

Mid Term Report: Library Management System

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Abstract—With the improvement in technology, there is a great need for automation in every aspect of life. The traditional library can also be made more efficient using technology. Previously, the librarian used to keep the log of books using traditional methods. But now, we can use relational database to keep track of the books in the library that are being borrowed.

Index Terms—Database, Library Management System, PHP, HTML, CSS.

I. INTRODUCTION

Libraries have been part of the human civilization for centuries. The library stores knowledge and information in books. From ancient times, the libraries have designed ways of keeping the record of books. Previously, it was done in written form. But with the advancement in technologies, relational databases are used to track the books.

The library management system is a project that aims in developing a computerized system to maintain all the daily work of library. This system will include features like user management, book management, issuing books, calculating late fee and many more. This system will greatly help the library administration to maintain the records more effectively.

II. LITERATURE REVIEW

Extensive researches are being conducted in the area of Library Management. More advanced technologies are being used to make the system more efficient. Donghua Zhou has proposed an intelligent library management system that will utilize the help of RFID (Radio Frequency Identification) to improve the system in term of efficiency and cost effectiveness (Zhou, 2019).

III. PROPOSED METHODOLOGY

The proposed system will provide a complete Library management solution. It will include a user-friendly front end that will help the admin and users to interact with the system easily. The system includes a database that will keep record of the books and users. The backend will combine the front end and the database and will include functions like user authentication, registration, late fee calculation etc. The frontend will be designed using HTML and CSS. For system will be built using PHP and MySQL database.

IV. CONCLUSION AND FUTURE WORK

There is a huge scope of improvement on this system. We can utilize computer vision to automatically issue a book when someone picks it from the shelf (Xi, Zhang, Hu & Xin, 2016). IOT devices can be used to keep track of books easily.

ACKNOWLEDGMENT

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REFERENCES

- [1] Zhou, D. (2019). Intelligent Library System Based on RFID Technology. *Journal Of Physics: Conference Series*, 1345, 042047.
- [2] Xi, Q., Zhang, Q., Hu, W., & Xin, W. (2016). Computer Vision-Based Library Management System. *Science Technology Libraries*, 35(2), 172-182.

A. System Implementation

HTML CODE FOR LOGIN:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form</title>
  <link rel="stylesheet" href="stylee.css">
</head>
<body>

  <div class="container">
    <div class="card">
      <div class="inner-box">
        <h2>LOGIN</h2>
        <form>
          <input type="email" class="input-box"
            placeholder="Your Student Id" required>
          <input type="password" class="input-box"
            placeholder="Password" required>
          <button type="submit" class="submit-btn">Sign In</button>

          </form>
          <button type="button" class="btn">I'm New Here</button>
          <a href="">Forgot Password</a>
        </div>
      </div>
    </div>
  </div>

</body>
</html>
```

CSS CODE FOR LOGIN:

```
*{
  margin: 0;
  padding: 0;
}
.container{
  width: 100%;
  height: 100vh;
  font-family: sans-serif;
  background: url(Library.jpg);
  background-size: cover;
  color: rgba(255, 255, 255, 0.226);
  display: flex;
  align-items: center;
  justify-content: center;
}
.card{
  width: 300px;
  height: 350px;
  background-color: rgba(179, 177, 177);
  padding: 20px;
  border-radius: 25px;
  margin-left: 50%;
}
.inner-box{
  position: relative;
  width: 100%;
  height: 100%;
}
.card h2{
  font-weight: normal;
  font-size: 30px;
  text-align: center;
  margin-bottom: 20px;
  color: black;
  margin-top: 20px;
}
.input-box{
  width: 100%;
  background: rgba(255, 255, 255, 0.842);
  border: 1px solid rgb(255, 255, 255);
  margin: 6px 0;
  height: 32px;
  border-radius: 10px;
  padding: 0 50px;
  box-sizing: border-box;
  outline: none;
  text-align: center;
  color: black
}
::placeholder{
  color: white
  font-size: 12px;
}
button{
  width: 100%;
  background: rgba(255, 255, 255, 0.842);
  border: 1px solid rgb(255, 255, 255);
  margin: 35px 0 10px;
  height: 32px;
  font-size: 12px;
  border-radius: 20px;
  padding: 0 10px;
  box-sizing: border-box;
  outline: none;
  color: black
  cursor: pointer;
}
.submit-btn{
  position: relative;
}
.submit-btn::after{
  content: '\27a4';
  color: #333;
  line-height: 32px;
  font-size: 17px;
  height: 32px;
  width: 32px;
  border-radius: 50%;
  background: blanchedalmond;
  position: absolute;
  right: -1px;
  top: -1px;
}
.card .btn{
  margin-top: 60px;
}
.card a{
  color: black
  text-decoration: none;
  display: block;
  font-size: 13px;
  margin-left: 35%;
}
```



Fig. 1. Screenshot for login page

HTML CODE FOR NEW REGISTER:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form</title>
  <link rel="stylesheet" href="style1.css">
</head>
<body>
  <div class="container">
    <div class="card">
      <div class="inner-box">
        <h2>REGISTER</h2>
        <form>
          <input type="name" class="input-box"
            placeholder="Your Name" required>
          <input type="id" class="input-box"
            placeholder="Your Student Id" required>
          <input type="email" class="input-box"
            placeholder="Your Email Id" required>
          <input type="password" class="input-box"
            placeholder="New Password" required>
          <input type="password" class="input-box"
            placeholder="Confirm Password" required>
          <button type="submit" class="submit-btn">Submit</button>
        </form>
      </div>
    </div>
  </div>
</body>
</html>
```

