

Library Management System for KCMIT
Object Oriented Analysis and Design Project

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Submitted to:

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PREFACE

This project of LIBRARY MANAGEMENT SYSTEM, gives us the complete information about the library. We can enter the record of new books and retrieve the details of books available in the library. We can issue the books to the students and maintain their records and can check how many books are issued and books that are available in the library. Using this system students can reserve their desired book and can view the cover, syllabus of the book. Whereas teachers can also view, the entire system can get information about the books that are reserved by students. Example: English Teacher can know how many books have been issued to the student in his/her class or how many students got the book from the library. In this project, we can maintain the late fine of students who returns the issued books after the due date. This report provides the basic knowledge of database and web-based software/programming in which different languages such as PHP, HTML, CSS, Database Server, JQuery and JavaScript are used. Throughout the project, the focus has been on presenting information and comments in an easy and intelligible manner. The project is very useful for those who want to know the concept and uses of the Library Management System in the school or college section.

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. I am grateful to my project guide Dinesh Bajracharya for the guidance, inspiration and constructive suggestions that helped me in the preparation of this project.

I also thank our colleagues who have helped in successful completion of the project.

Table of Contents

CHAPTER I	iv
INTRODUCTION	iv
1.1 Existing System Introduction	v
1.2 Developed System Advantage over Existing System	v
1.3 Limitations of the Developed System	v
CHAPTER II	vi
REQUIREMENTS AND DESIGN	vi
2.1 Requirements	viii
2.2 Design	viii
CHAPTER III	ix
DEVELOPMENT AND TESTING	ix
3.1 Development	ix
3.2 Testing the System	x
3.2.1 Test for Sign Up Form	x
3.2.2 Test for Admin Login	xii
CHAPTER IV	xv
CONCLUSION	xv
Glossary	xvi

CHAPTER I

INTRODUCTION

Library management System is a web system to manage library, which includes the task of:

- i. Approve new users by admin, viewing books contents.
- ii. Updating Users, books information or status.
- iii. Store and Retrieve Existing User database
- iv. Issue Books and Fine.
- v. Can ban user id by admin.

A library management system, also known as an automated library system is an online site that is developed to handle basic housekeeping functions of a library using the Internet at home.

It is a well-organized software solution for a library in the form of web pages. It helps to provide information on any book present in the library to the user as well as staff members. It keeps a track of books issued, returned and added to the library.

1.1 Existing System Introduction

In the existing Library Management System, we are only able to sign up, sign in and check the options provided but we were not able to issue books and look for Fine Date. Due to these few limited features, we have developed a new Library Management System project to solve some problems reported by the users where information is stored in the database when the sign up process is performed and Dashboard is also improved.

1.2 Developed System Advantage over Existing System

In this Newly Developed Library Management System, users can easily book their required subject books by author name or title and users can also update their profile, recover password and get id number and access to different eBooks.

In the existing system, there was no recovery, ban, issue, update, ISBN features and layout was too old so now I have developed a new Layout.

1.3 Limitations of the Developed System

- ❖ The system does not produce library cards.
- ❖ Users cannot delete their account by themselves.
- ❖ Students cannot enter the Admin Page Section without authority.
- ❖ Students cannot update the content of any notes, books by themselves.
- ❖ Users cannot directly comment or post other new content and cannot reset fines or clear it.

