

# LIBRARY MANAGEMENT SYSTEM

## REVIEW REPORT

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Prepared For

**DATABASE SYSTEMS (CSE2004) – PROJECT COMPONENT**

Submitted To

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(Deemed to be University under section 3 of UGC Act, 1956)

## **Abstract**

A library is a collection of organized information and resources which is made accessible to a well-defined community for borrowing or reference sake. The collection of the resources and information are provided in digital or physical format in either a building/room or in a virtual space or even both. The main aim of this system is to develop a new programmed system that will conveying ever lasting solution to the manual base operations and to make available a channel through which staff can maintain the record easily and customers can access the information about the library at whatever place they might find themselves.

Library Management System allows the user to store the book details and the customer details. The system is strong enough to withstand regressive yearly operations under conditions where the database is maintained and cleared over a certain time of span. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports.

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## 1. INTRODUCTION

The Database Library System is intended to Automate the library activities such as creating a new borrower, giving books to the borrowers, maintaining the details of all the item that were available in the books It is a well organized software solution for a library. It keeps a track of books issued, returned and added to the library. This also helps the librarians by providing information such as total copies available each book, list of books that belongs to particular category (short, long loan, reference items, hard copies. Etc).

The main aim of this system is to develop a new programmed system that will conveying ever lasting solution to the manual base operations and to make available a channel through which staff can maintain the record easily and customers can access the information about the library at whatever place they might find themselves. The implementation of the system in the organization will considerably reduce data entry, time and also provide readily calculated reports.

## 2. PROJECT SCOPE

Library Management System different favorable circumstances in itself, for example,

- Technologically advanced system
- spares times
- simple to look after records
- records are kept up in paperless mode, which makes it all the more simple to keep up
- It gives free of cost training to its clients .
- It is a low cost system
- Calculation of fines have turned out to be simple. The product naturally calculates fines utilizing due dates.
- After sale services of this product is additionally acknowledging and it gives 24\*7 help administrations.
- It is an all around perceived programming and structured by universal library standards.

## 3. LITERATURE REVIEW

A Library Management System (LMS) is a tool to help any libraries which are still using the old way to manage their library. The old way like searching for a book using manual work is hassle, fast report generation is not possible, information about issue/return of the books are not properly maintained, no central database can be created as information is not available in database. But by using the LMS, user can overcome all the problems mentioned above. This system can manage all the happenings of the library.

Book transactions including book searching, availability of the book, details and appearance of the book, personal book borrowing history and etc. can be very easily handled by this system. This system is suitable for small to big libraries including medical and legal libraries, colleges, schools, universities, corporate houses and other academic resource centers. However, I would like to focus on LMS for colleges or universities.

