

ONLINE LIBRARY MANAGEMENT SYSTEM

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COURSE NAME/SECTION :

Software Engineering Lab (CSE305L)

Semester VI : CSE F

Library management system is a project which aims in developing a computerized system to maintain all the daily work of the library. This project has many features which are generally not available in normal library management systems like facility of user login. Manual process of keeping student records, book records, account details, and managing employees is very difficult. There are various problems also faced by the student in the library such as finding any particular book, information whether the book is available or not, searching for books using ISBN number etc. To eliminate this manual system, a library management system has been developed. The Library Management System will handle all the current issues faced by the students and by its admin personnel. It has a facility of admin login through which the admin can monitor the whole system. It has a facility where students after logging in their accounts can see the list of books issued and its issue date and return date . Overall, this project of ours is being developed to help the staff of the library to maintain the library in the best way possible and also reduce human efforts.

Introduction:

Member Module:

In this module , we are displaying information from the database regarding all the members that are registered. In this module the librarian can add or delete the members

registered in the library and only the members who are registered can view the information. The first part is Adding of members. The initial page displays all the registered members present in our database. In this file the librarian can add a member by filling up all the details such as its address, name, phone number etc. The second part is the update of the member. If the member wants to update his/her phone number this could be done with the help of the update option available, after filling up all the new details the database will be updated using the appropriate query. The third part is Deletion of the member. We have provided an option for the librarian to permanently delete a member from the database. When the librarian clicks on the delete option button present in-front of the member then that particular member will be deleted from the database and the list will be updated.

Books Module:

In this module we are displaying information from the database regarding all the books that are available in the library. This option is divided into various categories like books which are lost,damaged, that are subject to replacement etc. The first file that is books.php displays the books that are not archived. Second tab that is of new_books.php displays information of new books available in the library. Then, it includes an option of old_books.php containing information regarding the old books. Similarly, there is an option for lost books and then for damaged books. It includes another option for books that are subject to replacement. This module provides admin a systematic view of all the books divided into various categories, making the task easier for the admin. In every file of the books module, there is an option provided Add Books, which enables the admin to add books in various categories defined above.

Search Module:

The search module lets users search for specific books on the site. You can search both for authors and for particular books. When you are on the search tab of a website, you will be able to search for authors and books available on the library management system.

Login and Logout Module:

The default user for our project is admin. Our project provides the facility for the admin to login and then review all the books and members in the library database. Admin also has an option of adding another person as admin to the system.

DOCUMENT PURPOSE

The main objective of this document is to illustrate the requirements of the project Library

Management system. The document gives the detailed description of the both functional and non-functional requirements proposed by the client. The document is developed after a number of consultations with the client and considering the complete requirement specifications of the given Project. The final product of the team will be meeting the requirements of this document.

PRODUCT SCOPE

The product is designed for both the Users and Library Admin. It will be a helpful product in a very effective way as it will reduce the tiresome workload from both Users and Library Admin.

Manually updating the library system into an android based application so that the user can

know the details of the books available and maximum limit on borrowing from their computer and also through their phones.

The ILM System provides information like details of the books, insertion of new books, deletion of lostbooks, limitation on issuing books, fine on keeping a book more than one month from the issued date.

Also users can provide feedback for adding some new books to the library.

PRODUCT PERSPECTIVE

The proposed Library Management System is an on-line Library Management System. This

System will provide search functionality to facilitate the search of resources. This search will

be based on various categories viz. book name or the ISBN. Also Advanced Search feature is

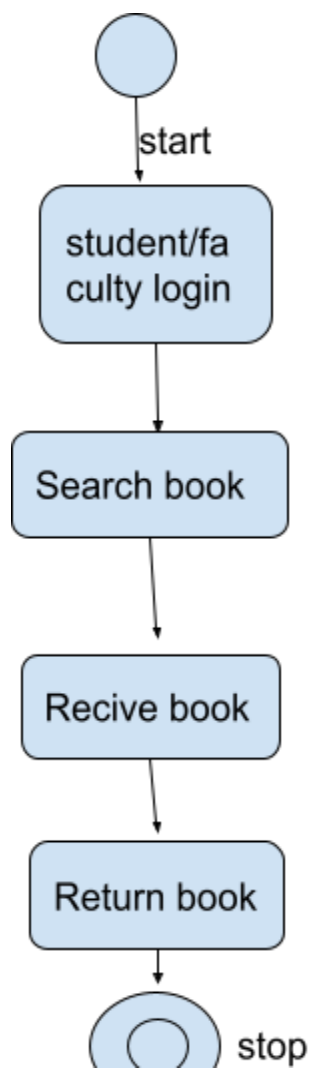
provided in order to search various categories simultaneously. Further the library staff personnel can add/update/remove the resources and the resource users from the system.

