

A Project Report On
LIBRARY MANAGEMENT SYSTEM

Submitted in partial fulfilment of the
MASTER OF COMPUTER APPLICATION

By
Shiva Gupta
Enrolment number - **AJU/211029**

Under the esteemed guidance of
Dr. Arvind Kumar Pandey
(Head of the Department)
And
Ms. Alka kumari
(Internal guide)



DEPARTMENT OF COMPUTER SCIENCE & IT
ARKA JAIN UNIVERSITY, JHARKHAND

Jamshedpur
2021-2023

ARKA JAIN UNIVERSITY

The image shows the entrance gate of Arka Jain University. The gate is a large, white, rectangular structure with a flat roof. The name 'ARKA JAIN UNIVERSITY' is written in large, dark, capital letters across the top of the gate. The gate is flanked by two tall, white pillars. In the center of the gate is a large, dark brown wooden door. A person in a blue shirt and dark pants is standing in front of the door. The gate is surrounded by a low wall made of light-colored stone blocks. There are some potted plants and trees in the background.

GUIDED BY

**DR. ARVIND KUMAR PANDEY
(HOD)**

&

**Ms. ALKA KUMARI
(Internal guide)**

SUBMITTED

SHIVA GUPTA

SUBMITTED TO

**DEPARTMENT OF COMPUTER SCIENCE & IT
ARKA JAIN UNIVERSITY**

ARKA JAIN UNIVERSITY, JHARKHAND

DEPARTMENT OF COMPUTER SCIENCE & IT



CERTIFICATE

This is to certify that the project entitled, " Library Management System", is bonafide work of **Shiva Gupta** bearing Enrolment no- **AJU/211029** submitted in partial fulfilment of the requirements for the award of degree of MASTER OF COMPUTER APPLICATION (MCA) from ARKA JAIN UNIVERSITY JHARKHAND.

Arka Singh

Internal Guide

Amal Pandey
HOD



Date -

23/7/22

University seal

ABSTRACT

The Library management System is an application for assisting a librarian in managing a book library in a university. The system would provide basic set of feature to add/update books, and manage check in specifications for the system based on the client's statement of need.

Library management system is a typical management information system (MIS), its development include the establishment and maintenance of back-end database and front-end application development aspects. For the former require the establishment of data consistency and integrity of the strong data security and good libraries. As for the latter requires the application full functional, easy to use and so on.

ACKNOWLEDEMENT

Before we describe in brief about our project, we would like to add a few heartfelt words for the people who were very much helpful for us in developing this project. We heartily thank to our Mam “ **Ms. Alka kumari** “ for giving us this opportunity to develop the project. We give him our sincere salute for inspiring and motivating us.

We would like to thank whole teaching staff of Arka Jain university, who have contributed greatly to the success of this project.

I would like to specially thank “ **Dr. Arvind Kumar Pandey** “ our Head of the Department who gave me the golden opportunity to do this wonderful project on the topic “Library Management System”, which helped me in research and I came to know about so many things.

TABLE OF CONTENTS

Chapter 1

1. Introduction	
1.1 Introduction	1
1.2 Objective	1
1.3 module	1

Chapter 2

2. Survey of Technologies	
2.1 Software description	2
2.2 Languages	2
2.2.1 HTML	2
2.2.2 CSS	2
2.2.3 PHP	3
2.2.4 MySQL	3

Chapter 3

3. Requirements and analysis	
3.1 Requirement Specification	4
3.2 Hardware and Software Requirements	4
3.3 Data flow diagram	4
3.3.1 Level 0	5
3.3.2 Level 1	5
3.3.3 Level 2	6
3.4 Data Dictionary	7
3.5 ER-Diagram	11
3.6 Normalization	12

Chapter 4

4. Program code
4.1 Code Details and Code Efficiency17

Chapter 5

5. Result and Discussion
5.1. User Documentation42

Chapter 6

6. Testing
6.1. Unit Testing46
6.2. Integration Testing46
6.3 System Testing46
6.4. Acceptance Testing46

Chapter 7

7. Conclusion
7.1 conclusion47

Ch 1. INTRODUCTION

1.1 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.

You can find books in an instant, issue/reissue books quickly, and manage all the data efficiently and orderly using this system. The purpose of a library management system is to provide instant and accurate data regarding any type of book, thereby saving a lot of time and effort.

1.2 OBJECTIVE

The main objective of the Library Management System is to manage the details of Address, Member, Issues, Books, Student. It manages all the information about Address, Librarian, Student, Address. The project is totally built at administrative end and thus only the administrator is guaranteed the access.

1.3 MODULE

- ADD NEW BOOKS
- VIEW BOOKS
- ISSUE BOOKS
- RENEW BOOKS
- RETURN BOOKS

Ch 2. SURVEY OF TECHNOLOGY

2.1 SOFTWARE DESCRIPTION

Visual studio Code

Visual Studio Code combines the simplicity of a source code editor with powerful developer tooling, like IntelliSense code completion and debugging.

First and foremost, it is an editor that gets out of your way. The delightfully frictionless edit-build-debug cycle means less time fiddling with your environment, and more time executing on your ideas.

2.2 LANGUAGES

2.2.1 HTML

Hypertext: text (often with embeds such as images, too) that is organized in order to connect related items

Markup: a style guide for typesetting anything to be printed in hardcopy or soft copy format

Language: a language that a computer system understands and uses to interpret commands.

HTML determines the structure of web pages. This structure alone is not enough to make a web page look good and interactive. So you'll use assisted technologies such as CSS and JavaScript to make your HTML beautiful and add interactivity, respectively.

2.2.2 CSS

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

2.2.3 PHP

PHP is a server side scripting language. that is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor, that earlier stood for Personal Home Pages.

PHP scripts can only be interpreted on a server that has PHP installed.
The client computers accessing the PHP scripts require a web browser only.

2.2.4 MySQL

Many of the world's largest and fastest-growing organisations including Facebook, Google, Adobe, Alcatel Lucent and Zappos rely on MySQL to save time and money powering their high-volume Web sites, business-critical systems and packaged software. Since then, the performance & scalability, reliability, and ease of use of the world's most popular open source database, characteristics that made MySQL the #1 choice for web applications, have relentlessly been improved.

Ch 3. REQUIREMENT AND ANALYSIS

3.1 REQUIREMENTS SPECIFICATION

User Requirements

The system requirement in library management focuses on the possibility of search for books by title, author or subject by the member.

System Requirements

There should be a database backup of the library management system. Operating system should be WindowsXP or a higher version of windows.

3.2 HARDWARE AND SOFTWARE REQUIREMENTS

Software Requirements

- Operating System Windows 10
- Front End HTML , CSS , javascript
- Back End PHP, MySQL

Hardware Requirements

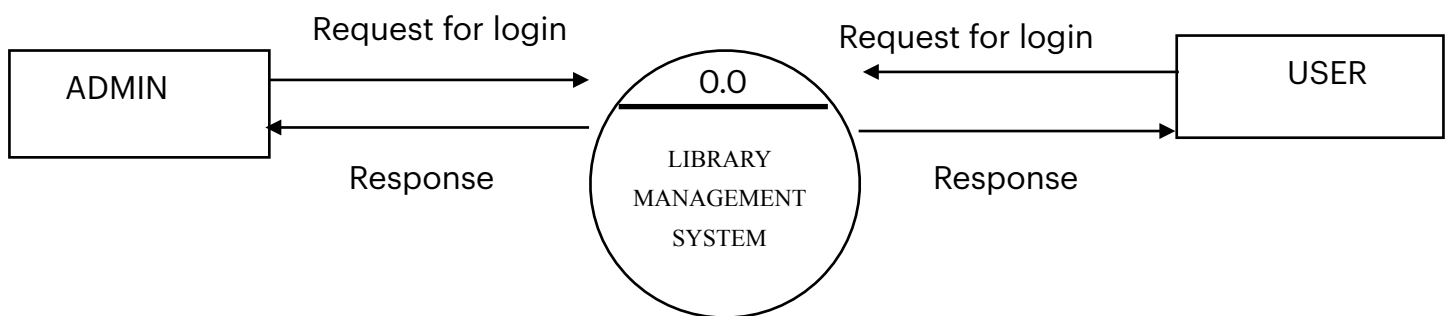
- Desktop PC or a Laptop
- Printer
- Operating System – Windows 10
- Intel® Core™ i3-6006U CPU @ 2.00GHz • 4.00 GB RAM
- 64-bit operating system, x64 based processor • 1024 x 768 monitor resolution
- Keyboard and Mouse

3.3 DATA FLOW DIAGRAM

DFD is an important tool used by system analysis. A data flow diagram model, a system using external entities from which data flows through a process which transforms the data and creates output data transforms which go to other processes external entities such as files. The main merit of DFD is that it can provide an overview of what data a system would process.