CHAPTER II

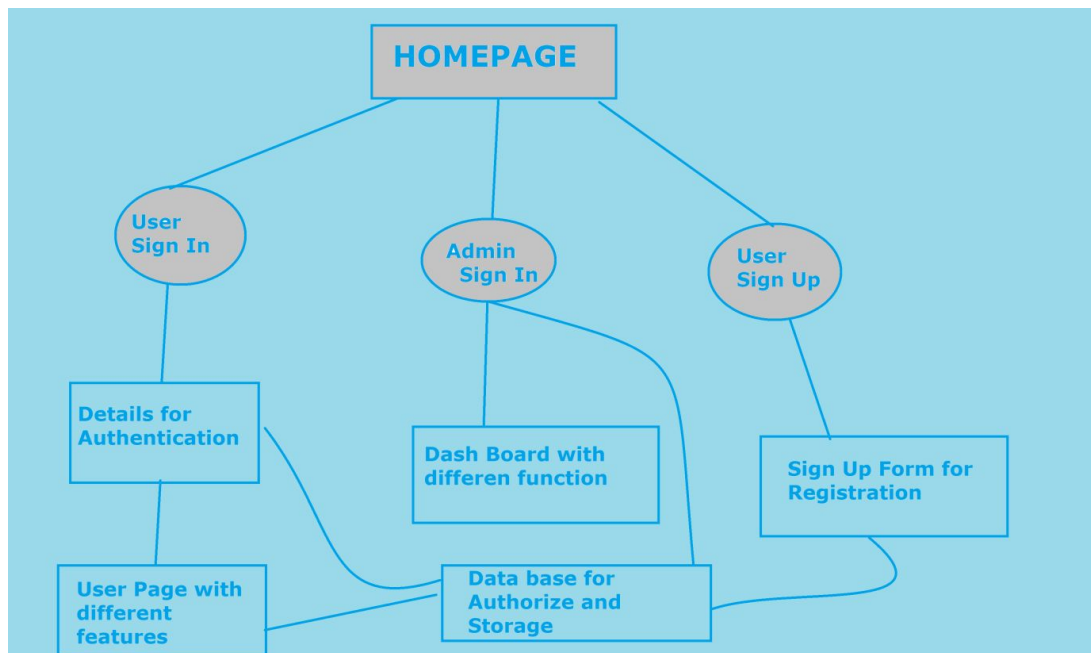
REQUIREMENTS AND DESIGN

2.1 Requirements

The following points describe what this system can do.

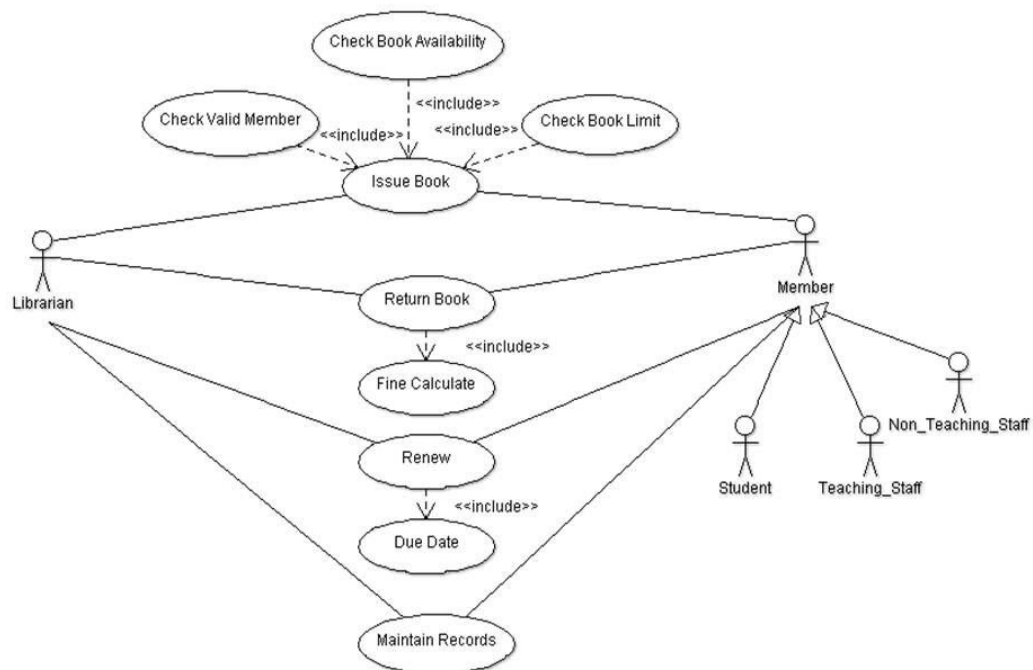
- No need to Sign Up for Admin.
- Users do not need to search their subject books.
- Users can directly access any notes and materials of another semester also if they need it for additional information after successful login.
- In the case of Sign Up for Students, no private detail is asked.

Following Image illustrates how the site works.