The proposed Library Management System will take care of the current book detail at any

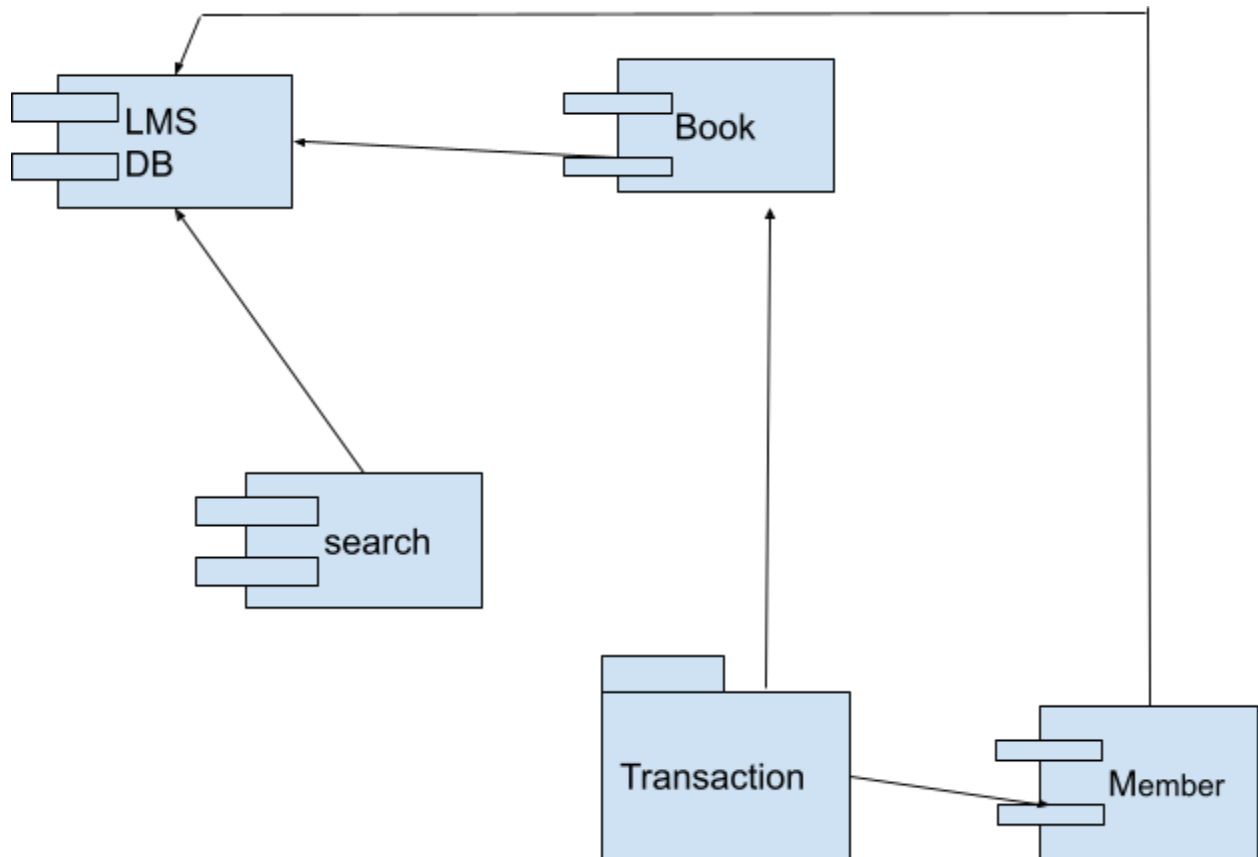
point of time. The book issue, book return will update the current book details automatically

so that user will get the update current book details.

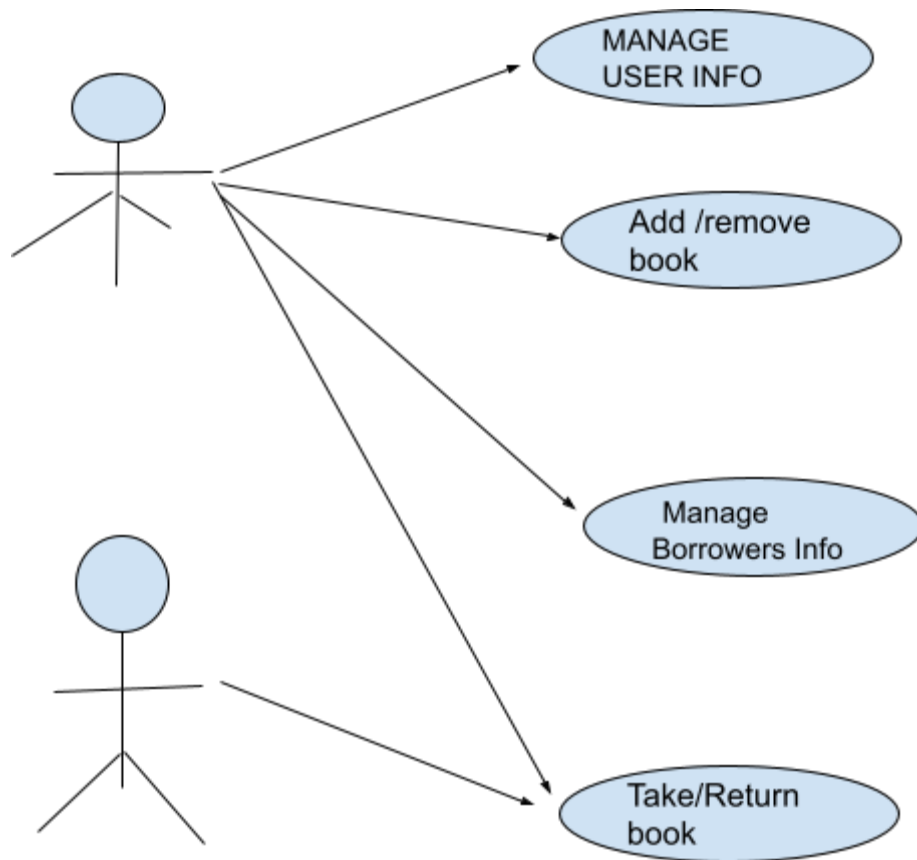
STATE CHAT DIAGRAM:



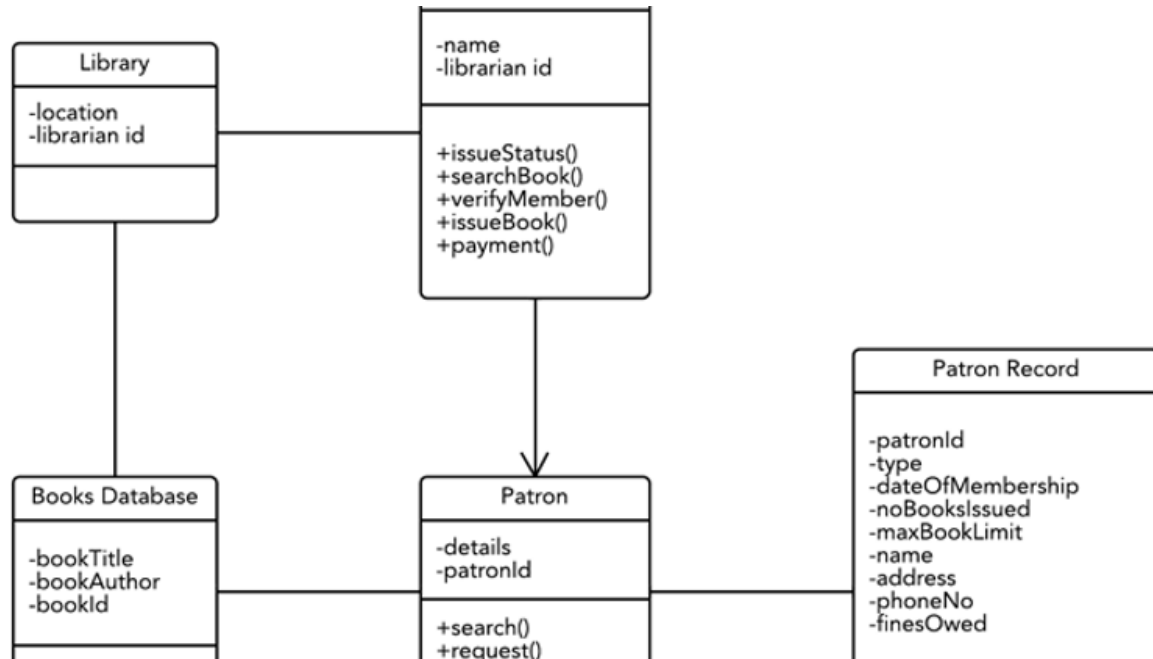
Component Diagram:



Use Case Diagram:



Class Diagram:



DATA BASE

MEMBERS:

CL.NAME	DATA TYPE	LENGTH	DESCRIPTION
Id_no	Text	50	Unique identification of the members
Name	Text	70	Name of members
Date of Date	Date/Time		Date of Registration
Date Expiry	Date/Time		Registration expiry date Expiry
Status	Text	50	Permanent/Temporary

S.no	NAME	DATA TYPE	DESCRIPTION
1.	Book_name	Text	Title of the book
2.	Book_code	Text	Book identification

			number
3.	Author	Text	Author of books
4.	Date of arrival	Date/time	Date on which book was received
5.	Price	Text	Cost of books
6.	No_of_books	Text	Quantity of books
7.	Subject_code	Text	Unique identification no of particular subject

CODE:

Admi login:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="utf-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
```

