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An Autonomous Institute
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Approved By AICTE, New Delhi,
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A MINI PROJECT REPORT
ON
LIBRARY MANAGEMENT SYSTEM

Submitted in partial fulfillment of requirements for the award of 4th semester,

BACHELOR OF ENGINEERING

IN

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Submitted By:
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USN: 1MJ20AI010

Under the Guidance of
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DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING
MVJ COLLEGE OF ENGINEERING
BENGALURU-67
ACADEMIC YEAR 2021-22

MVJ COLLEGE OF ENGINEERING

Whitefield, Near ITPB, Bengaluru-67

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CERTIFICATE

This is to certify that the mini project entitled "**MEN'S SALON MANAGEMENT SYSTEM"** is a bonafide work carried out by **CICIYA SEBASTIN (1MJ20AI010),** a bonafide student of MVJ College of Engineering in partial fulfillment for the award of degree of Bachelor of Engineering in Artificial Intelligence and Machine Learning during the year 2021-22. It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the Report. The Mini Project Report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said degree.

Signature of the Guide	**Signature of the HOD**
(Mrs. K. Manisha)	**(Prof. Tamilarasi. R)**

Name of examiners: Signature with date:

1.
2.

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DECLARATION

I, **CICIYA SEBASTIN** hereby declare that the entire work titled "**LIBRARY MANAGEMENT SYSTEM"** embodied in this project report has been carried out by us during the 4th semester of BE degree at MVJCE, Bengaluru under the esteemed guidance of **Mrs. K. Manisha**, Assistant Prof, Dept. of CSE, MVJCE. The work embodied in this dissertation work is original and it has not been submitted in part of full for any other degree in any University.

CICIYA SEBASTIN
1MJ20AI010 _____

Place:

Date:

ABSTRACT

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library .This project has many features which are generally not available in normal library management systems like facility of user login and a facility of teachers login .It also has a facility of admin login through which the admin can monitor the whole system .It also has facility of an online notice board where teachers can student can put up information about workshops or seminars being held in our colleges or nearby colleges and librarian after proper verification from the concerned institution organizing the seminar can add it to the notice board . It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form. The librarian after logging into his account ie admin account can generate various reports such as student report , issue report, teacher report and book report Overall this project of ours is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible, whose constant guidance and encouragement crowned our effort with success.

We are thankful to the Management of **MVJ College of Engineering Bengaluru** for their continuous support and encouragement for carrying out the project work.

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It's also a great pleasure to express our deepest gratitude to all faculty members of our department for their cooperation and constructive criticism offered, which helped us a lot during our project work.

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CHAPTER 1

INTRODUCTION

Database is an organized collection of data. The data is typically organized to model aspects of reality in a way that supports processes requiring information. A DBMS makes it possible for users to create, read, update and delete data in a database. The DBMS essentially serves as an interface between the database and users or application programs, ensuring that data is consistently organized and remains easily accessible.

PROJECT AIMS AND OBJECTIVES

The project aims and objectives that will be achieved after completion of this project are discussed in this subchapter. The aims and objectives are as follows:

- Online book issue
- Request column for librarian for providing new books
- A separate column for digital library
- Student login page where student can find books issued by him/her and date of return.
- A search column to search availability of books

BACKGROUND OF PROJECT

Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc. Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non-computerized system is used. In addition, report module is also included in Library Management System. If user's position is admin, the user is able to generate different kinds of reports like lists of students registered, list of books, issue and return reports. All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared to library systems which are not computerized.