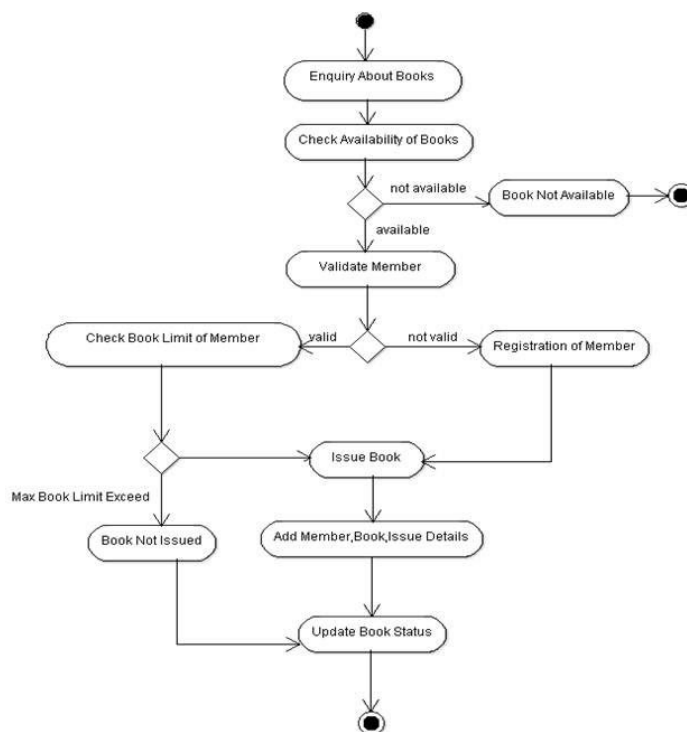


2.2 Design

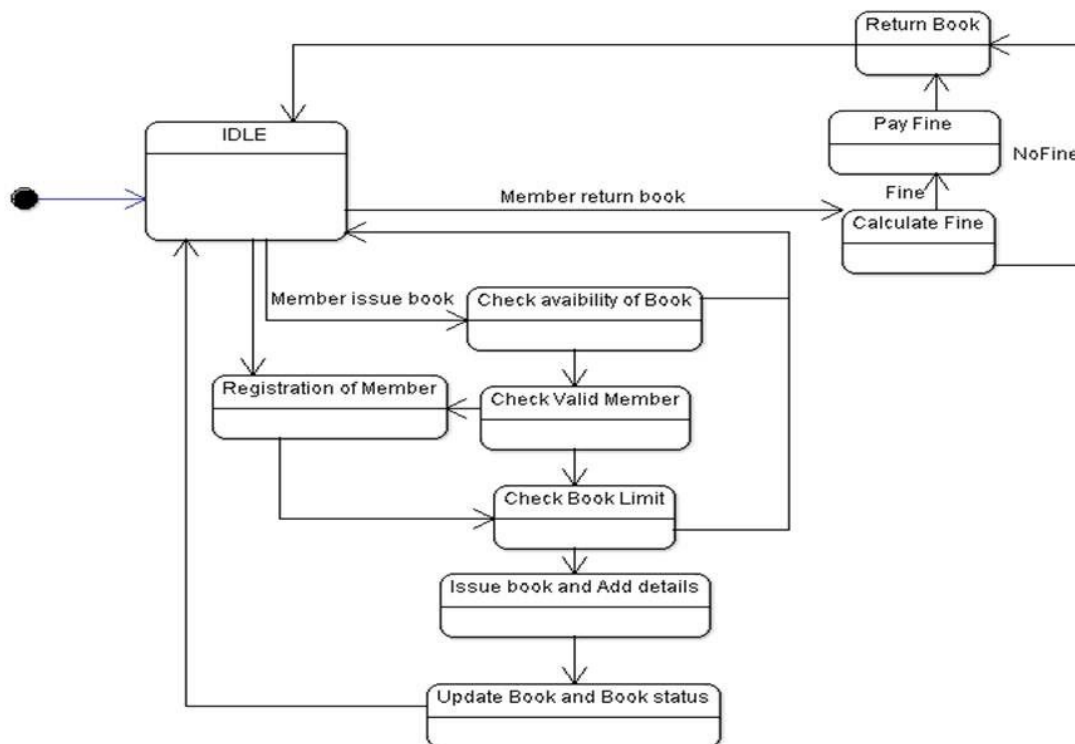
Use Case Diagram of LMS:



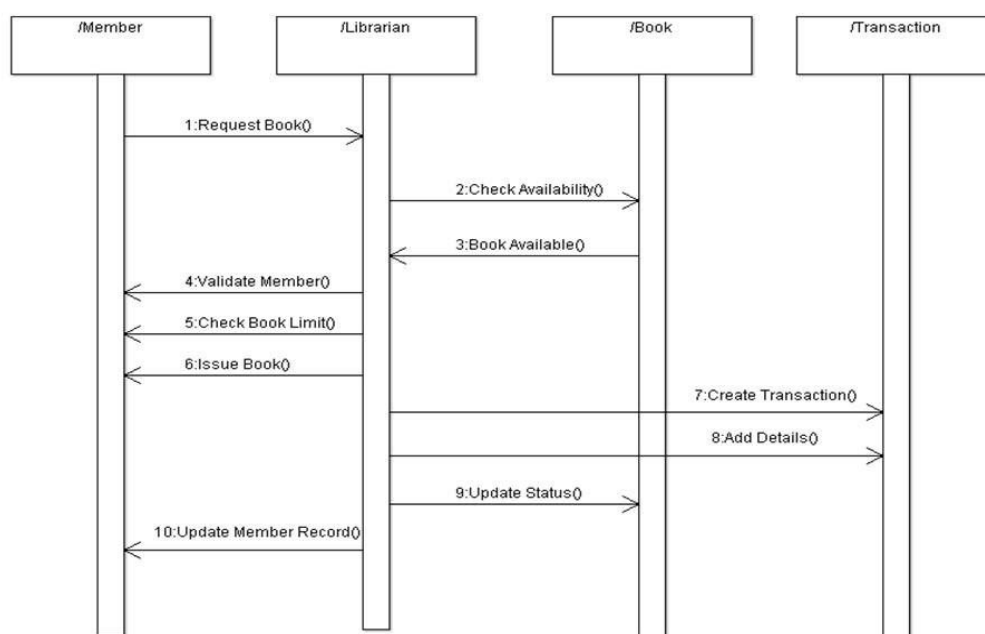
Activity Diagram of LMS on Issuing Books:



State Diagram of LMS on issuing Books:



Sequence Diagram of LMS on issuing Books:



2.2.1 Database Structure relation with LMS Site Map

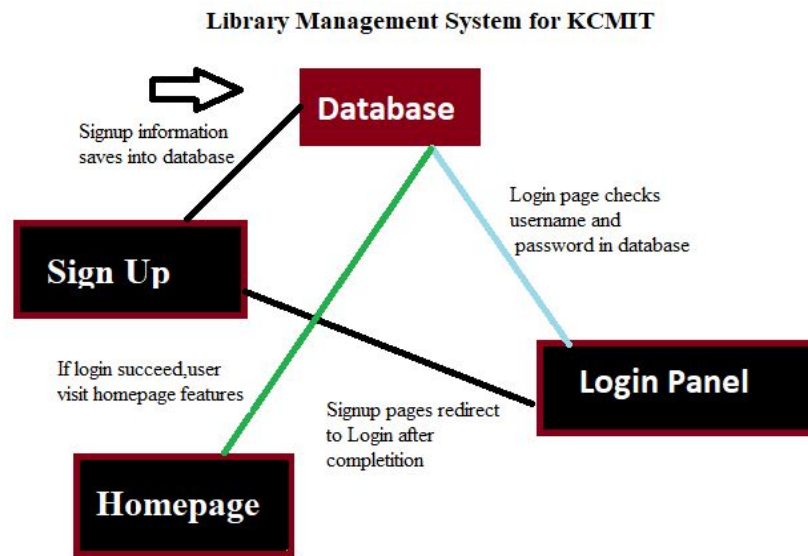


Fig: Site Map of Interconnection between Sign Up , Login Page , and Homepage with Database

