.

```
SELECT * FROM `student` WHERE admission_no=$adnum
```

STUDENT DETAILS



Student Name :	Admission No. :	Class :
<input type="text" value="Madhuja Sinha"/>	<input type="text" value="1000"/>	<input type="text" value="Twelve"/>
Mobile :	Father's Name :	Mother's Name :
<input type="text" value="9475861254"/>	<input type="text" value="Manoj Sinha"/>	<input type="text" value="Sushma Sinha"/>
Date of Birth :	Gender :	
<input type="text" value="01-12-2000"/>	<input type="text" value="female"/>	

5. New Book Page

- Auto-fill current book code in the input box.

```
SELECT * FROM `book_code`
```

Book Code :

- To insert the values from the form to the “book” database table.

```
INSERT INTO `book`(`bookname`,`bookcode`,`author`,`publisher`,`stock`)
VALUES('$bname','$bcode','$aut','$publish','$stck')
```

id	bookname	bookcode	author	publisher	stock	doc
1	The Guide	BK2100	R.K. Narayan	ABCD Publications	5	2022-01-26 22:42:39
2	God of Small Things	BK2101	Arundhati Roy	XYZ Publications	15	2022-01-26 22:43:45
3	Gitanjali	BK2102	Rabindranath Tagore	PQRS Publications	5	2022-01-26 22:44:26
4	Train to Pakistan	BK2103	Khushwant Singh	AFCBFGUJ Publishers	5	2022-01-26 22:46:04
5	In Custody	BK2104	Anita Desai	ASCDF Publication	17	2022-01-26 22:46:52
6	The Story Of My Experiments With The Truth	BK2105	Mahatma Gandhi	PQRSdsfvb Publications	9	2022-01-26 22:47:55
7	A Fine Balance	BK2106	Rohinton Mistry	PQRS Publications	6	2022-01-26 22:50:39
9	A Suitable Boy	BK2107	Vikram Seth	PQRS Publications	15	2022-01-26 22:51:43
10	The Interpreter Of Maladies	BK2108	Jhumpa Lahiri	PQRS Publications	8	2022-01-26 22:54:09
11	The Glass Palace	BK2109	Amitav Ghosh	PQRSdsfvb Publications	17	2022-01-26 22:55:07
12	The Private Life of an Indian Prince	BK2110	Mulk Raj Anand	ABCD Publications	25	2022-01-26 22:55:44
13	Midnights Children	BK2111	Salman Rushdie	AFCBFGUJ Publishers	12	2022-01-26 22:56:33
14	Maximum City	BK2112	Suketu Mehta	PQRSdsfvb Publications	30	2022-01-26 22:57:12
15	The Autobiography of an Unknown Indian	BK2113	Nirad C. Chaudhuri	ABCD Publications	10	2022-01-26 22:57:55
16	In Search of Lost Time	BK2114	Marcel Proust	SRMIST	10	2022-03-14 12:48:58
17	Ulysses	BK2115	James Joyce	ADSCVGFPG Publication	4	2022-03-14 12:52:57
18	Don Quixote	BK2116	Miguel de Cervantes	sfcc Publ	14	2022-03-14 12:54:57
19	The Great Gatsby	BK2117	F. Scott Fitzgerald	ABXCD SXCV	20	2022-03-14 12:55:42
22	War and Peace	BK2118	Leo Tolstoy	PQRS Publications	17	2022-03-14 21:22:48
23	The Catcher in the Rye	BK2119	J D Salinger	ABCD Publications	21	2022-04-12 10:24:46
25	Ulysses	BK2120	James Joyce	PQRS Publications	18	2022-04-17 18:22:25