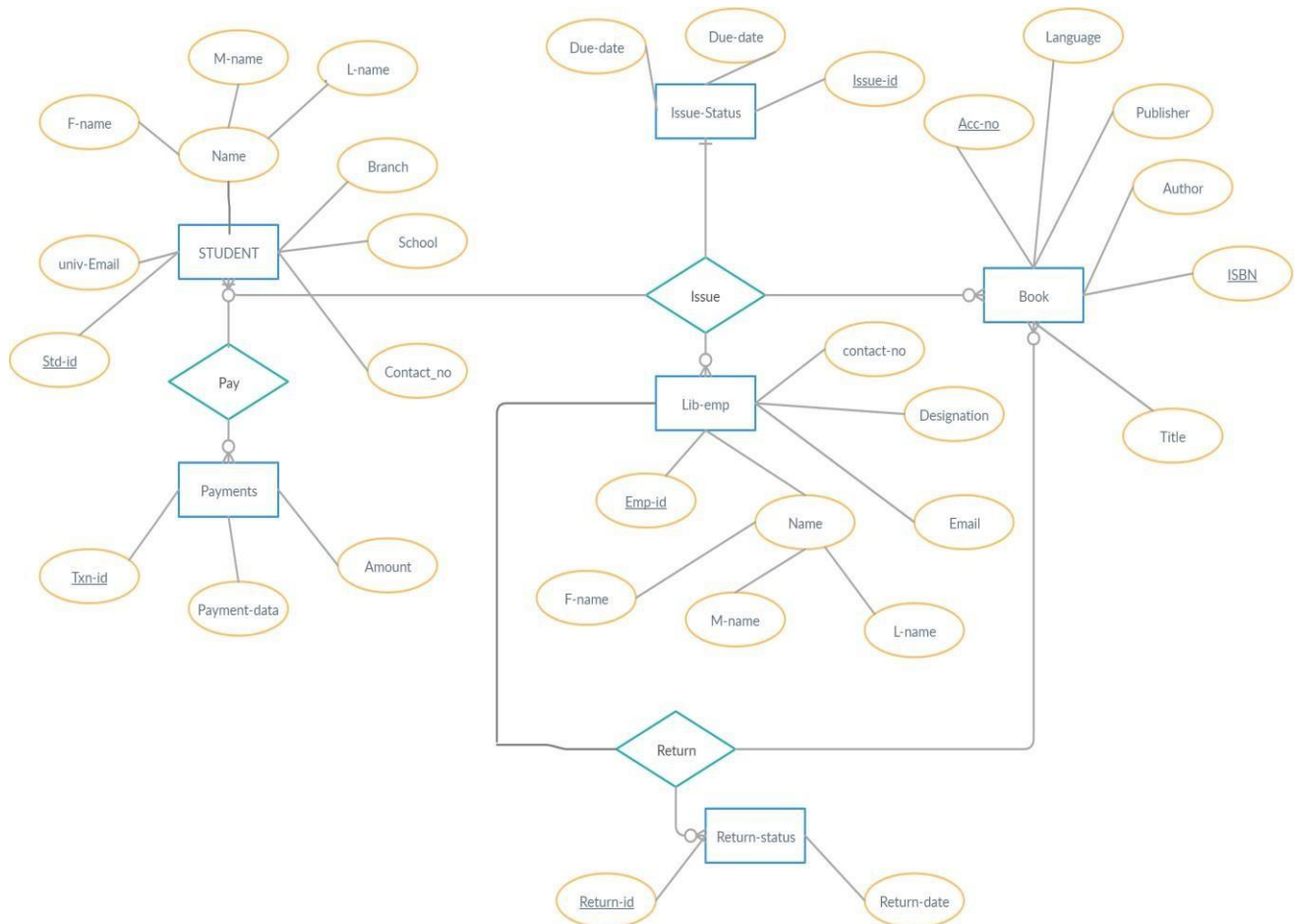
LMS has three modules which are Students Module, Staff Module, and Administration Module. First of all, Students Module allows students to search material by title, name/author, subject, publication, series, ISBN and etc. it also allow students to find recently arrived material. In Staff Module, staff can issue book and receive book with account number of every book. Staff also can fine for books received after due date. Lastly, the administration module help administrator to register/assign shelf and category, change book status, configuration to register users, and database backup/restore. Overall this system can be very helpful and it can make things easier.

## **4. PROJECT RESOURCE REQUIREMENTS**

### **4.1 Software Resource Requirements**

- Software used
  - Front end
    - Java Language
    - Apachi net beans
  - Back end
    - Windows 10
    - sql plus
    - libre office writer

## 5. ER DIAGRAM



## 6. TABLES AND CONSTRAINTS

### TABLE NAME : ADMIN

ATTRIBUTE	DATA TYPE	CONSTRAINT
ADMIN_ID	VARCHAR	PRIMARY KEY,FOREIGN KEY REFER TO BOOK
ADMINNAME	VARCHAR	NOT NULL
PASSWORD	VARCHAR	NOT NULL
EMAIL	VARCHAR	NOT NULL
USERNAME	VARCHAR	PRIMARY KEY

### TABLE NAME :BOOK

ATTRIBUTE	DATA TYPE	CONSTRAINT
BOOKID	VARCHAR	PRIMARY KEY
AUTHOR	VARCHAR	NOT NULL

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ISBN	VARCHAR	NOT NULL
BOOK COPIES	VARCHAR	NOT NULL
PUBLISHER NAME	VARCHAR	NOT NULL
CATEGORIES	VARCHAR	NOT NULL
CALL NUMBER	VARCHAR	NOT NULL

**TABLE NAME : STUDENT**

ATTRIBUTE	DATA TYPE	CONSTRAINT
STD_ID	VARCHAR	PRIMARY KEY
F-NAME	VARCHAR	NOT NULL
M_NAME	VARCHAR	
L_NAME	VARCHAR	NOT NULL
BRANCH	VARCHAR	NOT NULL
SCHOOL	VARCHAR	NOT NULL
UNIV_EMAIL	VARCHAR	UNIQUE , NOT NULL
CONTACT_NO	INT	UNIQUE,CHECK( BETWEEN 1000000000 AND 9999999999)