2.2.2 Database Storage:

Some information that were provide through Sign Up process is stored into database

library

- New
- admin
- scores
- tblauthors
- tblbooks
- tblcategory
- tblissuedbookdetails
- tblstudents

mysql

- performance_schema
- phpmyadmin
- summerproject
- test

Number of rows: 25 Filter rows: Search this table

+ Options

id	StudentId	FullName	EmailId	MobileNumber	Password	Status	RegDate	UpdationDate
0	1	Sandesh Dhakal	thehotsandesh@gmail.com	9874563210	Sandesh123	1	2019-08-21 01:08:45	NULL
0	2	Shankar Sapkota	shankarsapkota69@gmail.com	9847516***	Shankar123	1	2019-08-24 01:24:14	NULL
0	4	Shankar Sapkota	shankarsapkota@gmail.com	9847516615	Shankar123	1	2019-09-08 08:53:27	NULL
0	5	student new	testadmin@gmail.com	9847516615	student	1	2019-09-08 09:07:20	NULL
0	6	Kcmitions	kcmicollege@gmail.com	014479939	kcmi123	1	2019-11-08 09:55:05	NULL

Number of rows: 25 Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Let every user access this bookmark

2.2.3 List of Table Relations in Database:

The screenshot displays the phpMyAdmin web interface. On the left is a sidebar with a database tree view showing various databases like 'bim4thb', 'information_schema', and 'library'. The 'tblissuedbookdetails' table is selected under the 'library' database. The main panel shows the 'Table structure' tab for this table. It contains a table with 7 columns: 'id', 'BookId', 'StudentID', 'IssuesDate', 'ReturnDate', 'RetrunStatus', and 'fine'. Each row lists the column number, name, type, collation, attributes, nullability, default value, comments, and an action icon. Below the table structure, there are options to 'Check all', 'With selected', and 'Remove from central columns'. There are also buttons for 'Print', 'Propose table structure', 'Track table', 'Move columns', and 'Normalize'. At the bottom, there is a 'Console' tab showing SQL queries: '>SELECT * FROM `tblstudents`', '>SELECT * FROM `tblstudents`', and '>SELECT * FROM `tblissuedbookdetails`'. A message 'No index defined!' is displayed in a yellow box.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None			Ch
2	BookId	int(11)			Yes	NULL			Ch
3	StudentID	varchar(150)	latin1_swedish_ci		Yes	NULL			Ch
4	IssuesDate	timestamp			Yes	current_timestamp()			Ch
5	ReturnDate	timestamp			Yes	NULL	ON UPDATE CURRENT_TIMESTAMP()		Ch
6	RetrunStatus	int(1)			No	None			Ch
7	fine	int(11)			Yes	NULL			Ch

Indexes

No index defined!