```
<title>NITHEESH</title>
```

```
<link rel="stylesheet"
```

```
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
```

```
<link rel="stylesheet"
```

```
href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css">
```

```
<script
```

```
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
```

```
<script
```

```
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></script>
```

```
<script
```

```
src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script>
```

```
>
```

```
<style type="text/css">
```

```
body {
```



```

        color: #aa082e;
        background-color: #b6bde7;
        font-family: 'Roboto', sans-serif;
    }
    .form-control {
        border-color: #eee;
        min-height: 41px;
        box-shadow: none !important;
    }
    .form-control:focus {
        border-color: #5cd3b4;
    }
    .form-control, .btn {
        border-radius: 3px;
    }
    .signup-form {
        width: 500px;
        margin: 0 auto;
        padding: 30px 0;
    }
    .signup-form h2 {
        color: #333;
        margin: 0 0 30px 0;
        display: inline-block;
        padding: 0 30px 10px 0;
        border-bottom: 3px solid #ffffff;
    }
    .signup-form form {
        color: #999;
        border-radius: 3px;
        margin-bottom: 15px;
        background: #fff;
        box-shadow: 0px 2px 2px rgba(0, 0, 0, 0.3);
        padding: 30px;
    }
    .signup-form .form-group {
        margin-bottom: 20px;
    }
    .signup-form label {

```

```

        font-weight: normal;
        font-size: 13px;
    }
    .signup-form input[type="checkbox"] {
        margin-top: 2px;
    }
    .signup-form .btn {
        font-size: 16px;
        font-weight: bold;
        background: #161df0;
        border: none;
        margin-top: 20px;
        min-width: 140px;
    }
    .signup-form .btn:hover, .signup-form .btn:focus {
        background: #41cba9;
        outline: none !important;
    }
    .signup-form a {
        color: #2b04ff;

        text-decoration: underline;
    }
    .signup-form a:hover {
        text-decoration: none;
    }
    .signup-form form a {
        color: #5cd3b4;
        text-decoration: none;
    }
    .signup-form form a:hover {
        text-decoration: underline;
    }
</style>

```

```

</head>
<body>
  {% include "library/navbar.html" %}
  <br>
  <br>
  <center><h3 style=" margin-bottom: 0px;"class = 'alert alert-success'>Login As
Admin!</h3></center>
  <div class="signup-form">
    <form method="post" class="form-horizontal">

      <center><h2>Admin Login</h2></center>

      {% csrf_token %}
      {% for field in form %}
        <div class="form-group">
          <label class="control-label col-xs-4">{{ field.label_tag }}</label>
          <div class="col-xs-8">
            {{ field }}
          </div>
        </div>
      {% endfor %}

      <div class="form-group">
        <div class="col-xs-8 col-xs-offset-4">
          <button type="submit" class="btn btn-primary btn-lg">Login</button>
        </div>
      </div>
    </form>
    <div class="text-center">Do not have account? <a href="adminsignup">Signup
here</a></div>
  </div>

  {% include "library/footer.html" %}
</body>
</html>
Admin signup:

```

```
<!DOCTYPE html>
<html lang="en" dir="ltr">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
    <title>NITHEESH</title>
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.c
ss">
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></scri
pt>
    <script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script
>
```

```
<style type="text/css">
  body {
    color: #aa082e;
    background-color: #b6bde7;
    font-family: 'Roboto', sans-serif;
  }
  .form-control {
    border-color: #eee;
    min-height: 41px;
```

```

        box-shadow: none !important;
    }
    .form-control:focus {
        border-color: #5cd3b4;
    }
    .form-control, .btn {
        border-radius: 3px;
    }
    .signup-form {
        width: 500px;
        margin: 0 auto;
        padding: 30px 0;
    }
    .signup-form h2 {
        color: #333;
        margin: 0 0 30px 0;
        display: inline-block;
        padding: 0 30px 10px 0;
        border-bottom: 3px solid #ffffff;
    }
    .signup-form form {
        color: #999;
        border-radius: 3px;
        margin-bottom: 15px;
        background: #fff;
        box-shadow: 0px 2px 2px rgba(0, 0, 0, 0.3);
        padding: 30px;
    }
    .signup-form .form-group {
        margin-bottom: 20px;
    }
    .signup-form label {
        font-weight: normal;
        font-size: 13px;
    }
    .signup-form input[type="checkbox"] {
        margin-top: 2px;
    }
    .signup-form .btn {

```

```
font-size: 16px;
font-weight: bold;
background: #161df0;
border: none;
margin-top: 20px;
min-width: 140px;
}
.signup-form .btn:hover, .signup-form .btn:focus {
background: #41cba9;
outline: none !important;
}
.signup-form a {
color: #2b04ff;

text-decoration: underline;
}
.signup-form a:hover {
text-decoration: none;
}
.signup-form form a {
color: #5cd3b4;
text-decoration: none;
}
.signup-form form a:hover {
text-decoration: underline;
}
</style>
```

```
</head>
<body>
{% include "library/navbar.html" %}
<br>
<br>
```

```
<center><h3 style=" margin-bottom: 0px;"class = 'alert alert-success'>Signup As Admin!</h3></center>
```