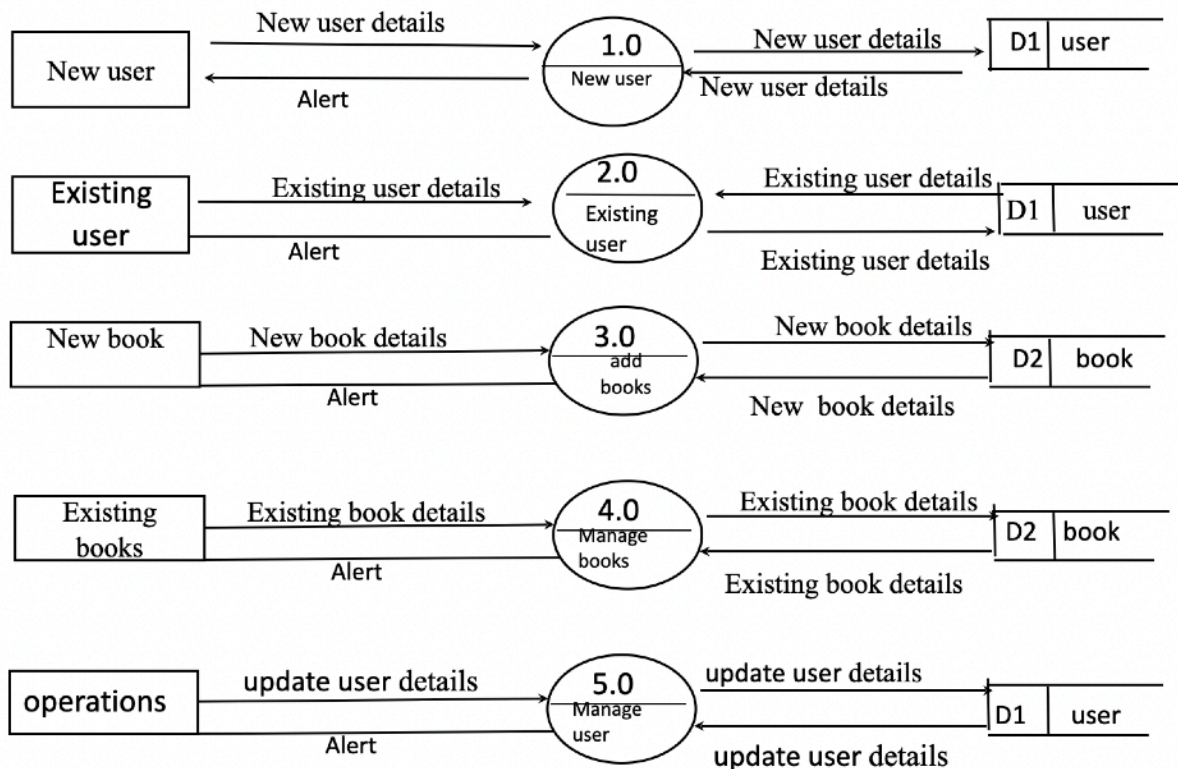
- A data-flow diagram is a way of representing a flow of data through a process or a system.
- The DFD also provides information about the outputs and inputs of each entity and the process itself.

CONTEXT LEVEL DFD :



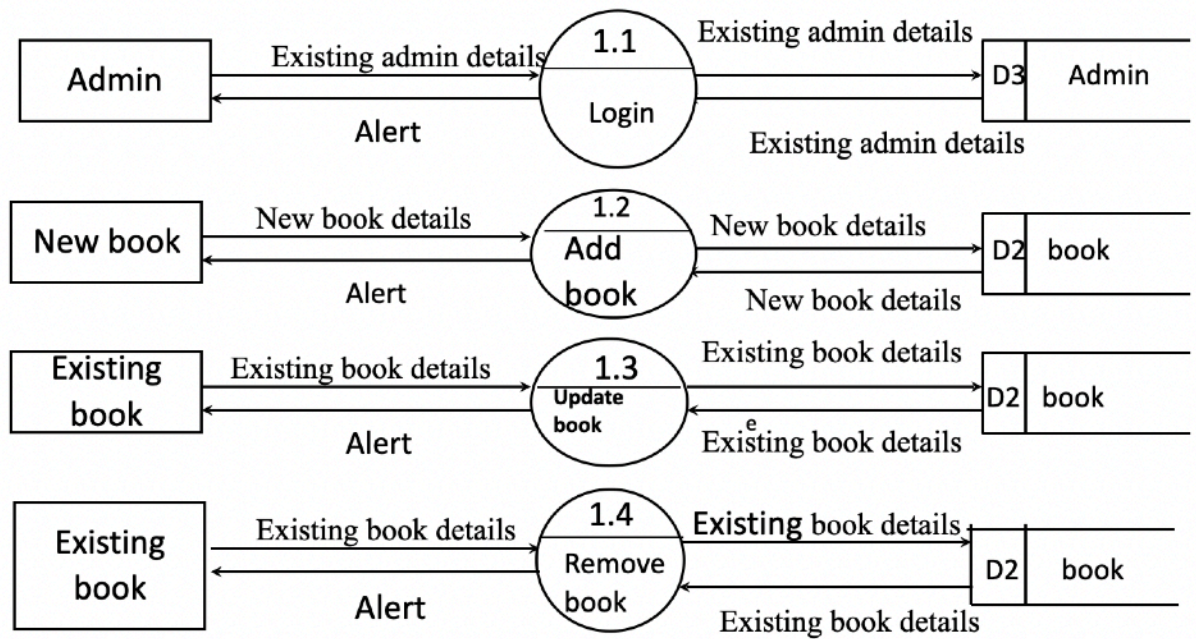
LEVEL 1 :

1st Level DFD



LEVEL 2:

2nd Level DFD lib



3.4 DATA DICTIONARY

22/07/2022, 15:38

localhost / localhost / lms | phpMyAdmin 5.2.0

lms

author

Column	Type	Null	Default	Links to	Comments	Media type
BookId (Primary)	int(10)	No		book -> BookId		
Author (Primary)	varchar(50)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	BookId	21	A	No	
				Author	21	A	No	

book

Column	Type	Null	Default	Links to	Comments	Media type
BookId (Primary)	int(10)	No				
Title	varchar(50)	Yes	NULL			
Publisher	varchar(50)	Yes	NULL			
Year	varchar(50)	Yes	NULL			
Availability	int(5)	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	BookId	18	A	No	

message

Column	Type	Null	Default	Links to	Comments	Media type
M_Id (Primary)	int(10)	No				
RollNo	varchar(50)	Yes	NULL	user -> RollNo		
Msg	varchar(255)	Yes	NULL			
Date	date	Yes	NULL			
Time	time	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	M_Id	33	A	No	
RollNo	BTREE	No	No	RollNo	16	A	Yes	

recommendations

Column	Type	Null	Default	Links to	Comments	Media type
R_ID (<i>Primary</i>)	int(10)	No				
Book_Name	varchar(50)	Yes	NULL			
Description	varchar(255)	Yes	NULL			
RollNo	varchar(50)	Yes	NULL	user -> RollNo		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	R_ID	6	A	No	
RollNo	BTREE	No	No	RollNo	6	A	Yes	

record

Column	Type	Null	Default	Links to	Comments	Media type
RollNo (<i>Primary</i>)	varchar(50)	No		user -> RollNo		
BookId (<i>Primary</i>)	int(10)	No		book -> BookId		
Date_of_Issue	date	Yes	NULL			
Due_Date	date	Yes	NULL			
Date_of_Return	date	Yes	NULL			
Dues	int(10)	Yes	NULL			
Renewals_left	int(10)	Yes	NULL			
Time	time	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	RollNo	29	A	No	