**TABLE NAME : NEWS****TABLE NAME : ISSUE\_STATUS**

ATTRIBUTE	DATA TYPE	CONSTRAINT
ACC_NO	VARCHAR	FOREIGN KEY , NOT NULL
ISSUE_ID	VARCHAR	PRIMARY KEY
ISSUE_DATE	DATE	NOT NULL
DUE_DATE	DATE	NOT NULL, CHECK(DUE_DATE - ISSUE_DATE=15)
STD_ID	VARCHAR	FOREIGN KEY , NOT NULL
EMP_ID	VARCHAR	FOREIGN KEY , NOT NULL

**TABLE NAME : RETURN\_STATUS**

ATTRIBUTE	DATA TYPE	CONSTRAINT
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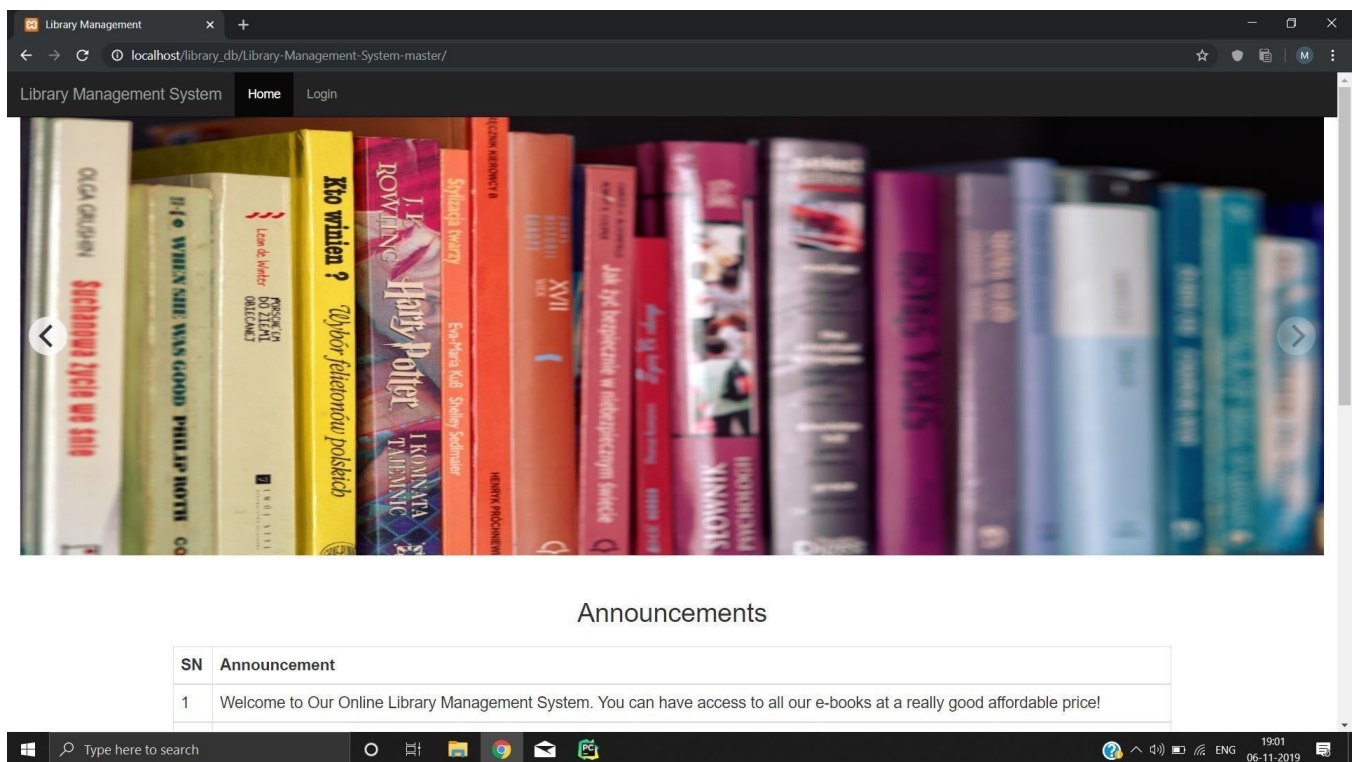
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ACC_NO	VARCHAR	FOREIGN KEY, NOT NULL
RETURN_ID	VARCHAR	PRIMARY KEY
RETURN_DATE	VARCHAR	NOT NULL
STD_ID	VARCHAR	FOREIGN KEY, NOT NULL