```
<div class="signup-form">
```

```
<form method="post" class="form-horizontal">
```

```
<center><h2>Admin Signup</h2></center>
```

```
{% csrf_token %}
```

```
{% for field in form %}
```

```
<div class="form-group">
```

```
<label class="control-label col-xs-4">{{ field.label_tag }}</label>
```

```
<div class="col-xs-8">
```

```
  {{ field }}
```

```
</div>
```

```
</div>
```

```
{% endfor %}
```

```
<div class="form-group">
```

```
<div class="col-xs-8 col-xs-offset-4">
```

```
<button type="submit" class="btn btn-primary btn-lg">Sign Up</button>
```

```
</div>
```

```
</div>
```

```
</form>
```

```
<div class="text-center">Already have an account? <a href="adminlogin">Login here</a></div>
```

```
</div>
```

```
{% include "library/footer.html" %}
```

```
</body>
```

```
</html>
```

Book added:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
</head>
```

```
<body>
```

```
{% include "library/navbaradmin.html" %}  
<br>  
<br>
```

```
<h3 class="p-3 mb-2 bg-primary text-white" style = 'font-size:  
50px;text-align:center;'>Book Added Successfully !</h3>  
<br><br>
```

```
<div class="options" style="text-align:center">  
  <a href="addbook" class="btn btn-primary btn-lg active" role="button"  
aria-pressed="true">Click here to add more Book</a><br><br>
```

```
<a href="viewbook" class="btn btn-primary btn-lg active" role="button"  
aria-pressed="true">Click here to view Book in Library</a><br><br>
```

```
</div>
```

```
<br>
```

```
{% include "library/footer.html" %}
```

```
</body>
```

```
</html>
```

Student login:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="utf-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1,  
shrink-to-fit=no">
```

```
<title>NITHEESH</title>
```

```
<link rel="stylesheet"
```

```
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
```

```
<link rel="stylesheet"
```

```
href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.c  
ss">
```

```
<script
```

```
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
```

```
<script
```

```
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></scri  
pt>
```



```
<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script
>
```

```
<style type="text/css">
  body {
    color: #aa082e;
    background-color: #b6bde7;
    font-family: 'Roboto', sans-serif;
  }
  .form-control {
    border-color: #eee;
    min-height: 41px;
    box-shadow: none !important;
  }
  .form-control:focus {
    border-color: #5cd3b4;
  }
  .form-control, .btn {
    border-radius: 3px;
  }
  .signup-form {
    width: 500px;
    margin: 0 auto;
    padding: 30px 0;
  }
  .signup-form h2 {
    color: #333;
    margin: 0 0 30px 0;
    display: inline-block;
```

```

        padding: 0 30px 10px 0;
        border-bottom: 3px solid #ffffff;
    }
    .signup-form form {
        color: #999;
        border-radius: 3px;
        margin-bottom: 15px;
        background: #fff;
        box-shadow: 0px 2px 2px rgba(0, 0, 0, 0.3);
        padding: 30px;
    }
    .signup-form .form-group {
        margin-bottom: 20px;
    }
    .signup-form label {
        font-weight: normal;
        font-size: 13px;
    }
    .signup-form input[type="checkbox"] {
        margin-top: 2px;
    }
    .signup-form .btn {
        font-size: 16px;
        font-weight: bold;
        background: #161df0;
        border: none;
        margin-top: 20px;
        min-width: 140px;
    }
    .signup-form .btn:hover, .signup-form .btn:focus {
        background: #41cba9;
        outline: none !important;
    }
    .signup-form a {
        color: #2b04ff;

        text-decoration: underline;
    }
    .signup-form a:hover {

```

```

        text-decoration: none;
    }
    .signup-form form a {
        color: #5cd3b4;
        text-decoration: none;
    }
    .signup-form form a:hover {
        text-decoration: underline;
    }
</style>

```

```

</head>
<body>
    {% include "library/navbar.html" %}
    <br>
    <br>
    <center><h3 style=" margin-bottom: 0px;"class = 'alert alert-success'>Login As
    Student!</h3></center>
    <div class="signup-form">
        <form method="post" class="form-horizontal">

                <center><h2>Student Login</h2></center>

```

```

{% csrf_token %}
    {% for field in form %}
        <div class="form-group">
            <label class="control-label col-xs-4">{{ field.label_tag }}</label>
            <div class="col-xs-8">
                {{ field }}
            </div>
        </div>
    {% endfor %}

    <div class="form-group">

```

```

        <div class="col-xs-8 col-xs-offset-4">
            <button type="submit" class="btn btn-primary btn-lg">Login</button>
        </div>
    </div>
</form>
    <div class="text-center">Do not have account? <a href="studentsignup">Signup
here</a></div>
</div>

```

```

    {% include "library/footer.html" %}
</body>
</html>
Student signup:
!DOCTYPE html>
<html lang="en" dir="ltr">
    <head>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
        <title>NITHEESH</title>
        <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
        <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.c
ss">
        <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
        <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></scri
pt>
        <script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script
>

```