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
				BookId	29	A	No	
BookId	BTREE	No	No	BookId	29	A	No	

renew

Column	Type	Null	Default	Links to	Comments	Media type
RollNo (<i>Primary</i>)	varchar(50)	No		user -> RollNo		
BookId (<i>Primary</i>)	int(10)	No		book -> BookId		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	RollNo	5	A	No	
				BookId	5	A	No	
BookId	BTREE	No	No	BookId	5	A	No	

return

Column	Type	Null	Default	Links to	Comments	Media type
RollNo (<i>Primary</i>)	varchar(50)	No		user -> RollNo		
BookId (<i>Primary</i>)	int(10)	No		book -> BookId		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	RollNo	5	A	No	
				BookId	5	A	No	
BookId	BTREE	No	No	BookId	5	A	No	

user

Column	Type	Null	Default	Links to	Comments	Media type
RollNo (<i>Primary</i>)	varchar(50)	No				
Name	varchar(50)	Yes	NULL			
Type	varchar(50)	Yes	NULL			

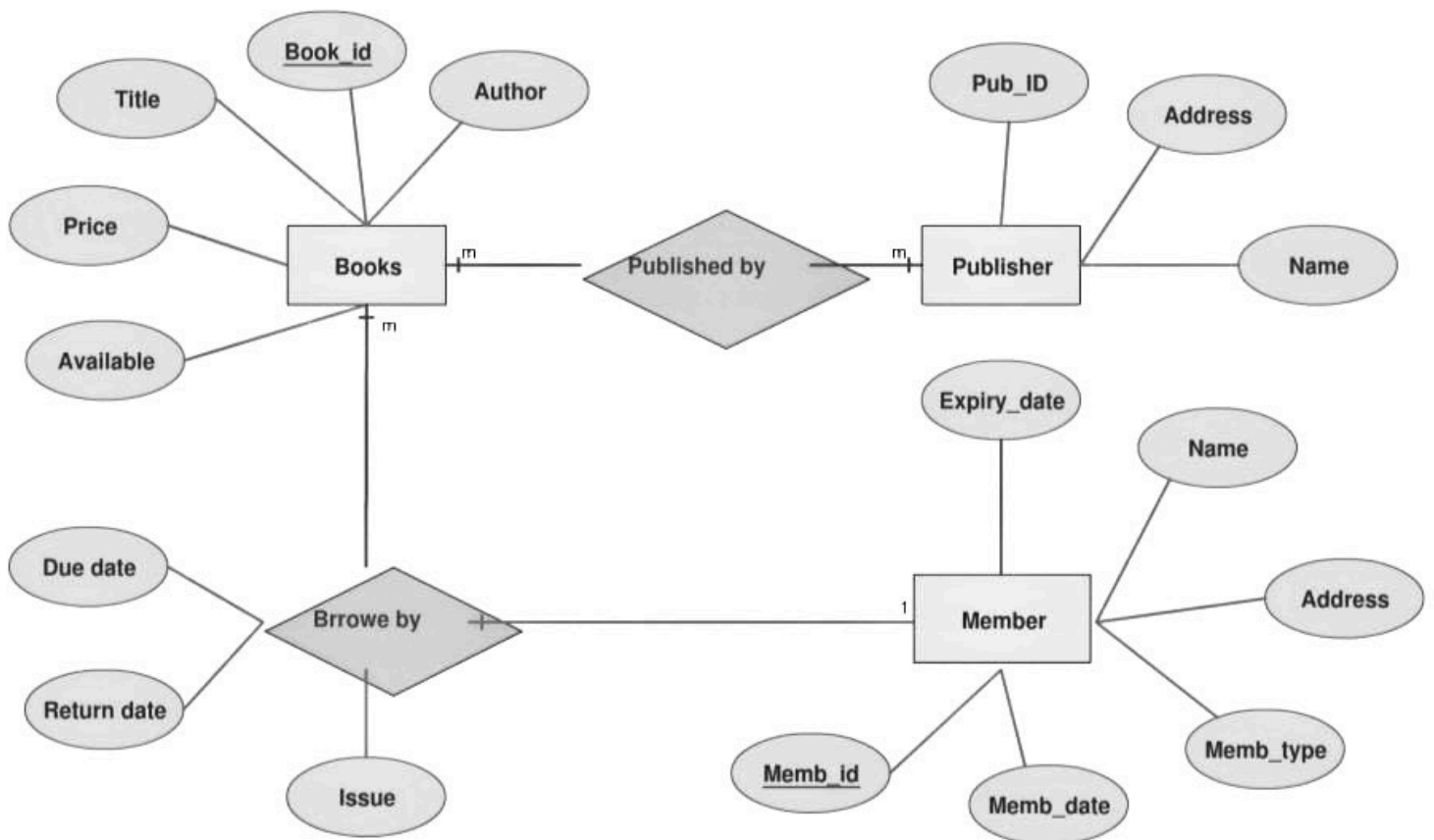
Column	Type	Null	Default	Links to	Comments	Media type
Category	varchar(50)	Yes	NULL			
EmailId	varchar(50)	Yes	NULL			
MobNo	bigint(11)	Yes	NULL			
Password	varchar(50)	Yes	NULL			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	RollNo	26	A	No	
EmailId	BTREE	Yes	No	EmailId	26	A	Yes	

3.5 E-R DIAGRAM

E-R Diagram for Library Management System



3.6 NORMALIZATION

Raw database

Column name	Data type	Key constraints
BookId	varchar(50)	Primary Key NOT NULL
Title	varchar(50)	NOT NULL
Publisher	varchar(50)	NOT NULL
Year	Int(5)	NOT NULL
BookId	varchar(50)	Primary Key NOT NULL
Author	varchar(50)	Primary Key NOT NULL
Date	varchar(50)	NOT NULL
Time	varchar(50)	NOT NULL
Msg	varchar(255)	NOT NULL
RollNo	varchar(50)	NOT NULL
M_Id	varchar(50)	Primary Key NOT NULL
Name	varchar(50)	NOT NULL
Type	varchar(50)	NOT NULL
Category	varchar(50)	NOT NULL
EmailId	varchar(50)	NOT NULL
MobNo	varchar(50)	NOT NULL
Password	varchar(50)	NOT NULL

First Normal Form (1NF)

AUTHOR TABLE

Column name	Data type	Key constraints
BookId	varchar(50)	Primary Key NOT NULL
Author	varchar(50)	Primary Key NOT NULL

USER TABLE

Column name	Data type	Key constraints
RollNo	varchar(50)	Primary Key NOT NULL
Name	varchar(50)	NOT NULL
Type	varchar(50)	NOT NULL
Category	varchar(50)	NOT NULL
EmailId	varchar(50)	NOT NULL
MobNo	varchar(50)	NOT NULL
Password	varchar(50)	NOT NULL
BookId	varchar(50)	Primary Key NOT NULL
Title	varchar(50)	NOT NULL
Publisher	varchar(50)	NOT NULL
Year	Int(5)	NOT NULL

BOOKS TABLE

Column name	Data type	Key constraints
BookId	varchar(50)	Primary Key NOT NULL
Title	varchar(50)	NOT NULL
Publisher	varchar(50)	NOT NULL
Year	Int(5)	NOT NULL

RETURN AND RENEW TABLE

Column name	Data type	Key constraints
Name	varchar(50)	NOT NULL
RollNo	varchar(50)	Primary Key NOT NULL
BookId	varchar(50)	Primary Key NOT NULL
Type	varchar(50)	NOT NULL
Category	varchar(50)	NOT NULL
EmailId	varchar(50)	NOT NULL

MESSAGE TABLE

Column name	Data type	Key constraints
Date	varchar(50)	NOT NULL
Time	varchar(50)	NOT NULL
Msg	varchar(255)	NOT NULL
RollNo	varchar(50)	NOT NULL

M_Id	varchar(50)	Primary Key NOT NULL
BookId	varchar(50)	Primary Key NOT NULL
Title	varchar(50)	NOT NULL
Publisher	varchar(50)	NOT NULL
Year	Int(5)	NOT NULL

Second Normal Form (2NF)

AUTHOR TABLE

Column name	Data type	Key constraints
BookId	varchar(50)	Primary Key NOT NULL
Author	varchar(50)	Primary Key NOT NULL

BOOKS TABLE

Column name	Data type	Key constraints
BookId	varchar(50)	Primary Key NOT NULL
Title	varchar(50)	NOT NULL
Publisher	varchar(50)	NOT NULL
Year	Int(5)	NOT NULL

RETURN TABLE

Column name	Data type	Key constraints
Name	varchar(50)	NOT NULL
RollNo	varchar(50)	Primary Key NOT NULL
Type	varchar(50)	NOT NULL
Category	varchar(50)	NOT NULL
EmailId	varchar(50)	NOT NULL