- Update book code (bk_code+1) in the “book_code” database table.

```
UPDATE `book_code` SET bookcode='$bknum'
```

id	bookcode	doc
1	2121	2022-03-14 00:00:00

6. Book List Page

- To display all the details of books.

```
SELECT * FROM `book`
```

BOOK LIST					
					+ Add Book
Show:	5	entries	Search: <input type="text" value="Search here"/>		
S.No.	Book Name	Book Code	Author	Publisher	Stock
1	The Guide	BK2100	R.K. Narayan	ABCD Publications	5
2	God of Small Things	BK2101	Arundhati Roy	XYZ Publications	15
3	Gitanjali	BK2102	Rabindranath Tagore	PQRS Publications	5
4	Train to Pakistan	BK2103	Khushwant Singh	AFCBFGUJ Publishers	5
5	In Custody	BK2104	Anita Desai	ASCDF Publication	17
6	The Story Of My Experiments With The Truth	BK2105	Mahatma Gandhi	PQRSdsfvb Publications	9
7	A Fine Balance	BK2106	Rohinton Mistry	PQRS Publications	6
8	A Suitable Boy	BK2107	Vikram Seth	PQRS Publications	15
9	The Interpreter Of Maladies	BK2108	Jhumpa Lahiri	PQRS Publications	8
10	The Glass Palace	BK2109	Amitav Ghosh	PQRSdsfvb Publications	17
11	The Private Life of an Indian Prince	BK2110	Mulk Raj Anand	ABCD Publications	25
12	Midnights Children	BK2111	Salman Rushdie	AFCBFGUJ Publishers	12
13	Maximum City	BK2112	Suketu Mehta	PQRSdsfvb Publications	30
14	The Autobiography of an Unknown Indian	BK2113	Nirad C. Chaudhuri	ABCD Publications	10
15	In Search of Lost Time	BK2114	Marcel Proust	SRMIST	10
16	Ulysses	BK2115	James Joyce	ADSCVGFg Publication	4
17	Don Quixote	BK2116	Miguel de Cervantes	sfc Publi	14
18	The Great Gatsby	BK2117	F. Scott Fitzgerald	ABXCD SXCv	20
19	War and Peace	BK2118	Leo Tolstoy	PQRS Publications	17
20	The Catcher in the Rye	BK2119	J D Salinger	ABCD Publications	21
21	Ulysses	BK2120	James Joyce	PQRS Publications	18

7. Stock Update Page

- Update stock of already present books present in the library. The previously present stock & new stock is added and updated for the respective book in the “book” table.

```
UPDATE `book` SET stock='$updatestock' WHERE bookcode='$bkcode'
```

8. Issue Book Page

- Insert book issuing details.

```
INSERT INTO `issue`(`admission_no`,`bookcode`,`status`) VALUES ($adm_no,'$bkcode','1')
```

id	admission_no	bookcode	status	doc
1	1000	BK2102	1	2022-01-03 00:42:04
2	1003	BK2105	1	2021-11-09 00:58:31
3	1002	BK2103	1	2022-01-10 00:59:33
4	1000	BK2114	0	2021-12-27 01:00:11
5	1002	BK2104	1	2021-12-15 01:00:33
6	1000	BK2110	0	2022-01-27 01:00:47
7	1001	BK2103	1	2022-01-27 01:16:34
9	1003	BK2101	0	2022-02-25 12:31:34
10	1001	BK2116	0	2022-02-08 10:28:27
11	1003	BK2119	1	2022-04-17 18:24:00
12	1001	BK2120	0	2022-02-15 18:24:57

- Get stock of the respective book to be issued.

```
SELECT stock FROM `book` WHERE bookcode='$bkcode'
```

- Update the stock of the issued book (stock-1) in the “book” database table.

```
SELECT stock FROM `book` WHERE bookcode='$bkcode'
```

9. Issue List Page

- To display selected details from “student”, “book” and “issue” database table.

```
SELECT
```

```
student.studentname,book.bookname,issue.admission_no,issue.bookcode,issue.status,i
```

```
ssue.doc FROM `student`,`book`,`issue` WHERE
```

```
issue.admission_no=student.admission_no AND issue.bookcode=book.bookcode
```