```
<style type="text/css">
  body {
    color: #aa082e;
    background-color: #b6bde7;
    font-family: 'Roboto', sans-serif;
  }
  .form-control {
    border-color: #eee;
    min-height: 41px;
    box-shadow: none !important;
  }
  .form-control:focus {
    border-color: #5cd3b4;
  }
  .form-control, .btn {
    border-radius: 3px;
  }
  .signup-form {
    width: 500px;
    margin: 0 auto;
    padding: 30px 0;
  }
  .signup-form h2 {
    color: #333;
    margin: 0 0 30px 0;
    display: inline-block;
    padding: 0 30px 10px 0;
    border-bottom: 3px solid #ffffff;
  }
  .signup-form form {
    color: #999;
    border-radius: 3px;
    margin-bottom: 15px;
```

```
background: #fff;
box-shadow: 0px 2px 2px rgba(0, 0, 0, 0.3);
padding: 30px;
}
.signup-form .form-group {
    margin-bottom: 20px;
}
.signup-form label {
    font-weight: normal;
    font-size: 13px;
}
.signup-form input[type="checkbox"] {
    margin-top: 2px;
}
.signup-form .btn {
    font-size: 16px;
    font-weight: bold;
    background: #161df0;
    border: none;
    margin-top: 20px;
    min-width: 140px;
}
.signup-form .btn:hover, .signup-form .btn:focus {
    background: #41cba9;
    outline: none !important;
}
.signup-form a {
    color: #2b04ff;

    text-decoration: underline;
}
.signup-form a:hover {
    text-decoration: none;
}
.signup-form form a {
    color: #5cd3b4;
    text-decoration: none;
}
.signup-form form a:hover {
```

```
        text-decoration: underline;
    }
</style>
```

```
</head>
<body>
    {% include "library/navbar.html" %}
    <br>
    <br>
<center><h3 style=" margin-bottom: 0px;"class = 'alert alert-success'>Signup As
Student!</h3></center>
    <div class="signup-form">
        <form method="post" class="form-horizontal">

                <center><h2>Student Signup</h2></center>
```

```
{% csrf_token %}
```

```
    {% for field in form1 %}
    <div class="form-group">
        <label class="control-label col-xs-4">{{ field.label_tag }}</label>
        <div class="col-xs-8">
            {{ field }}
        </div>
    </div>
    {% endfor %}
    {% for field in form2 %}
    <div class="form-group">
        <label class="control-label col-xs-4">{{ field.label_tag }}</label>
        <div class="col-xs-8">
            {{ field }}
        </div>
    </div>
    {% endfor %}
```

```

        <div class="form-group">
            <div class="col-xs-8 col-xs-offset-4">
                <button type="submit" class="btn btn-primary btn-lg">Sign Up</button>
            </div>
        </div>
    </form>
    <div class="text-center">Already have an account? <a href="studentlogin">Login
here</a></div>
</div>

```

```

    {% include "library/footer.html" %}
</body>
</html>
Issued book;
<!DOCTYPE html>
<html lang="en" dir="ltr">
    <head>
        <style media="screen">
            table.redTable {
                border: 2px solid #A40808;
                background-color: #EEE7DB;
                width: 100%;
                text-align: center;
                border-collapse: collapse;
            }
            table.redTable td, table.redTable th {
                border: 1px solid #AAAAAA;
                padding: 3px 2px;
            }
            table.redTable tbody td {
                font-size: 13px;
            }
            table.redTable tr:nth-child(even) {
                background: #F5C8BF;
            }

```



```
table.redTable thead {
background: #A40808;
}
table.redTable thead th {
font-size: 19px;
font-weight: bold;
color: #FFFFFF;
text-align: center;
border-left: 2px solid #A40808;
}
table.redTable thead th:first-child {
border-left: none;
}

table.redTable tfoot {
font-size: 13px;
font-weight: bold;
color: #FFFFFF;
background: #A40808;
}
table.redTable tfoot td {
font-size: 13px;
}
table.redTable tfoot .links {
text-align: right;
}
table.redTable tfoot .links a{
display: inline-block;
background: #FFFFFF;
color: #A40808;
padding: 2px 8px;
border-radius: 5px;
}
</style>
</head>
<body>
{% include "library/navbaradmin.html" %}
<br>
<br>
```

```
<h3 class="p-3 mb-2 bg-primary text-white" style = 'font-size:
50px;text-align:center;'>Available Book in Library !</h3>
```

```
{% if books%}
```

```
<table class="redTable">
```

```
<thead>
```

```
<tr>
```

```
<th>Book Name</th>
```

```
<th>ISBN</th>
```

```
<th>Author</th>
```

```
<th>Category</th>
```

```
</tr>
```

```
</thead>
```

```
<tfoot>
```

```
<tr>
```

```
<td colspan="4" rowspan="4">
```

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