MESSAGE TABLE

Column name	Data type	Key constraints
Date	varchar(50)	NOT NULL
Time	varchar(50)	NOT NULL
Msg	varchar(255)	NOT NULL
RollNo	varchar(50)	NOT NULL
M_Id	varchar(50)	Primary Key NOT NULL

RENEW TABLE

Column name	Data type	Key constraints
RollNo	varchar(50)	Primary Key NOT NULL
BookId	varchar(50)	Primary Key NOT NULL

USER TABLE

Column name	Data type	Key constraints
RollNo	varchar(50)	Primary Key NOT NULL
Name	varchar(50)	NOT NULL
Type	varchar(50)	NOT NULL
Category	varchar(50)	NOT NULL
EmailId	varchar(50)	NOT NULL
MobNo	varchar(50)	NOT NULL
Password	varchar(50)	NOT NULL

Ch 4. PROGRAM CODE

4.1. CODE DETAILS AND CODE EFFICIENCY

Index

```
<?php
require('dbconn.php');
?>

<!DOCTYPE html>
<html>

<!-- Head -->
<head>

<title>Library Management System </title>

<!-- Meta-Tags -->
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<meta name="keywords" content="Library Member Login Form Widget
Responsive, Login Form Web Template, Flat Pricing Tables, Flat Drop-Downs, Sign-Up
Web Templates, Flat Web Templates, Login Sign-up Responsive Web Template,
Smartphone Compatible Web Template, Free Web Designs for Nokia, Samsung, LG, Sony
Ericsson, Motorola Web Design" />

<script type="application/x-javascript"> addEventListener("load", function()
{ setTimeout(hideURLbar, 0); }, false); function hideURLbar(){ window.scrollTo(0,1); }
</script>

<!-- //Meta-Tags -->
```



```
<!-- Style --> <link rel="stylesheet" href="css/style.css" type="text/css"
media="all">
```

```
<!-- Fonts -->
<link href="//fonts.googleapis.com/css?
family=Roboto:100,300,400,500,700,900" rel="stylesheet">
<!-- //Fonts -->
```

```
</head>
<!-- //Head -->
```

```
<!-- Body -->
<body>
```

```
<h1>LIBRARY MANAGEMENT SYSTEM</h1>
```

```
<div class="container">
```

```
<div class="login">
<h2>Sign In</h2>
<form action="index.php" method="post">
<input type="text" Name="RollNo" placeholder="RollNo" required="">
<input type="password" Name="Password" placeholder="Password"
required="">
```

```
<div class="send-button">
<!--<form>-->
<input type="submit" name="signin"; value="Sign In">
</form>
```

</div>

<div class="clear"></div>

</div>

<div class="register">

<h2>Sign Up</h2>

<form action="index.php" method="post">

<input type="text" Name="Name" placeholder="Name" required>

<input type="text" Name="Email" placeholder="Email" required>

<input type="password" Name="Password" placeholder="Password"

required>

<input type="text" Name="PhoneNumber" placeholder="Phone Number"

required>

<input type="text" Name="RollNo" placeholder="Roll Number"

required="">

<select name="Category" id="Category">

<option value="GEN">General</option>

<option value="OBC">OBC</option>

<option value="SC">SC</option>

<option value="ST">ST</option>

</select>

<div class="send-button">

<input type="submit" name="signup" value="Sign Up">

</form>

</div>

```
<p>By creating an account, you agree to our <a class="underline"
href="terms.html">Terms</a></p>
```

```
<div class="clear"></div>
```

```
</div>
```

```
<div class="clear"></div>
```

```
</div>
```

```
<div class="footer w3layouts agileits">
```

```
<p> &copy; 2018 Library Member Login. All Rights Reserved </a></p>
```

```
</div>
```

```
<?php
```

```
if(isset($_POST['signin']))
```

```
{ $u=$_POST['RollNo'];
```

```
$p=$_POST['Password'];
```

```
$c=$_POST['Category'];
```

```
$sql="select * from LMS.user where RollNo='$u'";
```

```
$result = $conn->query($sql);
```

```
$row = $result->fetch_assoc();
```

```
$x=$row['Password'];
```

```
$y=$row['Type'];
```

```
if(strcasecmp($x,$p)==0 && !empty($u) && !empty($p))
```

```
{//echo "Login Successful";
```

```
$_SESSION['RollNo']=$u;
```

```

        if($y=='Admin')
            header('location:admin/index.php');
        else
            header('location:student/index.php');

    }
    else
        { echo "<script type='text/javascript'>alert('Failed to Login! Incorrect RollNo or
Password')</script>";
        }

    }

    if(isset($_POST['signup']))
    {
        $name=$_POST['Name'];
        $email=$_POST['Email'];
        $password=$_POST['Password'];
        $mobno=$_POST['PhoneNumber'];
        $rollno=$_POST['RollNo'];
        $category=$_POST['Category'];
        $type='Student';

        $sql="insert into LMS.user
(Name,Type,Category,RollNo,EmailId,MobNo>Password) values
('$name','$type','$category','$rollno','$email','$mobno','$password')";

        if ($conn->query($sql) === TRUE) {
            echo "<script type='text/javascript'>alert('Registration Successful')</script>";
        } else {

```

```

        //echo "Error: " . $sql . "<br>" . $conn->error;
        echo "<script type='text/javascript'>alert('User Exists')</script>";
    }
}

```

```

?>

```

```

</body>

```

```

<!-- //Body -->

```

```

</html>

```

Accept

```

<?php

```

```

require('dbconn.php');

```

```

$bookid=$_GET['id1'];

```

```

$rollno=$_GET['id2'];

```

```

$sql="select Category from LMS.user where RollNo='$rollno'";

```

```

$result=$conn->query($sql);

```

```

$row=$result->fetch_assoc();

```

```

$category=$row['Category'];

```

```

if($category == 'GEN' || $category == 'OBC' )

```

```

{
    $sql1="update LMS.record set

```

```

Date_of_Issue=curdate(),Due_Date=date_add(curdate(),interval 60 day),Renewals_left=1

```

```

where BookId='$bookid' and RollNo='$rollno'";

```

```

if($conn->query($sql1) === TRUE)
{
    $sql3="update LMS.book set Availability=Availability-1 where BookId='$bookid'";
    $result=$conn->query($sql3);
    $sql5="insert into LMS.message (RollNo,Msg,Date,Time) values ('$rollno','Your
request for issue of BookId: $bookid has been accepted',curdate(),curtime())";
    $result=$conn->query($sql5);
    echo "<script type='text/javascript'>alert('Success')</script>";
    header( "Refresh:0.01; url=issue_requests.php", true, 303);
}
else
{
    echo "<script type='text/javascript'>alert('Error')</script>";
    header( "Refresh:1; url=issue_requests.php", true, 303);

}
}
else
{
    $sql2="update LMS.record set
Date_of_Issue=curdate(),Due_Date=date_add(curdate(),interval 180
day),Renewals_left=1 where BookId='$bookid' and RollNo='$rollno'";

    if($conn->query($sql2) === TRUE)
    {
        $sql4="update LMS.book set Availability=Availability-1 where BookId='$bookid'";
        $result=$conn->query($sql4);
        $sql6="insert into LMS.message (RollNo,Msg,Date,Time) values ('$rollno','Your
request for issue of BookId: $bookid has been accepted',curdate(),curtime())";
        $result=$conn->query($sql6);
        echo "<script type='text/javascript'>alert('Success')</script>";
        header( "Refresh:1; url=issue_requests.php", true, 303);
    }
    else

```

```

{
    echo "<script type='text/javascript'>alert('Error')</script>";
    header( "Refresh:1; url=issue_requests.php", true, 303);

}
}