Console

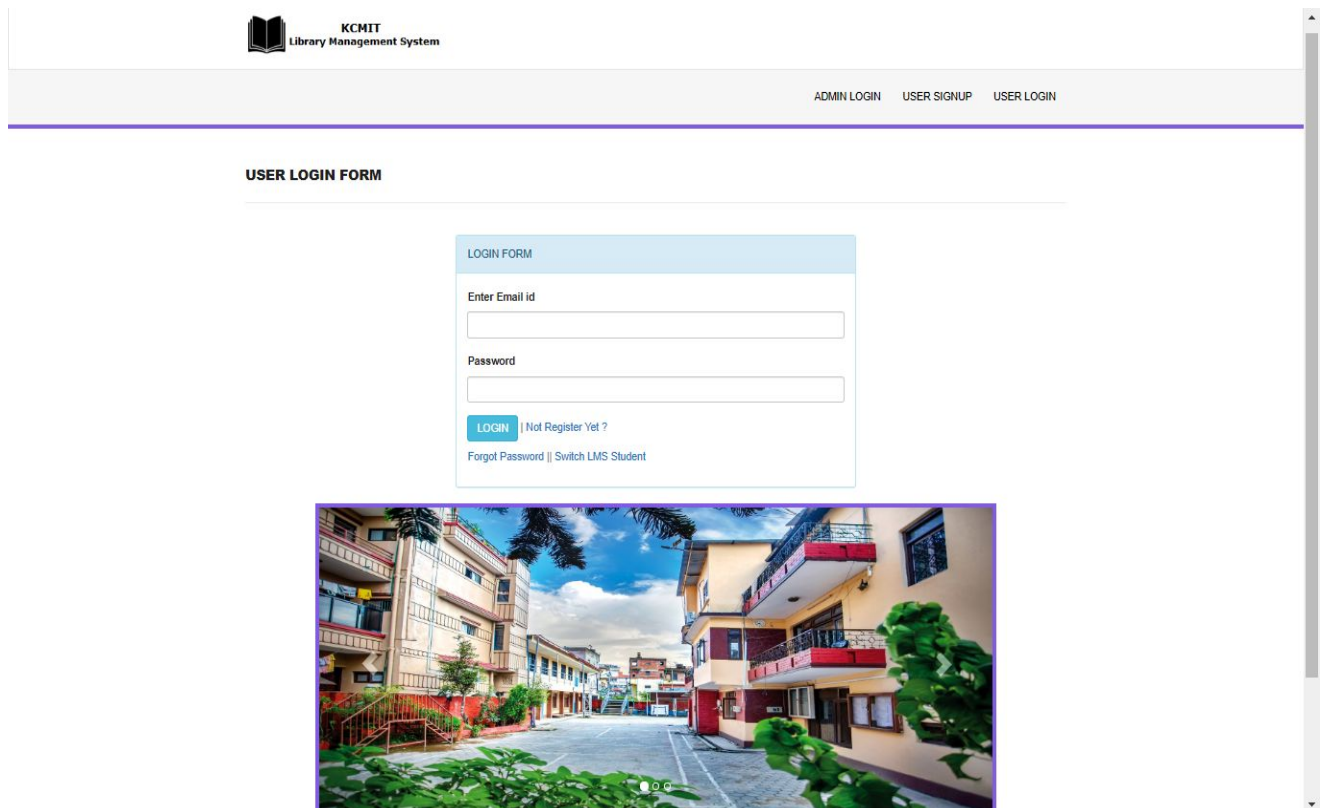
```
>SELECT * FROM `tblstudents`
>SELECT * FROM `tblstudents`
>SELECT * FROM `tblissuedbookdetails`
```

CHAPTER III

DEVELOPMENT AND TESTING

3.1 Development

Following is the snap shot of Homepage of Library Management System.



3.2 Testing the System

3.2.1 Test for Sign Up Form

In case of the same email id on database, error is generated to prevent from the same id signup process. All the fields are necessary for the user while signup process.

Snapshot of User Sign up Form Validation or error.

The image contains two screenshots of a web browser displaying a sign-up form titled "SIGNUP FORM". The browser's address bar shows the URL "localhost/test/v1/good/signup.php".

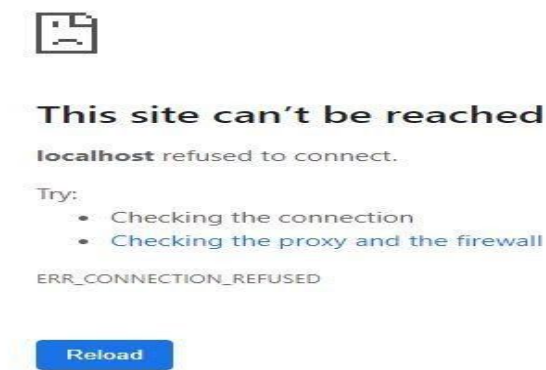
In the top screenshot, the form fields are as follows:

- Enter Full Name:** An empty text input field.
- Mobile Number :** An empty text input field.
- Enter Email:** A text input field containing "shankarsapkota69@gmail.com". Below this field, a message reads "Email already exists .".
- Enter Password:** A password input field with three dots "..." indicating it is masked.
- Confirm Password:** A password input field with two dots "..." indicating it is masked.
- Register Now:** A red button at the bottom of the form.

In the bottom screenshot, the form fields are the same, but the message below the email field has changed to "Email available for Registration .". The browser window also shows a "Paused" status in the top right corner.