CHAPTER 2

SYSTEM REQUIREMENTS

2.1 Hardware Requirements:

- **Operating System :** Windows 7 or later
- **Processor:** Intel Core i3 or later
- **Memory:** 2 GB minimum, 4 GB recommended
- **Screen resolution :** 1280*1024 or larger
- **Application Window Size :** 1024*680 or larger
- **Internet Connection :** Not required

2.2 Software Requirements:

- **Client :** Operating System(any)
- **Web Server :** Apache HTTP server
- **Database :** MySQL DB
- **Language :** HTML

CHAPTER 3

PROBLEM DESCRIPTION

EXISTING VS PROPOSED SYSTEM

i. Existing system does not have any facility of teacher's login or student login whereas proposed system will have a facility of student login as well as teacher's login

ii. Existing system does not have a facility of online reservation of books whereas proposed system has a facility of online reservation of books

iii. Existing system does not have any facility of online notice board where description of workshops happening in our college as well as nearby colleges is being provided.

iv. Existing system does not have any option of lectures notes uploaded by teachers whereas proposed system will have this facility

v. Existing system does not have any facility to generate student reports as well book issue reports whereas proposed system provides librarian with a tool to generate reports

vi. Existing system does not have any facility for book request and suggestions where as in proposed system after logging in to their accounts student can request books as well as provide suggestions to improve library