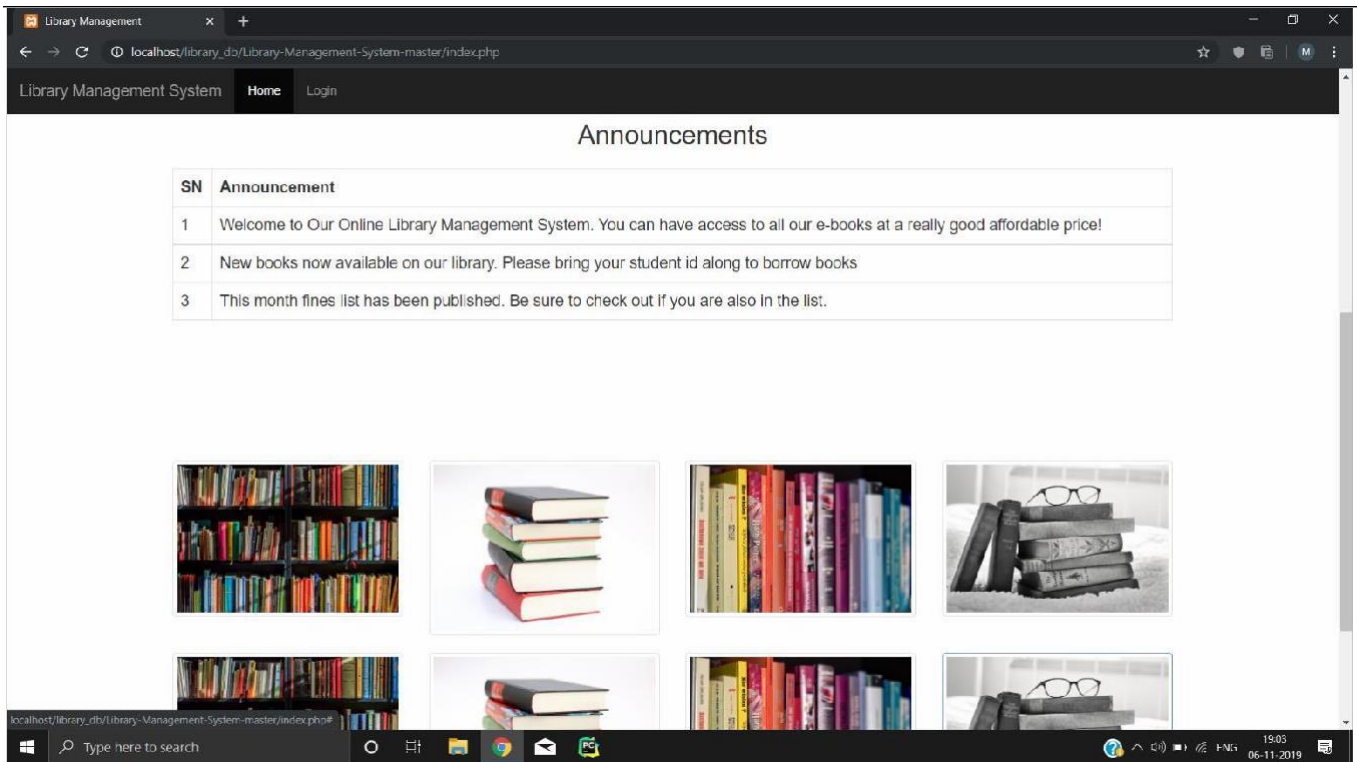
### TABLE NAME : PAYMENTS

ATTRIBUTE	DATA TYPE	CONSTRAINT
TXN_ID	VARCHAR	PRIMARY KEY
AMOUNT	INT	
PAYMENT_DATE	DATE	
STD_ID	VARCHAR	FOREIGN KEY, NOT NULL