```

```
?>
```

Accept renewal

```
<?php
```

```
require('dbconn.php');
```

```
$bookid=$_GET['id1'];
```

```
$rollno=$_GET['id2'];
```

```
$sql="select Category from LMS.user where RollNo='$rollno'";
```

```
$result=$conn->query($sql);
```

```
$row=$result->fetch_assoc();
```

```
$category=$row['Category'];
```

```
if($category == 'GEN' || $category == 'OBC' )
```

```
{ $sql1="update LMS.record set Due_Date=date_add(Due_Date,interval 60
day),Renewals_left=0 where BookId='$bookid' and RollNo='$rollno'";
```

```
if($conn->query($sql1) === TRUE)
```

```

{$sql3="delete from LMS.renew where BookId='$bookid' and RollNo='$rollno'";
$result=$conn->query($sql3);

$sql5="insert into LMS.message (RollNo,Msg,Date,Time) values ('$rollno','Your
request for renewal of BookId: $bookid has been accepted',curdate(),curtime())";
$result=$conn->query($sql5);
echo "<script type='text/javascript'>alert('Success')</script>";
header( "Refresh:0.01; url=renew_requests.php", true, 303);
}
else
{
    echo "<script type='text/javascript'>alert('Error')</script>";
    header( "Refresh:0.01; url=renew_requests.php", true, 303);

}
}
else
{
    {$sql2="update LMS.record set Due_Date=date_add(Due_Date,interval 180
day),Renewals_left=0 where BookId='$bookid' and RollNo='$rollno'";

    if($conn->query($sql2) === TRUE)
    {$sql4="delete from LMS.renew where BookId='$bookid' and RollNo='$rollno'";
    $result=$conn->query($sql4);
    $sql6="insert into LMS.message (RollNo,Msg,Date,Time) values ('$rollno','Your
request for renewal of BookId: $bookid has been accepted',curdate(),curtime())";
    $result=$conn->query($sql6);
    echo "<script type='text/javascript'>alert('Success')</script>";
    header( "Refresh:0.01; url=renew_requests.php", true, 303);
}
else
{

```



```

        echo "<script type='text/javascript'>alert('Error')</script>";
        header( "Refresh:0.01; url=renew_requests.php", true, 303);

    }

}

```

```
?>
```

```
Acceptreturn
```

```
<?php
```

```
require('dbconn.php');
```

```
$bookid=$_GET['id1'];
```

```
$rollno=$_GET['id2'];
```

```
$dues=$_GET['id3'];
```

```
$sql="select Category from LMS.user where RollNo='$rollno'";
```

```
$result=$conn->query($sql);
```

```
$row=$result->fetch_assoc();
```

```
$category=$row['Category'];
```

```

        $sql1="update LMS.record set Date_of_Return=curdate(),Dues='$dues' where
        BookId='$bookid' and RollNo='$rollno'";

```

```
if($conn->query($sql1) === TRUE)
```

```

        {$sql3="update LMS.book set Availability=Availability+1 where
BookId='$bookid'";
        $result=$conn->query($sql3);
        $sql4="delete from LMS.return where BookId='$bookid' and RollNo='$rollno'";
        $result=$conn->query($sql4);
        $sql6="delete from LMS.renew where BookId='$bookid' and RollNo='$rollno'";
        $result=$conn->query($sql6);
        $sql5="insert into LMS.message (RollNo,Msg,Date,Time) values ('$rollno','Your
request for return of BookId: $bookid has been accepted',curdate(),curtime())";
        $result=$conn->query($sql5);
        echo "<script type='text/javascript'>alert('Success')</script>";
        header( "Refresh:0.01; url=return_requests.php", true, 303);
    }
    else
    {
        echo "<script type='text/javascript'>alert('Error')</script>";
        header( "Refresh:1; url=return_requests.php", true, 303);

    }
?>

ADD BOOK

<?php
require('dbconn.php');
?>

<?php
if ($_SESSION['RollNo']) {
    ?>

<!DOCTYPE html>
<html lang="en">

```

```

<head>
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LMS</title>
  <link type="text/css" href="bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link type="text/css" href="bootstrap/css/bootstrap-responsive.min.css"
rel="stylesheet">
  <link type="text/css" href="css/theme.css" rel="stylesheet">
  <link type="text/css" href="images/icons/css/font-awesome.css"
rel="stylesheet">
  <link type="text/css" href='http://fonts.googleapis.com/css?
family=Open+Sans:400italic,600italic,400,600'
rel='stylesheet'>
</head>
<body>
  <div class="navbar navbar-fixed-top">
    <div class="navbar-inner">
      <div class="container">
        <a class="btn btn-navbar" data-toggle="collapse" data-target=".navbar-
inverse-collapse">
          <i class="icon-reorder shaded"></i></a><a class="brand"
href="index.php">LMS </a>
        <div class="nav-collapse collapse navbar-inverse-collapse">
          <ul class="nav pull-right">
            <li class="nav-user dropdown"><a href="#" class="dropdown-
toggle" data-toggle="dropdown">
              
              <b class="caret"></b></a>
              <ul class="dropdown-menu">
                <li><a href="index.php">Your Profile</a></li>
                <!--li><a href="#">Edit Profile</a></li>

```

```

        <li><a href="#">Account Settings</a></li-->
        <li class="divider"></li>
        <li><a href="logout.php">Logout</a></li>
    </ul>
</li>
</ul>
</div>
<!-- /.nav-collapse -->
</div>
</div>
<!-- /navbar-inner -->
</div>
<!-- /navbar -->
<div class="wrapper">
    <div class="container">
        <div class="row">
            <div class="span3">
                <div class="sidebar">
                    <ul class="widget widget-menu unstyled">
                        <li class="active"><a href="index.php"><i class="menu-icon
icon-home"></i>Home
                        </a></li>
                        <li><a href="message.php"><i class="menu-icon icon-
inbox"></i>Messages</a>
                        </li>
                        <li><a href="student.php"><i class="menu-icon icon-user"></
i>Manage Students </a>
                        </li>
                        <li><a href="book.php"><i class="menu-icon icon-book"></
i>All Books </a></li>

```

```

        <li><a href="addbook.php"><i class="menu-icon icon-edit"></i>Add Books </a></li>
        <li><a href="requests.php"><i class="menu-icon icon-tasks"></i>Issue/Return Requests </a></li>
        <li><a href="recommendations.php"><i class="menu-icon icon-list"></i>Book Recommendations </a></li>
        <li><a href="current.php"><i class="menu-icon icon-list"></i>Currently Issued Books </a></li>
    </ul>
    <ul class="widget widget-menu unstyled">
        <li><a href="logout.php"><i class="menu-icon icon-signout"></i>Logout </a></li>
    </ul>
</div>
<!--/.sidebar-->
</div>
<!--/.span3-->
<!--/.span9-->
<div class="span9">
    <div class="content">

        <div class="module">
            <div class="module-head">
                <h3>Add Book</h3>
            </div>
            <div class="module-body">

                <br >

```

```

        <form class="form-horizontal row-fluid"
action="addbook.php" method="post">
        <div class="control-group">
            <label class="control-label" for="Title"><b>Book Title</
b></label>

            <div class="controls">
                <input type="text" id="title" name="title"
placeholder="Title" class="span8" required>
            </div>
        </div>
        <div class="control-group">
            <label class="control-label" for="Author"><b>Author</
b></label>

            <div class="controls">
                <input type="text" id="author1" name="author1"
class="span8" required>

                <input type="text" id="author2" name="author2"
class="span8">

                <input type="text" id="author3" name="author3"
class="span8">

            </div>
        </div>
        <div class="control-group">
            <label class="control-label"
for="Publisher"><b>Publisher</b></label>

            <div class="controls">
                <input type="text" id="publisher" name="publisher"
placeholder="Publisher" class="span8" required>
            </div>
        </div>

```

```

        <div class="control-group">
            <label class="control-label" for="Year"><b>Year</b></
label>

            <div class="controls">
                <input type="text" id="year" name="year"
placeholder="Year" class="span8" required>
            </div>
        </div>

        <div class="control-group">
            <label class="control-label"
for="Availability"><b>Number of Copies</b></label>

            <div class="controls">
                <input type="text" id="availability"
name="availability" placeholder="Number of Copies" class="span8" required>
            </div>
        </div>

        <div class="control-group">
            <div class="controls">
                <button type="submit"
name="submit" class="btn">Add Book</button>
            </div>
        </div>
    </form>
</div>
</div>
</div>

</div><!--/.content-->

```

</div>

</div>

</div>

<!--/.container-->

</div>

<div class="footer">

<div class="container">

<b class="copyright">© 2018 Library Management System All
rights reserved.