CSS CODE FOR NEW REGISTER:

```
*{
  margin: 0;
  padding: 0;
}
.container{
  width: 100%;
  height: 100vh;
  font-family: sans-serif;

  background-size: cover;
  color: rgba(255, 255, 255, 0.226);
  display: flex;
  align-items: center;
  justify-content: center;
}
.card{
  width: 350px;
  height: 400px;
  background-color: black;
  padding: 20px;
  border-radius: 25px;
}
.inner-box{
  position: relative;
  width: 100%;
  height: 100%;
}
.card h2{
  font-weight: normal;
  font-size: 30px;
  text-align: center;
  margin-bottom: 20px;
  color: white;
  margin-top: 20px;
}
.input-box{
  width: 100%;
  background: white;
  border: 1px solid rgb(255, 255, 255);
  margin: 6px 0;
  height: 32px;
  border-radius: 10px;
  padding: 0 50px;
  box-sizing: border-box;
  outline: none;
  text-align: center;
  color: black
}
::placeholder{
  color: white
  font-size: 12px;
}
button{
  width: 100%;
  background: rgba(255, 255, 255, 0.842);
  border: 1px solid rgb(255, 255, 255);
  margin: 35px 0 10px;
  height: 32px;
  font-size: 12px;
  border-radius: 20px;
  padding: 0 10px;
  box-sizing: border-box;
  outline: none;
  color: black
  cursor: pointer;
}
.submit-btn{
  position: relative;
}
.submit-btn::after{
  content: '\27a4';
  color: #333;
  line-height: 32px;
  font-size: 17px;
  height: 32px;
  width: 32px;
  border-radius: 50%;
  background: blanchedalmond;
  position: absolute;
  right: -1px;
  top: -1px;
}
```

REGISTER

Your Name

Your Student Id

Your Email Id

New Password

Confirm Password

Submit

Fig. 2. Screenshot For New Register

HTML CODE FOR HOME & TABLE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Home</title>
  <link rel="stylesheet" href="nav.css">
</head>
<body>
  <nav>
    <label class="logo">LMS</label>
    <ul>
      <li><a href="">Home</a></li>
      <li><a href="">Book Info </a></li>
      <li><a href="">Profile </a></li>
      <li><a href="">Logout </a></li>
    </ul>
  </nav>
  <table>
    <tr>
      <th>Book code</th>
      <th>Book Name</th>
      <th>Author</th>
      <th>Avalaible</th>
      <th>Select</th>
    </tr>
    <tr>
      <td>1</td>
      <td>Teach Yourself (C++)</td>
      <td>Herbert Schildt</td>
      <td>01</td>
      <td><button type="button" class="btn">0</button></td>
    </tr>
    <tr>
      <td>2</td>
      <td>Database system</td>
      <td>Abraham Silberschtz</td>
      <td>01</td>
      <td><button type="button" class="btn">0</button></td>
    </tr>
    <tr>
      <td>3</td>
      <td>Economics</td>
      <td>Dalkir</td>
      <td>01</td>
      <td><button type="button" class="btn">0</button></td>
    </tr>
  </table>
</body>
</html>
```


CSS CODE FOR HOME & TABLE:

```
*{
  padding: 0;
  margin: 0;
  text-decoration: none;
  list-style: none;
  box-sizing: border-box;
}
body{
  font-family: montserrat;
}
nav{
  background: black;
  height: 80px;
  width: 100%;
}
label.logo{
  color: white;
  font-size: 50px;
  line-height: 80px;
  padding: 0 100px;
  font-weight: bold;
}
nav ul{
  float: right;
  margin-right: 80px;
}
nav ul li{
  display: inline-block;
  line-height: 80px;
  margin: 0 5px;
}
nav ul li a{
  color: white;
  font-size: 15px;
  text-transform: uppercase;
}
nav li a:hover {
  color: gray;
}
table{
  width: 100%;
  height: 80px;
}
td{
  text-align: center;
}
.btn {
  background-color: gray
  color: black;
  border: 2px solid black;
  padding: 0px 2px;
  text-align: center;
  text-decoration: none;
  display: inline-block;
  font-size: 16px;
  cursor: pointer;
}
tr:nth-child(even) {
  background-color: #dddddd;
}
```

LMS					HOME	BOOK INFO	PROFILE	LOGOUT
Book code	Book Name	Author	Avalaible	Select				
1	Teach Yourself(C++)	Herbert Schildt	01	<input type="checkbox"/>				
2	Database system	Abraham Silberschtz	01	<input type="checkbox"/>				
3	Economics	Dalkir	01	<input type="checkbox"/>				

Fig. 3. Screenshot for home & table.

HTML CODE FOR PROFILE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Profile </title>
  <link rel="stylesheet" href="profile.css">
</head>
<body>
  <section >
    <div class="card">
      
      <h1 class="name">My Profile </h1>
    <div class="desc">
      <p>Md. Rafiul Alam</p>
      <p>ID:UG02-47-18-041</p>
      <p>EMAIL:mdurjoy148@gmail.com</p>
    </div>
  </div>
  </section>
  <div class="card1">
    <h1 class="name">Book Details </h1>

    <table>
      <tr>
        <th>ID</th>
        <th>Book code</th>
        <th>Book Name</th>
        <th>Amount</th>
      </tr>
      <tr>
        <td>UG02-47-18-041</td>
        <td>1</td>
        <td>C++</td>
        <td>01</td>
      </tr>
      <tr>
        <td>UG02-47-18-041</td>
        <td>2</td>
        <td>Data Structure </td>
        <td>01</td>
      </tr>
    </table>

  </div>
  <div class="card1">
    <h1 class="name">Fine Details </h1>
    <table>
      <tr>
        <th>ID</th>
        <th>Fine Issued</th>
        <th>Total Fine</th>
        <th>Paid</th>
      </tr>
```

```

        <th>Due</th>
      </tr>
      <tr>
        <td>UG02-47-18-041</td>
        <td>01-09-2021</td>
        <td>15/-</td>
        <td>10/-</td>
        <td>05/-</td>
      </tr>
      <tr>
        <td>UG02-47-18-041</td>
        <td>01-09-2021</td>
        <td>25/-</td>
        <td>15/-</td>
        <td>10/-</td>
      </tr>
    </table>
  </div>
</body>
</html>

```

CSS CODE FOR PROFILE:

```

body{
  background: white;
  text-align: center;
  font-family: monospace;
}
.card{
  background: black;
  border-radius: 6px;
  display: inline-block;
  height: 470px;
  width: 375px;
  margin-top: 60px;
  box-shadow: 0 12px 13px rgba(0,0,0.16),
    0 12px 13px rgba(0,0,0.16);
}

.img{
  border-radius: 100%;
  margin-top: 60px;
  width: 132px;
  height: 128px;
}

.name{
  color: blanchedalmond;
}

.desc {
  font-size: 14px;
  margin-left: 65px;
  margin-right: 65px;
  margin-top: 15%;
}

```

```
color: white;
}

.container{
  display: flex;
  height: 250px;
  margin-top: 10%;
}
.card1{
  background: black;
  border-radius: 6px;
  display: inline-block;
  height: 200px;
  width: 45%;
  margin-top: 60px;
  margin-bottom: 5%;
  margin-right: 2.2%;
  margin-left: 2.2%;
  position: relative;
  box-shadow: 0 12px 13px rgba(0,0,0.16),0 12px 13px rgba(0,0,0.16);
}
table{
  width: 100%;
}
th, td {
  border: 1px solid black;
  background-color: white;
}
```



Book Details			
ID	Book code	Book Name	Amount
UG02-47-18-041	1	C++	01
UG02-47-18-041	2	Data Structure	01

Fine Details				
ID	Fine Issued	Total Fine	Paid	Due
UG02-47-18-041	01-09-2021	15/-	10/-	05/-
UG02-47-18-041	01-09-2021	25/-	15/-	10/-

Fig. 4. Screenshot for profile page.