## 7. PROJECT OUTPUT

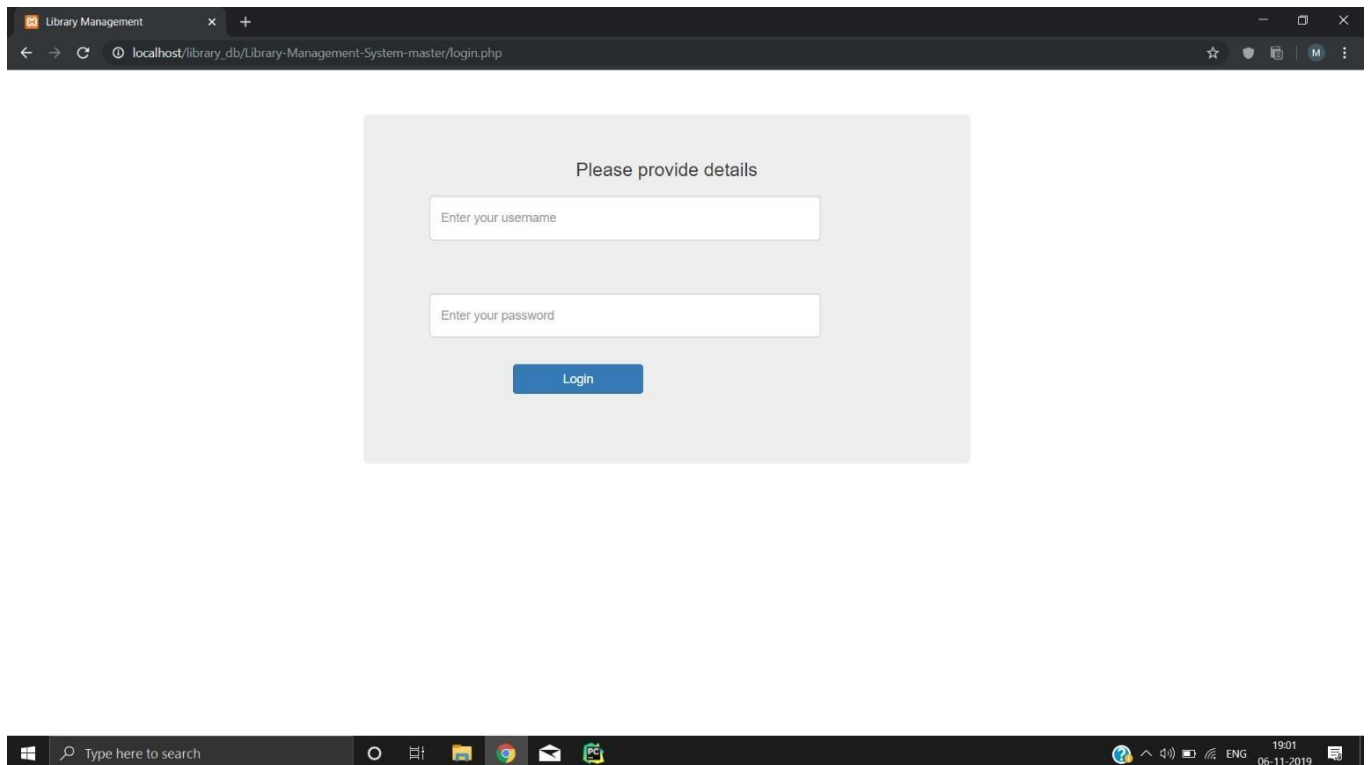


Library management system Home Page(part-1)



Library management system Home Page(part-2)