</div>

</div>

<!--/.wrapper-->

<script src="scripts/jquery-1.9.1.min.js" type="text/javascript"></script>

<script src="scripts/jquery-ui-1.10.1.custom.min.js" type="text/javascript"></
script>

<script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="scripts/flot/jquery.flot.js" type="text/javascript"></script>

<script src="scripts/flot/jquery.flot.resize.js" type="text/javascript"></script>

<script src="scripts/datatables/jquery.dataTables.js" type="text/javascript"></
script>

<script src="scripts/common.js" type="text/javascript"></script>

<?php

if(isset(\$_POST['submit']))

{

\$title=\$_POST['title'];


```

$author1=$_POST['author1'];
$author2=$_POST['author2'];
$author3=$_POST['author3'];
$publisher=$_POST['publisher'];
$year=$_POST['year'];
$savailability=$_POST['availability'];

$sql1="insert into LMS.book (Title,Publisher,Year,Availability) values
('$title','$publisher','$year','$savailability')";

if($conn->query($sql1) === TRUE){
    $sql2="select max(BookId) as x from LMS.book";
    $result=$conn->query($sql2);
    $row=$result->fetch_assoc();
    $x=$row['x'];
    $sql3="insert into LMS.author values ('$x','$author1')";
    $result=$conn->query($sql3);
    if(!empty($author2))
    { $sql4="insert into LMS.author values('$x','$author2')";
      $result=$conn->query($sql4);}
    if(!empty($author3))
    { $sql5="insert into LMS.author values('$x','$author3')";
      $result=$conn->query($sql5);}

    echo "<script type='text/javascript'>alert('Success')</script>";
}
else
{
    //echo $conn->error;
    echo "<script type='text/javascript'>alert('Error')</script>";
}

```

```
}  
?>
```

```
</body>
```

```
</html>
```

```
<?php }  
else {  
    echo "<script type='text/javascript'>alert('Access Denied!!!')</script>";  
} ?>
```

STUDENT DETAILS

```
<?php  
require('dbconn.php');  
?>
```

```
<?php  
if ($_SESSION['RollNo']) {  
    ?>
```

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```

<title>LMS</title>

<link type="text/css" href="bootstrap/css/bootstrap.min.css" rel="stylesheet">

<link type="text/css" href="bootstrap/css/bootstrap-responsive.min.css"
rel="stylesheet">

<link type="text/css" href="css/theme.css" rel="stylesheet">

<link type="text/css" href="images/icons/css/font-awesome.css"
rel="stylesheet">

<link type="text/css" href='http://fonts.googleapis.com/css?
family=Open+Sans:400italic,600italic,400,600'
rel='stylesheet'>
</head>
<body>
<div class="navbar navbar-fixed-top">
<div class="navbar-inner">
<div class="container">
<a class="btn btn-navbar" data-toggle="collapse" data-target=".navbar-
inverse-collapse">
<i class="icon-reorder shaded"></i></a><a class="brand"
href="index.php">LMS </a>
<div class="nav-collapse collapse navbar-inverse-collapse">
<ul class="nav pull-right">
<li class="nav-user dropdown"><a href="#" class="dropdown-
toggle" data-toggle="dropdown">

<b class="caret"></b></a>
<ul class="dropdown-menu">
<li><a href="index.php">Your Profile</a></li>
<!--li><a href="#">Edit Profile</a></li>
<li><a href="#">Account Settings</a></li-->
<li class="divider"></li>
<li><a href="logout.php">Logout</a></li>

```

```

        </ul>
    </li>
</ul>
</div>
<!-- /.nav-collapse -->
</div>
</div>
<!-- /navbar-inner -->
</div>
<!-- /navbar -->
<div class="wrapper">
    <div class="container">
        <div class="row">
            <div class="span3">
                <div class="sidebar">
                    <ul class="widget widget-menu unstyled">
                        <li class="active"><a href="index.php"><i class="menu-icon
icon-home"></i>Home
                        </a></li>
                        <li><a href="message.php"><i class="menu-icon icon-
inbox"></i>Messages</a>
                        </li>
                        <li><a href="student.php"><i class="menu-icon icon-user"></
i>Manage Students </a>
                        </li>
                        <li><a href="book.php"><i class="menu-icon icon-book"></
i>All Books </a></li>
                        <li><a href="addbook.php"><i class="menu-icon icon-edit"></
i>Add Books </a></li>
                        <li><a href="requests.php"><i class="menu-icon icon-tasks"></
i>Issue/Return Requests </a></li>

```

```

        <li><a href="recommendations.php"><i class="menu-icon icon-
list"></i>Book Recommendations </a></li>

        <li><a href="current.php"><i class="menu-icon icon-list"></
i>Currently Issued Books </a></li>

    </ul>

    <ul class="widget widget-menu unstyled">

        <li><a href="logout.php"><i class="menu-icon icon-signout"></
i>Logout </a></li>

    </ul>

</div>

<!--/.sidebar-->

</div>

<!--/.span3-->

<div class="span9">
    <div class="content">

        <div class="module">
            <div class="module-head">
                <h3>Student Details</h3>
            </div>
            <div class="module-body">
                <?php
                    $rno=$_GET['id'];
                    $sql="select * from LMS.user where RollNo='$rno'";
                    $result=$conn->query($sql);
                    $row=$result->fetch_assoc();

                    $name=$row['Name'];
                    $category=$row['Category'];
                    $email=$row['EmailId'];

```

```
$mobno=$row['MobNo'];
```

```
echo "<b><u>Name:</u></b> ".$name."<br><br>";  
echo "<b><u>Category:</u></b> ".$category."<br><br>";  
echo "<b><u>Roll No:</u></b> ".$rno."<br><br>";  
echo "<b><u>Email Id:</u></b> ".$email."<br><br>";  
echo "<b><u>Mobile No:</u></b> ".$mobno."<br><br>";
```

```
?>
```

```
<a href="student.php" class="btn btn-primary">Go Back</a>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
<!--/.span9-->
```

```
</div>
```

```
</div>
```

```
<!--/.container-->
```

```
</div>
```

```
<div class="footer">
```

```
<div class="container">
```

```
<b class="copyright">&copy; 2018 Library Management System </b>All  
rights reserved.
```

```
</div>
```

```
</div>
```

```
<!--/.wrapper-->
```

```
<script src="scripts/jquery-1.9.1.min.js" type="text/javascript"></script>
```

```

        <script src="scripts/jquery-ui-1.10.1.custom.min.js" type="text/javascript"></
script>
        <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>
        <script src="scripts/flot/jquery.flot.js" type="text/javascript"></script>
        <script src="scripts/flot/jquery.flot.resize.js" type="text/javascript"></script>
        <script src="scripts/datatables/jquery.dataTables.js" type="text/javascript"></
script>
        <script src="scripts/common.js" type="text/javascript"></script>

</body>

</html>

<?php }
else {
    echo "<script type='text/javascript'>alert('Access Denied!!!')</script>";
} ?>

```

LOGOUT