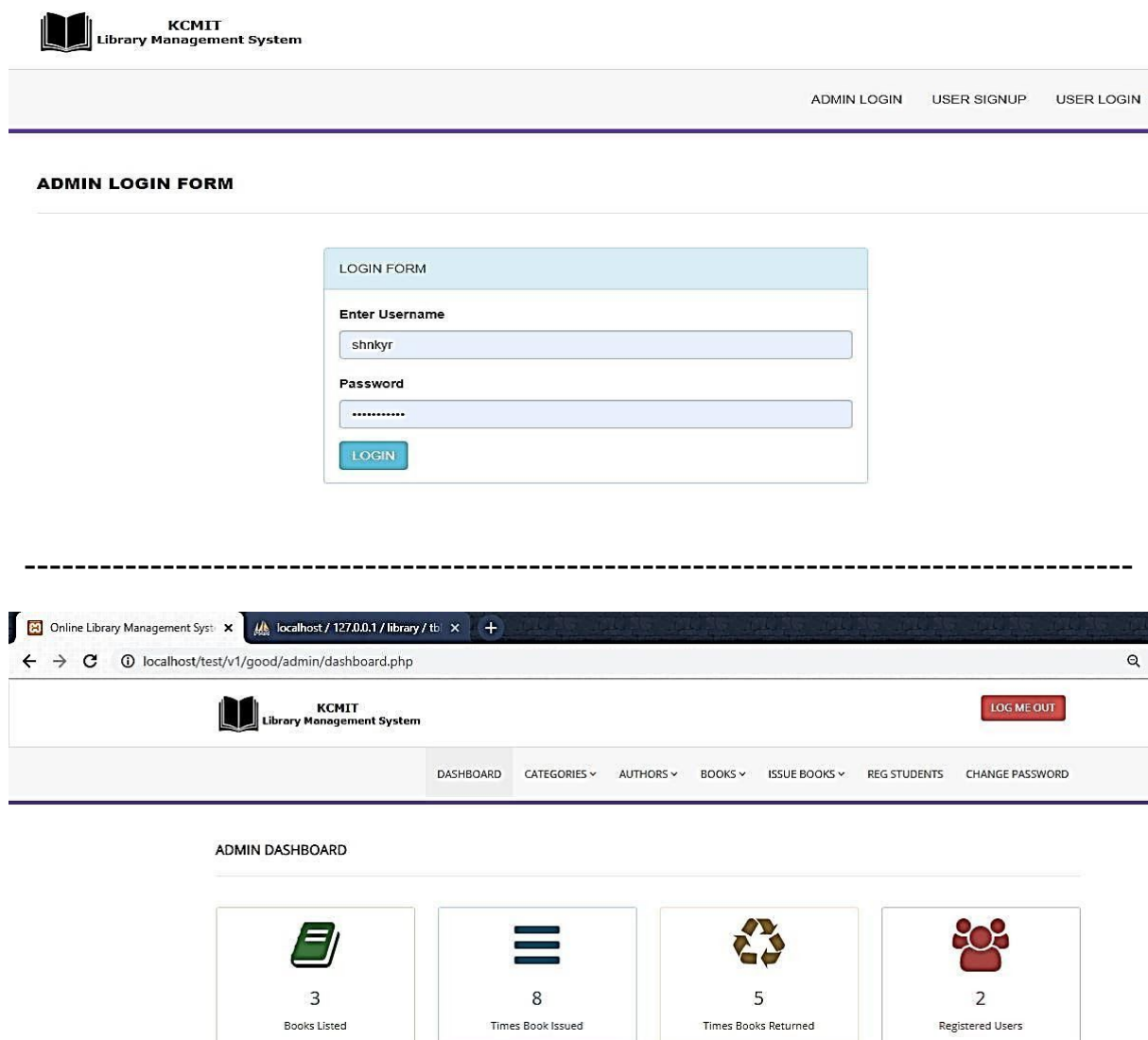
Fig: 3.2.1 Test for Sign up Information

In case of Database Error in Php/ MySQL the error is generated as:-



3.2.2 Test for Admin Login

If the Username and Password lies in Database then the following page displays.