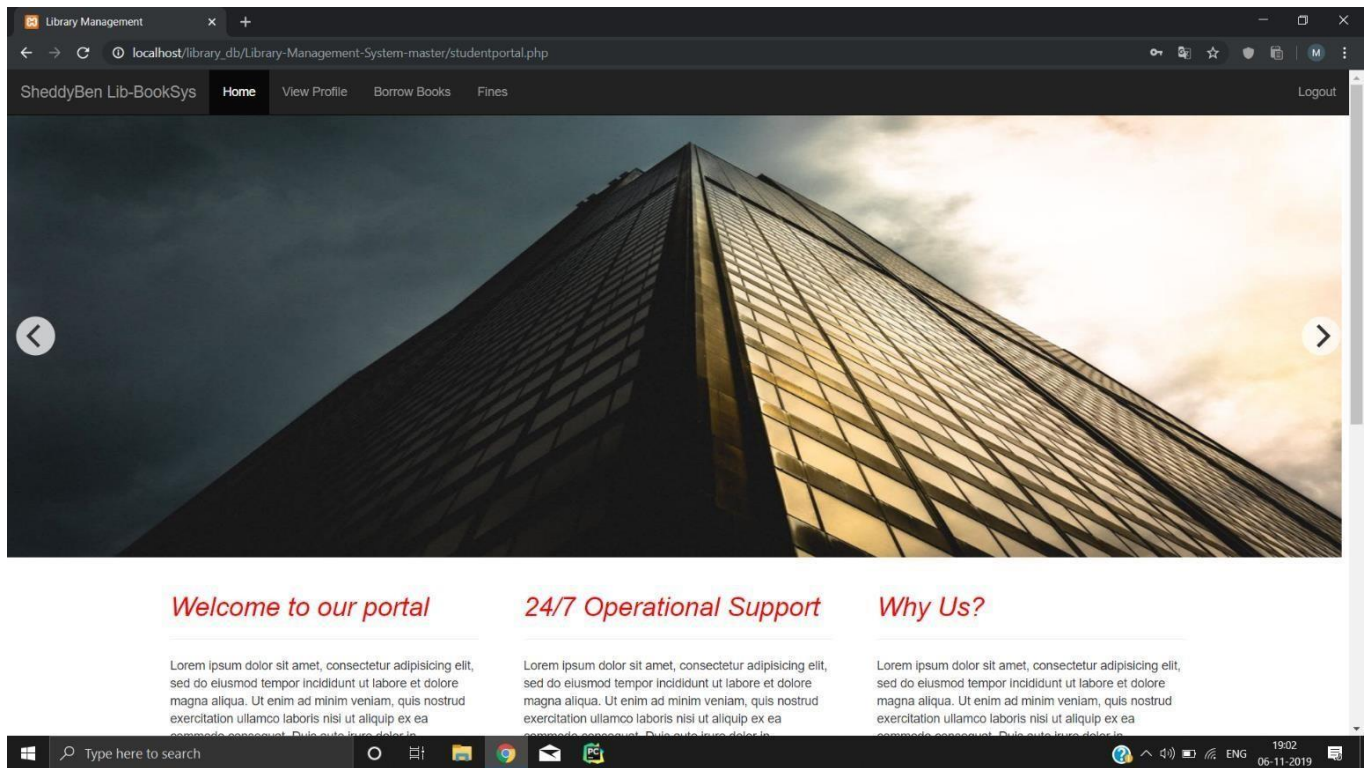
The two figures above describe the home page of our “LIBRARY MANAGEMENT SYSTEM”