```

<?php

session_start();
session_destroy();
header("location:../index.php");
exit;

```

?>

CSS

html,body,div,span,applet,object,iframe,h1,h2,h3,h4,h5,h6,p,blockquote,pre,a,abbr,acronym,address,big,cite,code,del,dfn,em,img,ins,kbd,q,s,samp,small,strike,strong,sub,sup,tt,var,b,u,i,dl,dt,dd,ol,nav ul,nav li,fieldset,form,label,legend,table,caption,tbody,tfoot,thead,tr,th,td,article,aside,canvas,details,embed,figure,figcaption,footer,header,hgroup,menu,nav,output,ruby,section,summary,time,mark,audio,video {margin:0;padding:0;border:0;font-size:100%;font:inherit;vertical-align:baseline;}

article, aside, details, figcaption, figure, footer, header, hgroup, menu, nav, section {display: block;}

ol,ul {list-style:none;padding:0;margin:0;}

blockquote,q {quotes:none;}

blockquote:before,blockquote:after,q:before,q:after {content:"";content:none;}

table {border-collapse:collapse;border-spacing:0;}

a {text-decoration:none;}

.txt-rt {text-align:right;}

.txt-lt {text-align:left;}

.txt-center {text-align:center;}

.float-rt {float:right;}

.float-lt {float:left;}

.clear {clear:both;}

.pos-relative {position:relative;}

.pos-absolute {position:absolute;}

.vertical-base {vertical-align:baseline;}

.vertical-top {vertical-align:top;}

.underline {padding-bottom:3px;border-bottom: 1px solid #eee;}

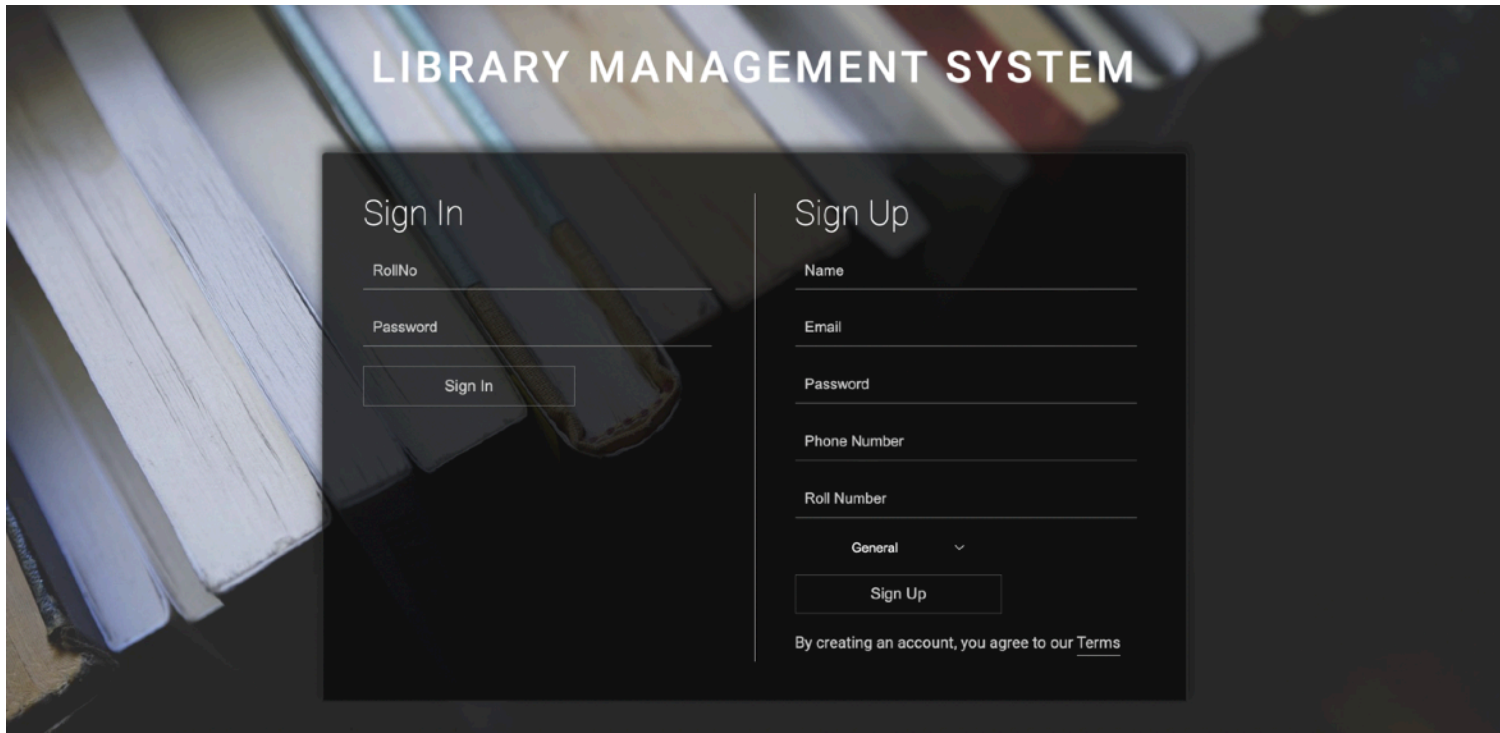
nav.vertical ul li {display:block;}

nav.horizontal ul li {display: inline-block;}

Ch 5. RESULT AND DISCUSSION

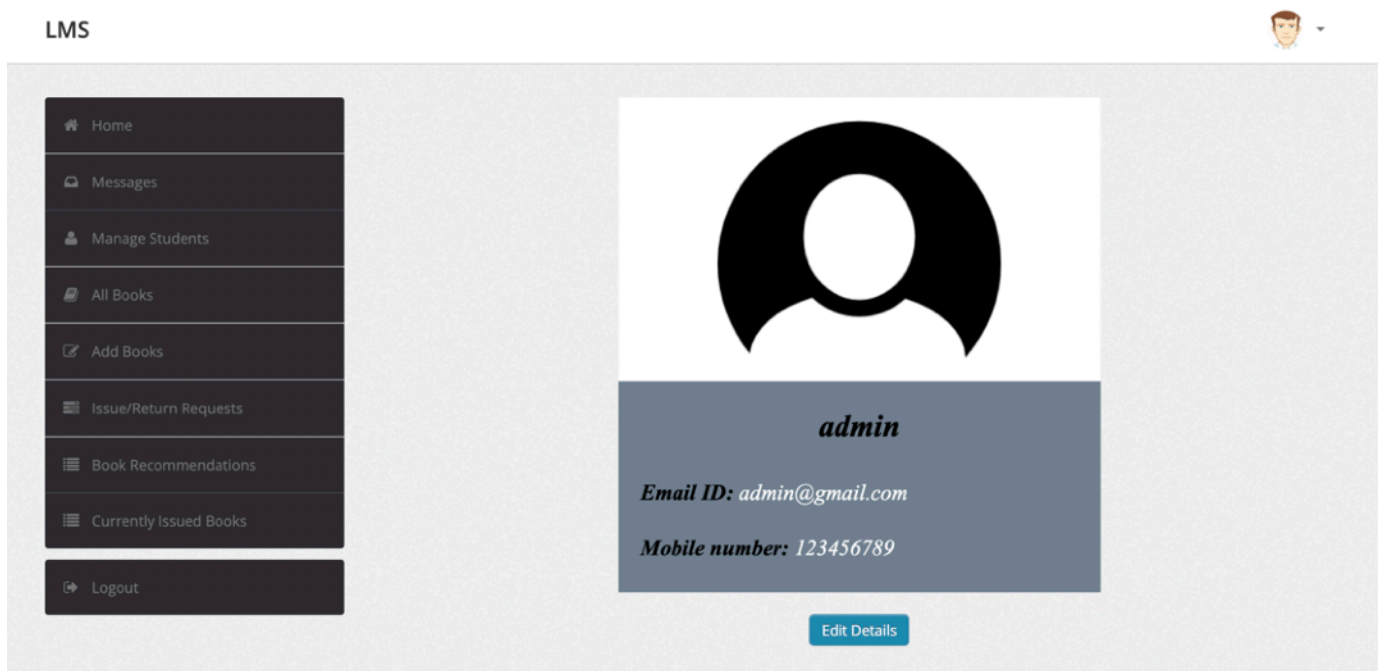
5.1 USER DOCUMENTATION

LOGIN PAGE



The image shows a web form for a 'LIBRARY MANAGEMENT SYSTEM'. The form is divided into two sections: 'Sign In' and 'Sign Up'. The 'Sign In' section has fields for 'RollNo' and 'Password', with a 'Sign In' button below. The 'Sign Up' section has fields for 'Name', 'Email', 'Password', 'Phone Number', and 'Roll Number', with a 'Sign Up' button below. A dropdown menu labeled 'General' is also present. At the bottom of the 'Sign Up' section, there is a link: 'By creating an account, you agree to our [Terms](#)'. The background of the form is a dark overlay on a blurred image of books.

ADMIN HOME PAGE



The image is a screenshot of the 'ADMIN HOME PAGE' of the Library Management System (LMS). The page has a light gray background. On the left, there is a dark gray sidebar with a list of menu items: Home, Messages, Manage Students, All Books, Add Books, Issue/Return Requests, Book Recommendations, Currently Issued Books, and Logout. On the right, there is a large white area with a black silhouette of a person's head and shoulders. Below the silhouette, the text 'admin' is displayed in a bold, italicized font. Underneath, the 'Email ID' is 'admin@gmail.com' and the 'Mobile number' is '123456789'. At the bottom right of this section, there is a blue button labeled 'Edit Details'. In the top right corner of the page, there is a small profile icon of a person.

MANAGE STUDENTS

LMS



Home

Messages

Manage Students

All Books

Add Books

Issue/Return Requests

Book Recommendations

Currently Issued Books

Logout

Search:

Search

Name	Roll No.	Email id	
John	b160001cs	john@gmail.com	<button>Details</button>
Adam	b160002cs	adam@yahoo.com	<button>Details</button>
Alice	b160003ch	alice@hotmail.com	<button>Details</button>
Abbot	b160004me	abbot@gmail.com	<button>Details</button>
bale	b160005ce	bale@gmail.com	<button>Details</button>
Bob	b160006cs	bob@gmail.com	<button>Details</button>
Goku	b160007cs	goku@yahoo.com	<button>Details</button>
Ben	b160008cs	ben10@hotmail.com	<button>Details</button>
Ash	b160009cs	ash@yahoo.com	<button>Details</button>
Harry	b160010cs	harry@hotmail.com	<button>Details</button>
Gwen	b160011ch	gwen@yahoo.com	<button>Details</button>

ALL BOOKS

LMS



Home

Messages

Manage Students

All Books

Add Books

Issue/Return Requests

Book Recommendations

Currently Issued Books

Logout

Search:

Search

Book Id	Book name	Availability	
1	OS	0	<button>Details</button> <button>Edit</button>
2	DBMS	0	<button>Details</button> <button>Edit</button>
3	TOC	4	<button>Details</button> <button>Edit</button>
4	TOC	1	<button>Details</button> <button>Edit</button>
5	DAA	0	<button>Details</button> <button>Edit</button>
6	DSA	10	<button>Details</button> <button>Edit</button>
7	Discrete Structures	10	<button>Details</button> <button>Edit</button>
8	Database Processing	12	<button>Details</button> <button>Edit</button>
9	Computer System Architecture	4	<button>Details</button> <button>Edit</button>
10	C: How to program	3	<button>Details</button> <button>Edit</button>
11	Atomic and Nuclear Systems	12	<button>Details</button> <button>Edit</button>
12	The PlayBook	12	<button>Details</button> <button>Edit</button>
13	General Theory of Relativity	5	<button>Details</button> <button>Edit</button>

ADD BOOKS

LMS



Home