Features admin can have:

1) Admin Can Add Categories and Manage it

The screenshot shows a web browser window with the URL `localhost/test/v1/good/admin/add-category.php`. The page header includes the KCMIT Library Management System logo, a 'LOG ME OUT' button, and a navigation menu with links: DASHBOARD, CATEGORIES, AUTHORS, BOOKS, ISSUE BOOKS, REG STUDENTS, and CHANGE PASSWORD. The main content area is titled 'ADD CATEGORY' and contains a form titled 'Category Info'. The form has a 'Category Name' text input field, a 'Status' section with radio buttons for 'Active' (selected) and 'Inactive', and a 'Create' button. The footer of the page states '© 2019 KCMIT Library Management System | Designed by : Shankar Sapkota'.

2) Admin Can Add Author and Manage it

The screenshot shows a web browser window with the URL `localhost/test/v1/good/admin/add-author.php`. The page header is identical to the previous screenshot, featuring the KCMIT Library Management System logo, a 'LOG ME OUT' button, and the same navigation menu. The main content area is titled 'ADD AUTHOR' and contains a form titled 'Author Info'. The form has an 'Author Name' text input field and an 'Add' button. The footer of the page states '© 2019 KCMIT Library Management System | Designed by : Shankar Sapkota'.

3) Admin Can Add Book and Manage it

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*

Manage books:

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	Digital Logic	Technology	Chetan Bhagatt	12354	500	Edit Delete
3	physics	Science	HC Verma	1111	15	Edit Delete

Showing 1 to 3 of 3 entries

[Previous](#) [1](#) [Next](#)

4) Admin Can Add Student and Manage it

Online Library Management System

localhost / 127.0.0.1 / library / tti

localhost/test/v1/good/admin/reg-students.php

LOG ME OUT

DASHBOARD CATEGORIES AUTHORS BOOKS ISSUE BOOKS REG STUDENTS CHANGE PASSWORD

MANAGE REG STUDENTS

Reg Students

10 records per page

Search:

#	Student ID	Student Name	Email id	Mobile Number	Reg Date	Status	Action
1	1	Sandeh Dhakal	thehotsandesh@gmail.com	9874563210	2019-08-21 01:08:45	Active	Inactive
2	2	Shankar Sapkota	shankarsapkota69@gmail.com	9847516***	2019-08-24 01:24:14	Active	Inactive

Showing 1 to 2 of 2 entries

[Previous](#) [1](#) [Next](#)

CHAPTER IV

CONCLUSION

The entire web page is developed using HTML, CSS and Java Script language JQuery and Php with connection of Database using MySQL. This web page system is able to process and update the books database with more ease. Using this webpage users can easily sign up with their information and also can access all the features available after successful login. It will surely reduce the effort and time to go to the library and allow the users to access the books or any library stuff at home using the internet.

Users can easily access the books for free of given authors and this concept or this system will help school, colleges, university or any other organization to access required books and related services easily with the help of technology.

With the completion of this project I learned the importance of database systems, bookkeeping importance in any educational sector and record maintenance system functions. I also got to know more about Php, Database working mechanism, different implementation style and system development process and models.

Thus the project “Library Management System” can be altered in accordance with the future requirements of the colleges or any educational organization.

Glossary

Some commonly used tags and their functions are explained below:

S.N	Tag	Descriptions/Function
1.	<a> --	Creates link to other internet location, or file.
2.	<Div> --	This tag is a logical section of a web document.
3.	< embed> --	Gives a command to browser to include a multimedia Elements, such as video, sound or web document.
4.	<Form> / --	Form tags define a form. FONT tags attribute text
5.	 --	IMG tag attributes an image.
6.	<Input> -- buttons.	Define input fields, check boxes, and radio
7.	<Legend> --	It assigns a caption in a field set element.
8.	< Li> / -- .	LI tag Defines a list of ordered and unordered items. Defines ordered list.
9.	<Option> -- with .	Creates drop-down menu, works only in conjunction SELECT tag.
10.	<Script> -- .	Define scripts within a web page and let the web browsers Know that it is not an HTML section.
11.	 --	Used in specifying a section of a document.
12.	<Style> -- .	Specifies a link, location to a style sheet. Gives Command to browsers regarding to a layout for web page.
13.	<Table> --	TABLE tag is defining a table.