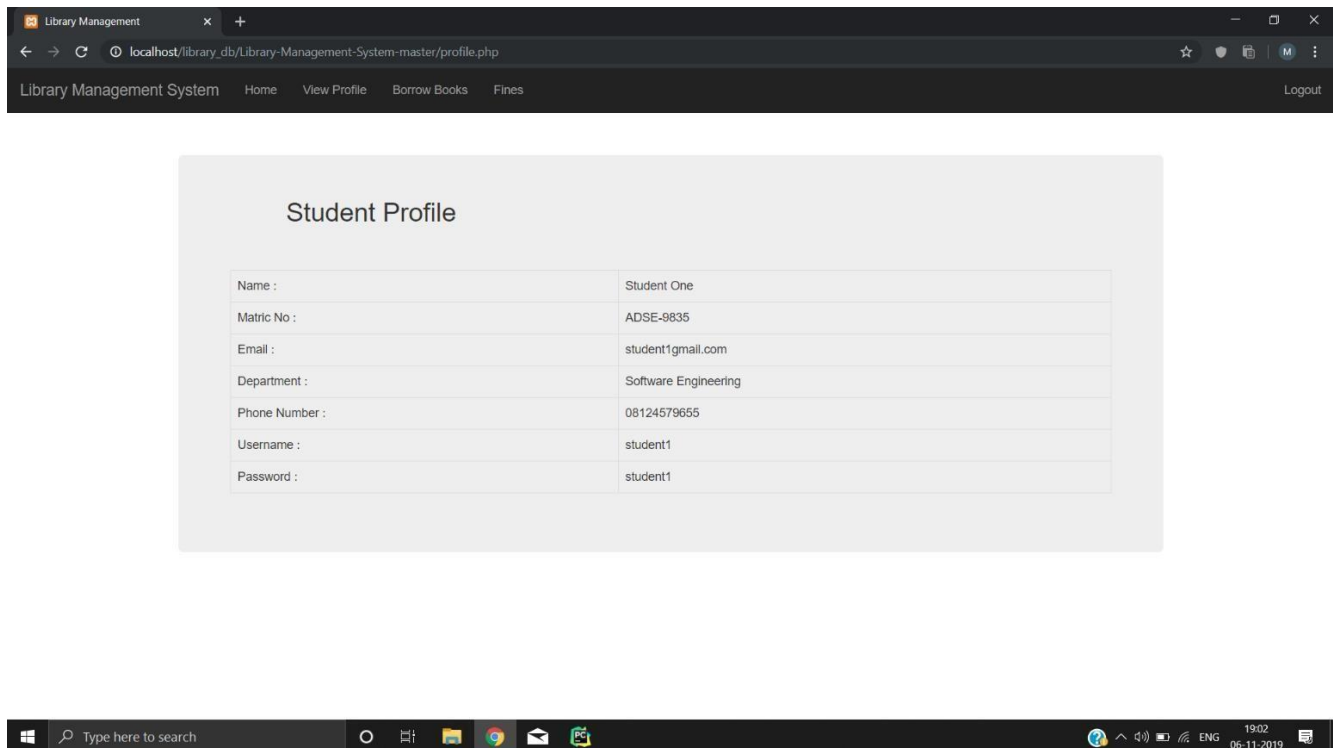
Login Page

The above figure describes the login page.

It validates only registered users to login to access our “LIBRARY MANAGEMENT SYSTEM”

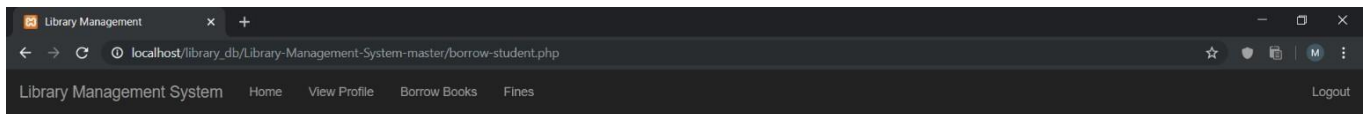


### Student Login



The figure depicts information about student details in database. It can be updated.

## Student login – Student Profile

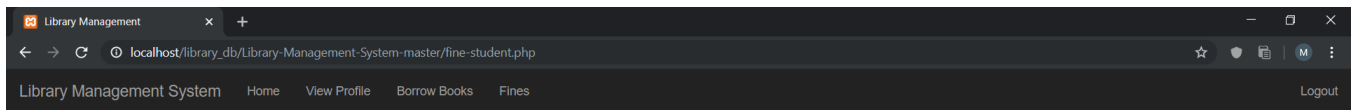


### Borrow Books

ID	BOOK	AVAILABLE	BORROW
1	Advance Databases	YES	<a href="#">Borrow Now</a>
2	Software Engineering	YES	<a href="#">Borrow Now</a>



## Student Login – Borrowed Books Details



### Fines Table

Fines						
ID	Member Name	Matric Number	Book Name	Borrow date	Return Date	Overdue Charges



## Student Login – fines

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The screenshot shows the 'Library Management System' admin interface. The top navigation bar includes 'Home', 'Books', 'Admins', 'Students', 'Borrow books', 'Fines', and 'Logout'. The main content area has a 'Welcome admin' message and a 'Published Announcements' section. This section contains a table with three announcements, each with a 'Delete' button. Below the table is a 'Publish New Announcements' form with a 'SUBMIT' button.

NewsId	Announcement	Delete
1	Welcome to Our Online Library Management System. You can have access to all our e-books at a really good affordable price!	DELETE
2	New books now available on our library. Please bring your student Id along to borrow books	DELETE
3	This month fines list has been published. Be sure to check out if you are also in the list.	DELETE

Publish New Announcements

Announcement

SUBMIT

### Admin Login

The screenshot shows the 'Library Management System' admin interface. The top navigation bar includes 'Home', 'Books', 'Admins', 'Students', 'Borrow books', 'Fines', and 'Logout'. The main content area has a 'Books Table' section. This section contains a table with two books, each with a 'Delete' button. Above the table is an 'Add Book' button.

Books Table

Add Book

BookId	bookTitle	author	ISBN	bookCopies	publisherName	available	categories	callNumber	Delete
1	Advance Databases	Informatics College	1900-124-3242	30	Juliet Caesar	YES	Morals	0902334	DELETE
2	Software Engineering	Robert Thompson	123-423-4-13	12	Robert Thompson, Inc	YES	Information Technology	0216230.	DELETE

### Admin Login – Book Details

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The screenshot shows a web browser window with the title 'Library Management'. The address bar shows the URL 'localhost/library\_db/library-Management-System-master/users.php'. The navigation bar includes 'Home', 'Books', 'Admins', 'Students', 'Borrow books', 'Fines', and 'Logout'. The main content area has a yellow header with the text 'Users List' in red. Below the header is a green button labeled 'Add User'. A table displays the user list with columns: adminId, adminName, password, username, email, and Delete. The table contains one row with the following data: adminId: 1, adminName: admin, password: admin, username: admin, email: admin@gmail.com, and a 'DELETE' button.