```
</td>
```

```
</tr>
```

```
</tfoot>
```

```
<tbody>
```

```
{% for book in books %}
```

```
<tr>
```

```
<td>{{book.name}}</td>
```

```
<td>{{book.isbn}}</td>
```

```
<td>{{book.author}}</td>
```

```
<td>{{book.category}}</td>
```

```
</tr>
```

```
{% endfor %}
```

```
</tbody>
```

```
</table>
```

```
{%else%}
```

```
<h1>Have 0 book</h1>
```

```
{%endif%}
```

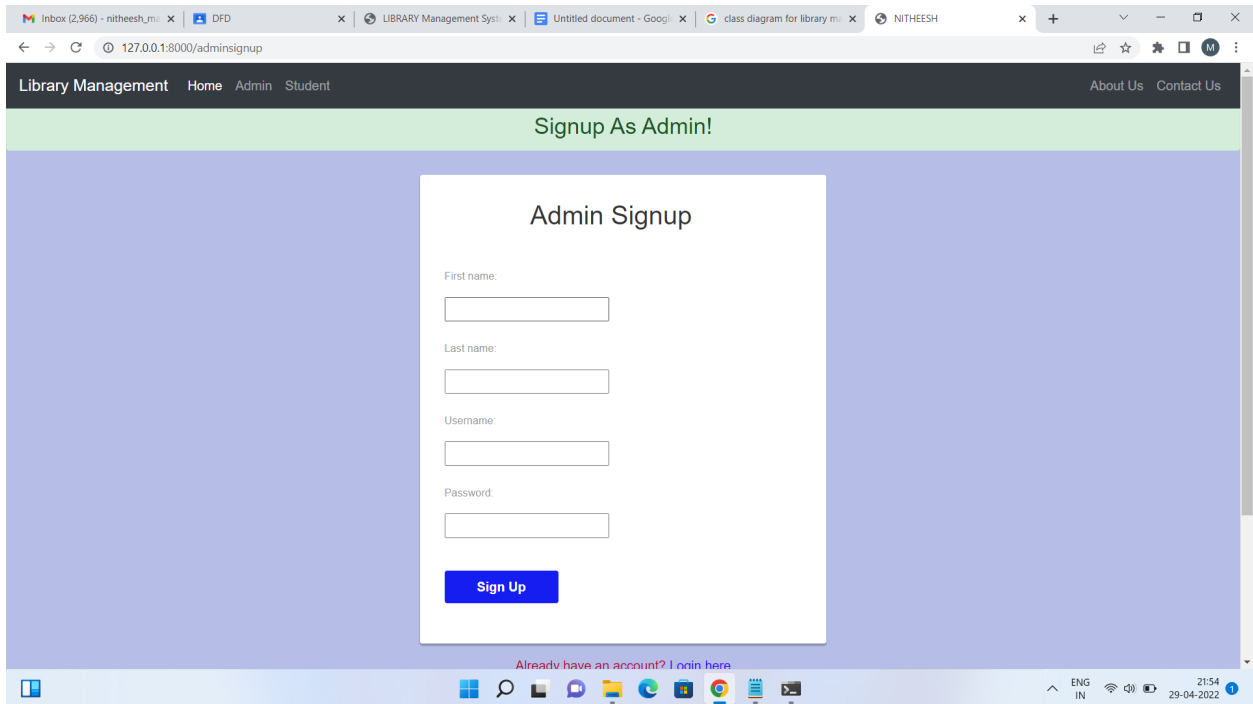
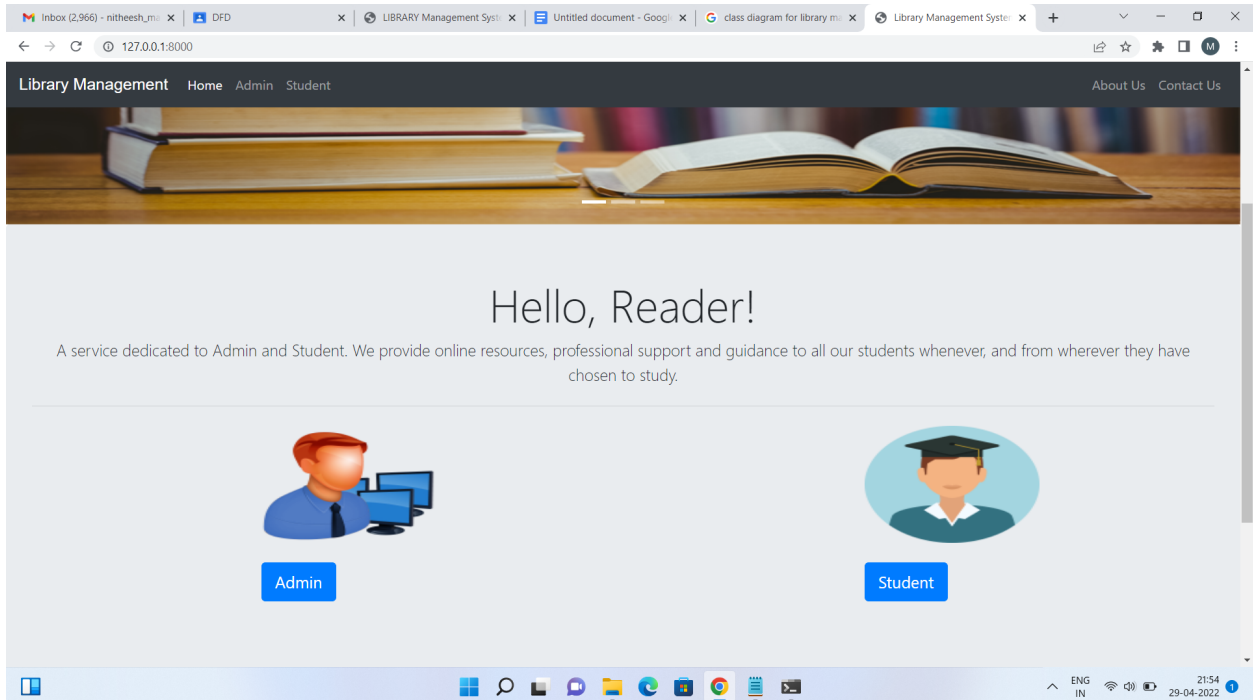
```
<br><br><br><br><br><br><br><br>
```

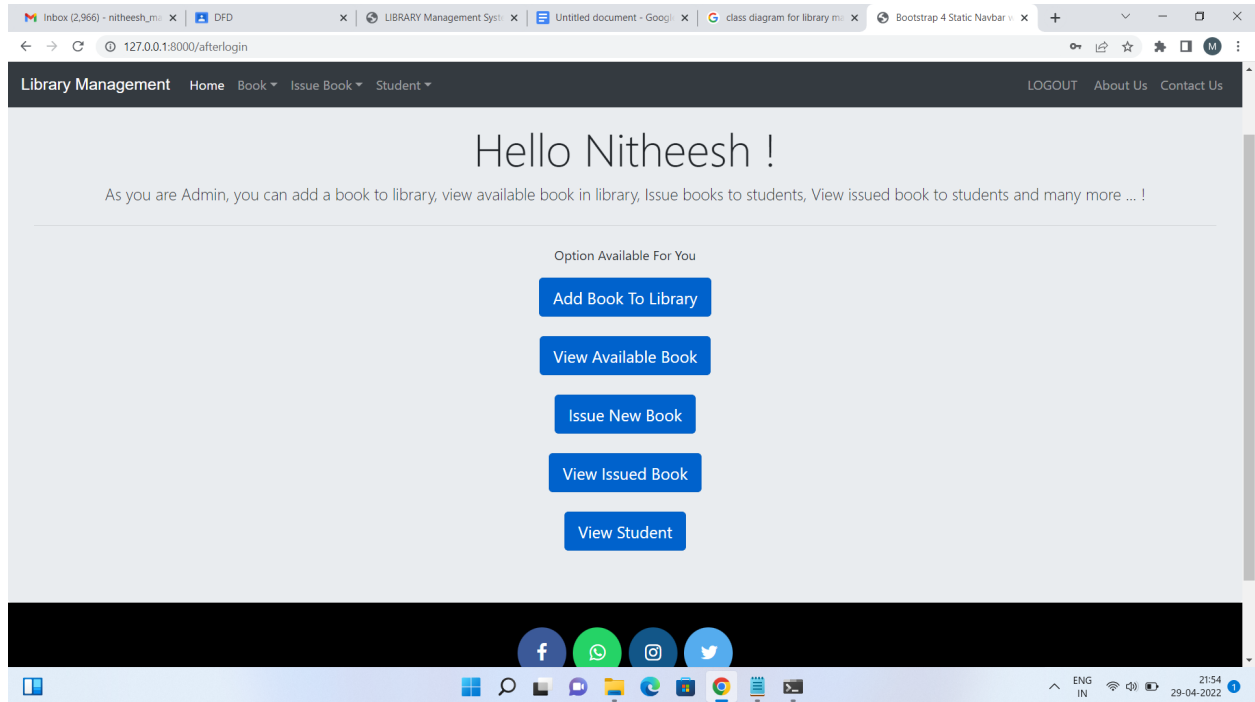
```
{% include "library/footer.html" %}
```

```
</body>
```

```
</html>
```

SCREEN SHOTS:





CONCLUSION:

This website provides a computerized version of the library management system which will benefit the staff of the library. It makes the entire process online where librarians can search books. Through this project, librarians can digitally monitor the status of books. It also helps in maintaining a systematic and structured database for newly issued, old as well as damaged books. It also provides an opportunity to the librarian to maintain a student database and manage it accordingly, reducing the paperwork. There is a futurescope of this facility where many more features such as online lectures and video tutorials can be added by teachers as well as online assignments submissions facility. A feature of group chat where students can discuss various issues can be added to this project thus it making it more interactive.