CHAPTER 4

SYSTEM DESIGN

4.1 ER Diagram:

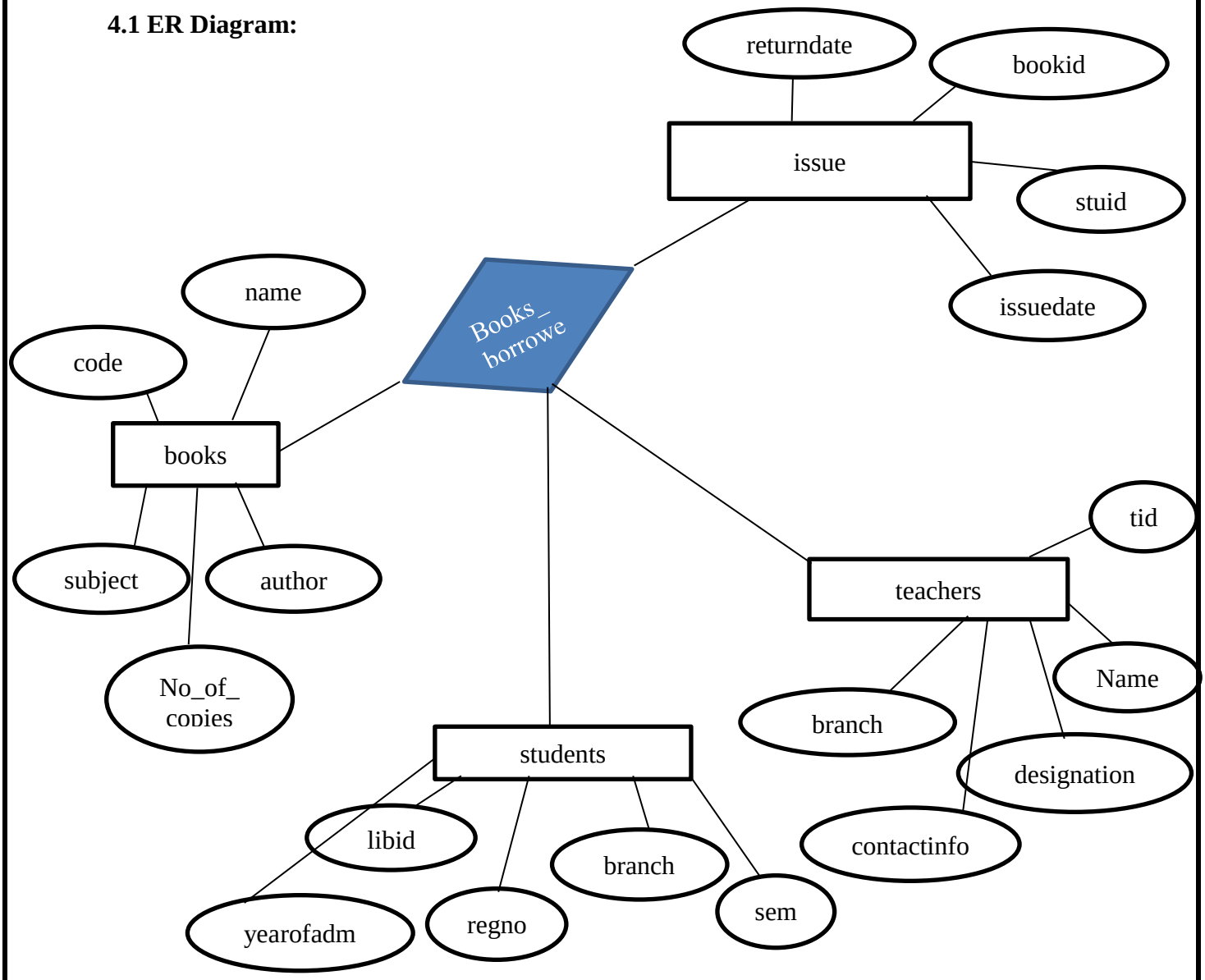

Fig 4.1 ER diagram for Library Management System

4.2 VARIOUS TABELS TO MAINTAIN INFORMATION

Field	Data type	Default	Key	Extra
Code	INT(11)	Not Null	Primary	Auto increment
Bookname	VARCHAR(255)	Null		
Author	VARCHAR(255)	Null		
Publication	VARCHAR(255)	Null		
Subject	VARCHAR(255)	Null		
No of copies	INT(10)	Null		

Fig: 4.2.1 Book table for keeping track of books

Field	Data type	Default	Key	Extra
libid	INT(11)	NOT NULL	Primary key	Auto increment
regno	INT(10)	NULL		
branch	VARCHAR(255)	NULL		
section	VARCHAR(255)	NULL		
semester	VARCHAR(255)	NULL		
section	VARCHAR(2)	NULL		
yearofadm	INT(5)	NULL		

Fig: 4.2.2 Student table for student information

Field	Data Type	Default	Key	Extra
Tid	INT(11)	NOT NULL	Primary key	Auto increment
Name	VARCHAR(255)	NULL		
Designation	VARCHAR(255)	NULL		
Branch	VARCHAR(255)	NULL		
Contactno	INT(13)	NULL		
Lectures	LONG BLOB	NULL		

Fig: 4.2.3 Teacher table to keep teacher information

Field	Data Type	Default	Key	Extra
bookid	INT(11)	NOT NULL	Foreign key	References book
stuid	INT(11)	NOT NULL	Foreign key	References Student
issuedate	DATE	NULL		
returndate	DATE	NULL		

Fig: 4.2.4 Issue table to keep track of books issued

Field	Data type	Default	Key	Extra
logid	INT(11)	NOT NULL	Foreign key	References Student
Username	VARCHAR(255)	NULL		
Password	VARCHAR(255)	NULL		
numbooks	INT(1)	NULL		

Fig: 4.2.5 Student login table

Field	Data type	Default	Key	Extra
Name	Varchar(255)	NULL		
Date	Date(yyyy/mm/dd)	NULL		
Time	VARCHAR(255)	NULL		
Mname	VARCHAR(255)	NULL		
Contactno.	Int(30)	NULL		
Email	VARCHAR(255)	NULL		
Venue	varchar(255)	NULL		

Fig: 4.2.6 Event table for event information

Field	Data Type	Default	Key	Extra
Loginid	INT(11)	NOT NULL	Foreign key	References teacher
Username	VARCHAR(255)	NULL		
Password	VARCHAR(255)	NULL		

Fig: 4.2.7 Teacher login table

CHAPTER 5

IMPLEMENTATION

5.1 Introduction to software used:

Description

To run this project you must have installed virtual server i.e. XAMPP on your PC (for Windows). MYSQL Server for the creation of the Backend of the project and PHP for the Frontend creation.