adminId	adminName	password	username	email	Delete
1	admin	admin	admin	admin@gmail.com	DELETE

### Admin Login – User list

The screenshot shows a web browser window with the title 'Library Management'. The address bar shows the URL 'localhost/library\_db/Library-Management-System-master/viewstudents.php'. The navigation bar includes 'Home', 'Books', 'Admins', 'Students', 'Borrow books', 'Fines', and 'Logout'. The main content area has a yellow header with the text 'Student Table'. Below the header is a green button labeled 'Add Student'. A table displays the student list with columns: ID, Student Name, Matric No, Email, Department, Phone No., Username, Password, and Action1. The table contains two rows with the following data: Row 1: ID: 1, Student Name: Student One, Matric No: ADSE-9835, Email: student1@gmail.com, Department: Software Engineering, Phone No.: 08124579655, Username: student1, Password: student1, and a 'DELETE' button. Row 2: ID: 2, Student Name: Student Two, Matric No: ADSE-9835, Email: student2@gmail.com, Department: Software Engineering, Phone No.: 08124578966, Username: student 2, Password: student 2, and a 'DELETE' button.

ID	Student Name	Matric No	Email	Department	Phone No.	Username	Password	Action1
1	Student One	ADSE-9835	student1@gmail.com	Software Engineering	08124579655	student1	student1	DELETE
2	Student Two	ADSE-9835	student2@gmail.com	Software Engineering	08124578966	student 2	student 2	DELETE

### Admin login – Student List

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The screenshot shows a web browser window titled 'Library Management' with the URL 'localhost/library\_db/Library-Management-System-master/borrowedbooks.php'. The navigation bar includes 'Library Management System', 'Home', 'Books', 'Admins', 'Students', 'Borrow books', 'Fines', and 'Logout'. The main content area features a yellow header 'Borrow Books' and a table with the following structure:

ID	Book Name	Member Name	Matric Number
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The Windows taskbar at the bottom shows the search bar, task view, and several application icons. The system clock indicates 19:02 on 06-11-2019.

### Admin login – Borrow Books

The screenshot shows a web browser window titled 'Library Management' with the URL 'localhost/library\_db/Library-Management-System-master/fines.php'. The navigation bar is identical to the previous screenshot. The main content area features a yellow header 'Fines Table' and a table with the following structure:

ID	Member Name	Matric Number	Book Name	Borrow date	Return Date	Overdue Charges	ACTION
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The Windows taskbar at the bottom shows the search bar, task view, and several application icons. The system clock indicates 19:03 on 06-11-2019.

### Admin Login – Fines List

## 8. CONCLUSION AND FUTURE SCOPE

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library. It makes entire process online where student can search books, staff can generate reports and do book transactions. It also has a facility for student login where student can login and can see status of books issued as well request for book or give some suggestions. It has a facility of teacher's login where teachers can add lectures notes and also give necessary suggestion to library and also add info about workshops or events happening in our college or nearby college in the online notice board.

There is a future scope of this facility that many more features such as online lectures video tutorials can be added by teachers as well as online assignments submission facility , a feature Of group chat where students can discuss various issues of engineering can be added to this project thus making it more interactive more user friendly and project which fulfills each users need in the best way possible.

## 9. WORK BREAK DOWN

Team Member Registration Number	Name	Work Assigned
18BCE0013	SARVEPALLI MOHITH	Sql table insertion and creation and presentation
18BCE0087	SAI KIREETI	Sql creation, Front end creation
18BCE0088	SAI SARAVAN	Sql insertion, presentation
		Front end code creation



## 11. REFERENCES

- <https://lbsitbytes2010.wordpress.com/2013/09/21/er-diagram-oflibrary-management-rno15s5cs2/>
- [https://www.slideshare.net/fiu025/library-management32343393?next\\_slideshow=1](https://www.slideshare.net/fiu025/library-management32343393?next_slideshow=1)
- <http://www.c-sharpcorner.com/UploadFile/ea3ed6/database-design-forlibrary-management-system/>
- <http://stackoverflow.com/questions/17641134/what-is-differentbetween-er-diagram-and-database-schema>

## 12. REVIEW EVALUATION

COMPONENT	MARKS	MEMBER 1	MEMBER 2	MEMBER 3	MEMBER 4
Report	10				
Project Implementation	25				
Presentation	15				
TOTAL	50 MARKS				