ISSUE LIST						
S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date	Status
1	1003	Sithara Swamynathan	God of Small Things	BK2101	25-02-2022	Returned
2	1000	Madhuja Sinha	Gitanjali	BK2102	03-01-2022	
3	1002	Soham Das	Train to Pakistan	BK2103	10-01-2022	
4	1001	Ayushi Chouhan	Train to Pakistan	BK2103	27-01-2022	
5	1002	Soham Das	In Custody	BK2104	15-12-2021	
6	1003	Sithara Swamynathan	The Story Of My Experiments With The Truth	BK2105	09-11-2021	
7	1000	Madhuja Sinha	The Private Life of an Indian Prince	BK2110	27-01-2022	Returned
8	1000	Madhuja Sinha	In Search of Lost Time	BK2114	27-12-2021	Returned
9	1001	Ayushi Chouhan	Don Quixote	BK2116	08-02-2022	Returned
10	1003	Sithara Swamynathan	The Catcher in the Rye	BK2119	17-04-2022	
11	1001	Ayushi Chouhan	Ulysses	BK2120	15-02-2022	Returned

10. Return Book Page

- Insert book returning details.

```
INSERT INTO `return`(`admission_no`,`bookcode`,`issue_date`,`fine`) VALUES ($adm_no,'$bkcode','$idate','$fn')
```

id	admission_no	bookcode	issue_date	fine	doc
2	1000	BK2114	27-12-2021	3	2022-01-27 12:45:11
3	1000	BK2110	27-01-2022	48	2022-03-14 12:07:24
4	1003	BK2101	25-02-2022	0	2022-03-14 12:34:35
5	1001	BK2116	08-02-2022	99	2022-04-12 10:30:14
6	1001	BK2120	15-02-2022	93	2022-04-17 18:26:52

- Get stock of the book to be returned.

```
SELECT stock FROM `book` WHERE bookcode='$bkcode'
```

- Update the stock of the returned book (stock+1) in the “book” database table.

```
UPDATE `book` SET stock='$stnumber' WHERE bookcode='$bkcode'
```

- Update the status of the returned book in “issue” database table as “0” to indicate that the book has been returned.

```
UPDATE `issue` SET status='0' WHERE bookcode='$bkcode'
```

11. Return List page

- To display selected details from “student”, “book” and “return” database table.

```
SELECT
```

```
student.studentname,book.bookname,return.admission_no,return.bookcode,return.issue_date,return.fine,return.doc FROM `student`,`book`,`return` WHERE return.admission_no=student.admission_no AND return.bookcode=book.bookcode
```

RETURN LIST							
S.No.	Admission No.	Student Name	Book Name	Book Code	Issue Date	Return Date	Fine
1	1003	Sithara Swamynathan	God of Small Things	BK2101	25-02-2022	14-03-2022	0
2	1000	Madhuja Sinha	The Private Life of an Indian Prince	BK2110	27-01-2022	14-03-2022	48
3	1000	Madhuja Sinha	In Search of Lost Time	BK2114	27-12-2021	27-01-2022	3
4	1001	Ayushi Chouhan	Don Quixote	BK2116	08-02-2022	12-04-2022	99
5	1001	Ayushi Chouhan	Ulysses	BK2120	15-02-2022	17-04-2022	93

Chapter – 5

CONCLUSION AND FUTURE WORK

This project, Library Management System is a fully computerized version of library. The application is developed using HTML, CSS and JS for Front end along with PHP and Mysqli for Back end in Windows environment.

The project has been computed successfully and was also tested successfully by taking several test cases in regard. It is a user-friendly application and has the required options which can be utilized by the user to perform the desired operation. It takes care of all the requirements of a library and is capable of providing easy and effective storage of information related to users, books and students.

Thus, the project “Library Management System” has been tested for efficient working and can be altered in accordance with the future requirements of the organization.

The future work for Library Management System may include many more features such as :-

- Include student login to this project
- Online lectures can be added by teachers
- Video tutorials can be added by teachers
- Online assignments submission facility can be added
- A feature of group chat where students can discuss various topics of their concern can be added to this project
- Make the application more interactive and more user friendly
- Report generation on monthly basis yearly basis according to demand

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