5.1.1 PHP:

Description

Stands for "Hypertext Preprocessor" (It is a recursive acronym) PHP is an HTML - embedded Web scripting language. This means PHP code can be inserted into the HTML of a Web page. When a PHP page is accessed, the PHP code is read or "parsed" by the server the page resides on. The outputs from the PHP functions on page are typically returned as HTML code, which can be read by the browser.

5.1.2 MySQL:

Description

MySQL pronounced either "My S-Q-L" or "My Sequel," is an open source relational database management system. It is based on the structured query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL.

5.2 Source Code:

```php
<?php
require'../include/connection1.php';
$libid=$_POST['libid'];
$bookid=$_POST['bookid'];
 $result = mysqli_query($connection,"SELECT * FROM issuebooks where libid= '$libid' &&
bookid='$bookid'");
 $rowcount=mysqli_num_rows($result);
 if($rowcount>0)
 {
 $sql=mysqli_query($connection,"UPDATE studentlogin SET
numbooks=numbooks-1
 WHERE logid='$libid'");
 $sql1=mysqli_query($connection,"UPDATE book SET
numberofbooks=numberofbooks+1
 WHERE code='$bookid'");
 $sql2=mysqli_query($connection,"DELETE FROM issuebooks WHERE
libid=$libid && bookid='$bookid'");
 }
 else
 echo"no book issued";
 mysqli_close($connection);
 ?>
```

```php
<?php
 require '../include/connection1.php';
 $result = mysqli_query($connection,"SELECT * FROM
teacher");
 $count=mysqli_num_rows($result);
echo "<table border='1' style='width=100px'>
<tr>
<td>Teacher id</td>
<td>Name</td>
<td>Designation</td>
<td>Branch</td>
<td>Contact no</td>
</tr>";
 while($count>0)
 {
 while($row = mysqli_fetch_array($result))
{echo "<tr>";
 echo "<td>" . $row['tid'] . "</td>";
 echo "<td>" . $row['name'] . "</td>";
 echo "<td>" . $row['designation'] . "</td>";
 echo "<td>" . $row['branch'] . "</td>";
 echo "<td>" . $row['contactno'] . "</td>";
 echo"</tr>";
 }
```

```php
<?php
 require '../include/connection1.php';
 $result = mysqli_query($connection,"SELECT * FROM
issuebooks order by libid");
 $count=mysqli_num_rows($result);
echo "<table border='1' style='width=100px'>
<tr>
<td>Libraryid</td>
<td>Bookid</td>
<td>Issue date</td>
<td>Return date</td>
</tr>";
 while($count>0)
 {
 while($row = mysqli_fetch_array($result))
 {echo "<tr>";
 echo "<td>" . $row['libid'] . "</td>";
 echo "<td>" . $row['bookid'] . "</td>";
 echo "<td>" . $row['issuedate'] . "</td>";
 echo "<td>" . $row['returndate'] . "</td>";
 echo"</tr>";
 }
 $count=$count-1;
 }
```

```php
k?php
 require '../include/connection1.php';
 $result = mysqli_query($connection,"SELECT * FROM books")
$count=mysqli_num_rows($result);
echo "<table border='1' style='width=100px'>
<tr>
<td>Book Id</td>
<td>Name</td>
<td>Publication</td>
<td>Author</td>
<td>Subject</td>
<td>Number Of Books</td>
</tr>";
 while($count>0)
 {
 while($row = mysqli_fetch_array($result))
 {echo "<tr>";
 echo "<td>" . $row['code'] . "</td>";
 echo "<td>" . $row['bookname'] . "</td>";
 echo "<td>" . $row['publication'] . "</td>";
 echo "<td>" . $row['author'] . "</td>";
 echo "<td>" . $row['subject'] . "</td>";
 echo "<td>" . $row['numberofbooks'] . "</td>";
 echo"</tr>";
```