Messages

Manage Students

All Books

Add Books

Issue/Return Requests

Book Recommendations

Currently Issued Books

Logout

Add Book

Book Title

Title

Author

Publisher

Publisher

Year

Year

Number of Copies

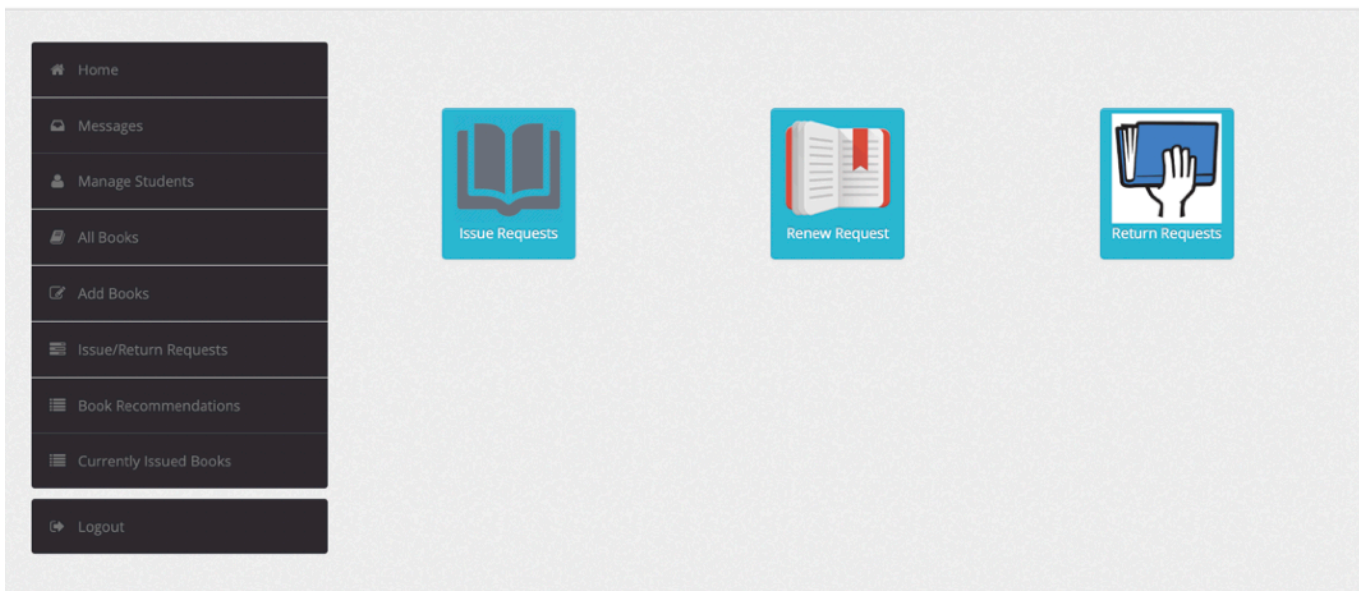
Number of Copies

Add Book

© 2018 Library Management System All rights reserved.

ISSUE/RETURN REQUEST

LMS



© 2018 Library Management System All rights reserved.

BOOK RECOMMENDATIONS

LMS



Home	Book Name	Description	Recommended By
Messages	Book1	Descp1	B160158CS
Manage Students	Book2	Descp2	B160158CS
All Books	Operating System	An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs.	B160001CS
Add Books	Networks	A computer network, or data network, is a digital telecommunications network which allows nodes to share resources. In computer networks, computing devices exchange data with each other using connections (data links) between nodes.	B160999CS
Issue/Return Requests	String Theory	In physics, string theory is a theoretical framework in which the point-like particles of particle physics are replaced by one-dimensional objects called strings. It describes how these strings propagate through space and interact with each other.	B160777CS
Book Recommendations	The Theory of Everything	The Theory of Everything	B160777CS
Currently Issued Books	TOC	jay prakash	26
Logout	Add a Book		

© 2018 Library Management System All rights reserved.

CURRENTLY ISSUED BOOKS

LMS



Home	Search: Enter Roll No of Student/Book Name/Book Id.		Search			
Messages	Roll No	Book Id	Book name	Issue Date	Due date	Dues
Manage Students	26	11	Atomic and Nuclear Systems	2022-07-04	2022-09-02	0
All Books	B160001CS	9	Computer System Architecture	2018-10-25	2018-12-24	1306
Add Books	B160001CS	11	Atomic and Nuclear Systems	2018-10-25	2018-12-24	1306
Issue/Return Requests	B160003CH	9	Computer System Architecture	2018-10-25	2018-12-24	1306
Book Recommendations	B160011CH	10	C: How to program	2018-10-25	2018-12-24	1306
Currently Issued Books	B160011CH	17	Operating System	2018-10-25	2018-12-24	1306
Logout	B160111CS	1	OS	2018-10-15	2018-12-14	1316
	B160158CS	1	OS	2018-10-15	2020-04-12	831
	B160158CS	2	DBMS	2018-10-16	2018-12-15	1315
	B160158CS	9	Computer System Architecture	2018-10-25	2018-12-24	1306
	B160158CS	18	Theory of Machines	2018-10-25	2018-12-24	1306
	B160511CS	10	C: How to program	2018-10-25	2018-12-24	1306
	B160511CS	11	Atomic and Nuclear Systems	2018-10-25	2018-12-24	1306
	B160511CS	13	General Theory of Relativity	2018-10-25	2018-12-24	1306
	B160632CS	15	Machine Design	2018-10-25	2018-12-24	1306
	B160854CS	6	DSA	2018-10-16	2019-04-14	1195

Ch 6. TESTING

6.1 Unit Testing

Unit testing is a testing technique in which modules are tested individually. Small individual units of source code are tested to determine whether it is fit to use or not. Different modules of games are put to test while the modules are being developed. Here modules refer to individual levels, players, scenes

6.2 Integration Testing

Integration testing is the technique in which individual components or modules are grouped together and tested. It occurs after testing. The inputs for the integrated testing are the modules that have already been unit tested.

6.3 System Testing

System testing is conducted on the entire system as a whole to check whether the system meets its requirements or not. software was installed on different systems and any errors or bugs that occurred were fixed.

6.4 Acceptance Testing

User Acceptance is defined as a type of testing performed by the Client to certify the system with respect to the requirements that was agreed upon. This testing happens in the final phase of testing before moving the software application to the Market or Production environment.

Ch 7. CONCLUSION

7.1 Conclusion

After we have completed the project we are sure the problems in the existing system would overcome. The “**LIBRARY MANAGEMENT SYSTEM**” process made computerized to reduce human errors and to increase the efficiency. The main focus of this project is to lessen human efforts. The maintenance of the records is made efficient, as all the records are stored in the database, through which data can be retrieved easily. The navigation control is provided in all the forms to navigate through the large amount of records. If the numbers of records are very large then user has to just type in the search string and user gets the results immediately. The editing is also made simpler. The user has to just type in the required field and press the update button to update the desired field.

The Books and Students are given a particular unique id no. So that they can be accessed correctly and without errors. Our main aim of the project is to get the correct information about a particular student and books available in the library.