Fig 5.1 Code Snippets of DBMS operations

CHAPTER 6

SCREENSHOTS

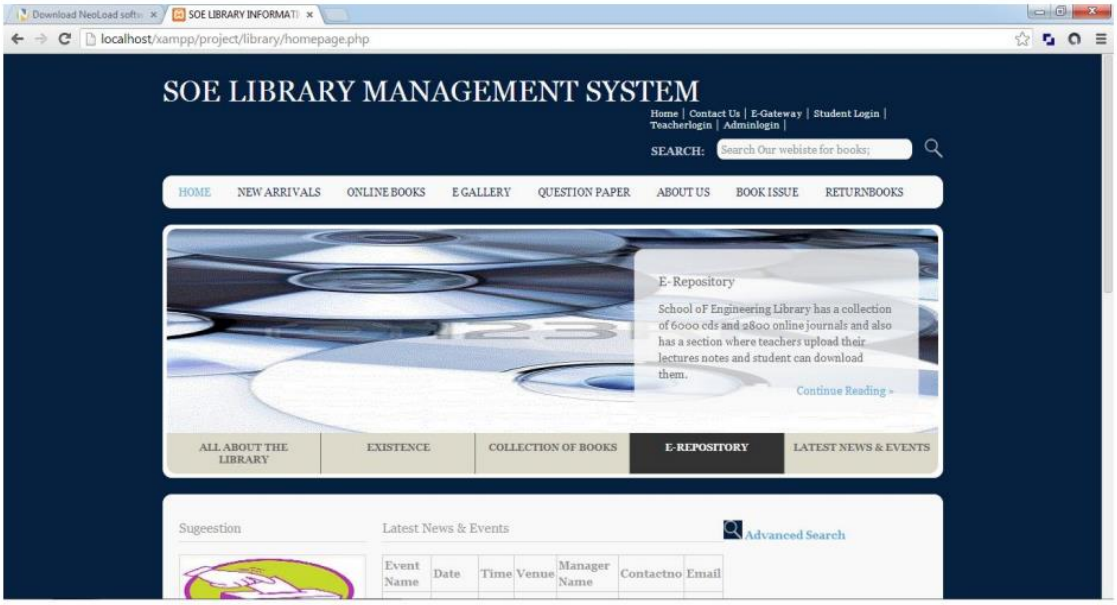

Fig: 6.1 homepage

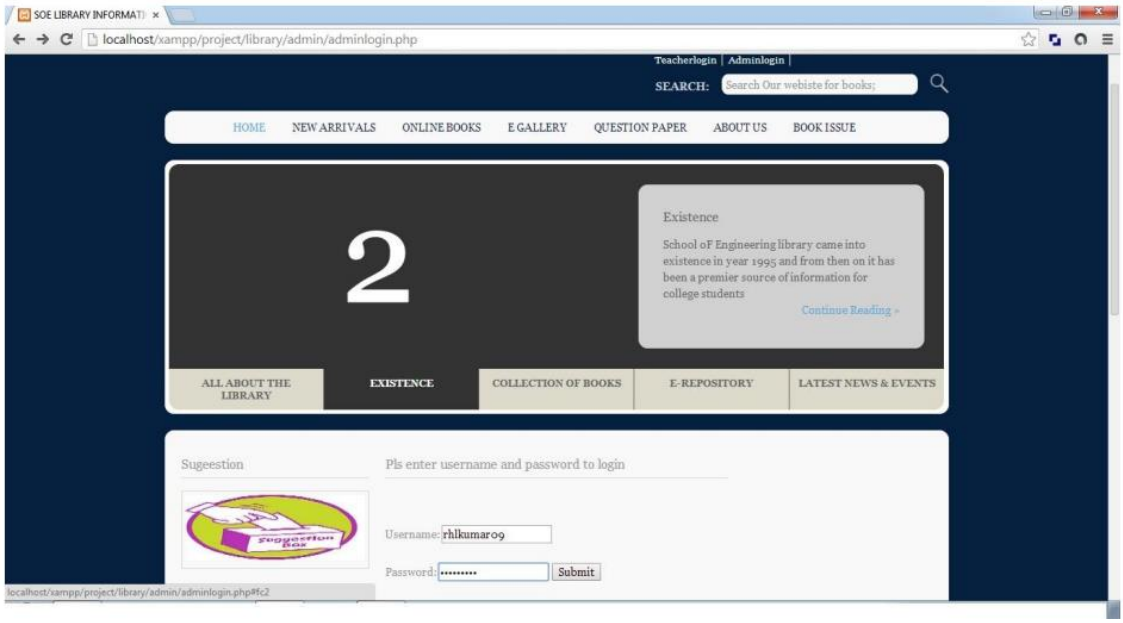

Fig: 6.2 Admin login

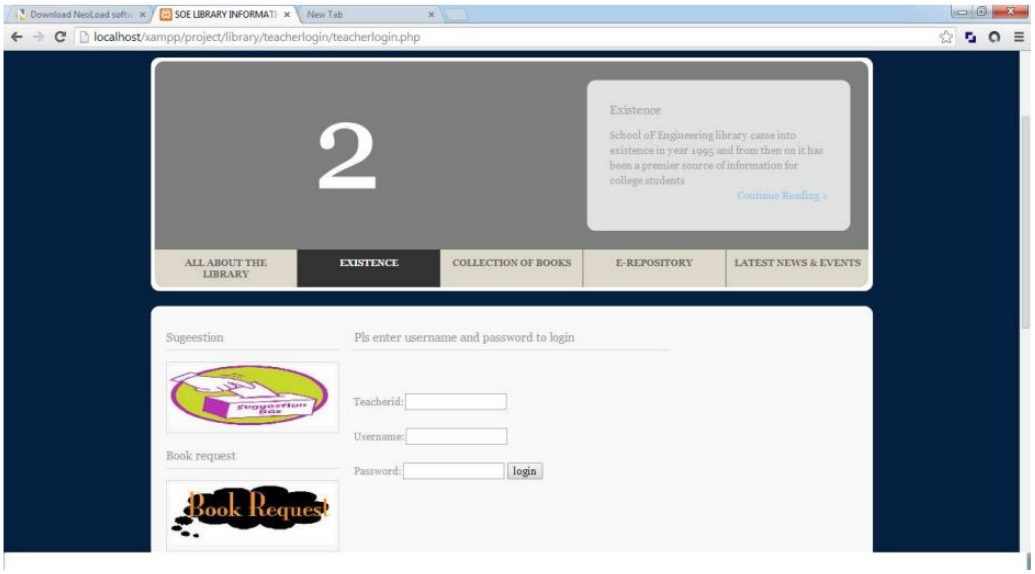

Fig: 6.3 Teacher login

Library Management System

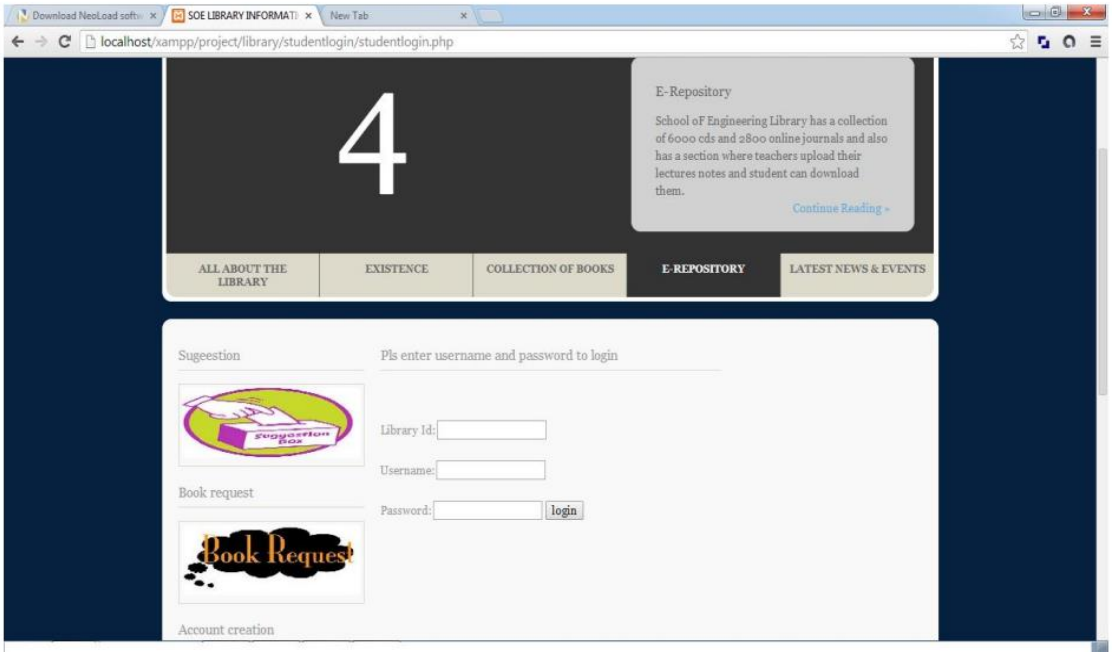

Fig: 6.4 Student login

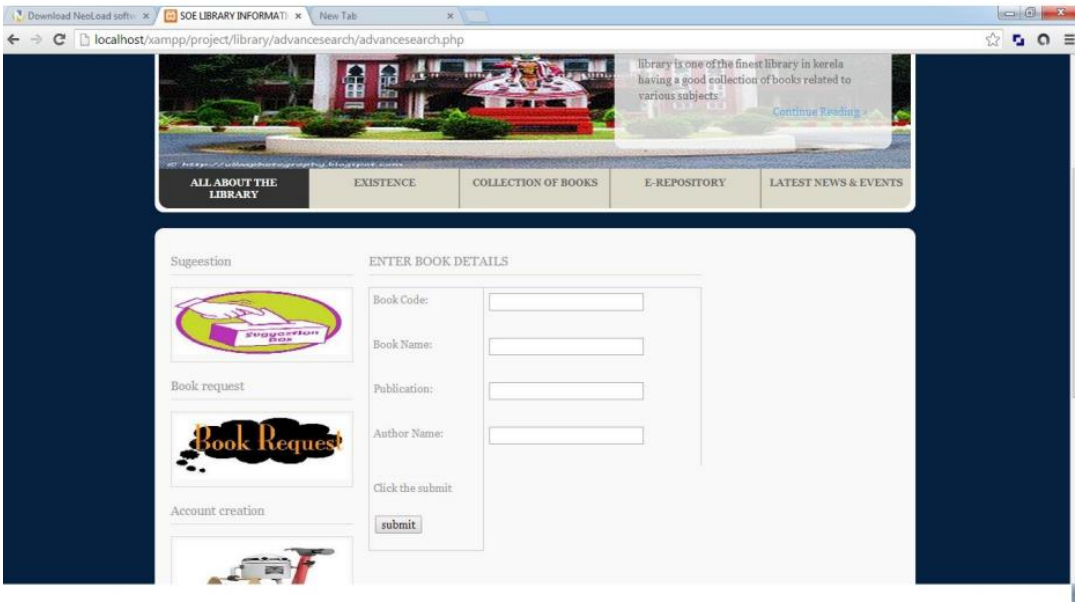

Fig: 6.5 Book search

CHAPTER 7

CONCLUSION & 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.

REFERENCES

- During the course of this project reference to the following materials were made.

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2. https://www.geeksforgeeks.org/dbms/
3. Fundamentals of software engineering by Rajib mall, PHIlearning
4. Web development and application development by Ivan Byross BPB publications