PROJECT DOCUMENT

TITLE

LIBRARY MANAGEMENT SYSTEM

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ABSTRACT

Online Library Management System is a system which maintains the information about the books present in the library. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Library becomes much simple. The Online Library Management has been designed to computerize and automate the operations performed over the information about the book. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

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ABOUT PROJECT

Library Management System is a computerized system which helps user(librarian) to manage the library daily activity in electronic format. It reduces the risk of paper work such as file lost, file damaged and time consuming. It can help user to manage the transaction or record more effectively and timesaving. Only valid users will be able to access this Library Management System. Valid user can only add/delete/modify/view book details.

USERS

Users who want to make book details computerized.

SYSTEM ANALYSIS

Software Requirements

- Operating System
- Browser-Microsoft Edge/Chrome/Mozilla
- Text Editor-Visual Studio Code /Notepad++

- Client Side
    - ✦ HTML- Hypertext Mark-up Language, or HTML, is a mark-up language used to describe the structure of information on a web page.HTML is the foundation of a website it contains the information that tells the browser what is on the page in terms of text, links, where to find images.
    - ✦ **CSS**- it allows web designers, developer, bloggers, and so forth to make our websites unique and attractive. CSS gives us the opportunity to play with a page layout, adjust colours and fonts, add effects to images, etc.
    - ✦ **JavaScript**- JavaScript is a programming language used primarily by Web browsers to create a dynamic and interactive experience for the user. Most of the functions and applications that make the Internet indispensable to modern life are coded in some form of JavaScript.
- Server Side

PHP- Websites developed with PHP include faster processing features and they function easily which makes the data processing easy. It is compatible on all Operating Systems such as UNIX, Windows etc. Compatibility to upload into *HTML*. it is a free language with no licensing fees so the cost of using it is minimal. A good benefit of using PHP is that it can interact with many different database languages including MySQL.

- Database

MYSQL- MySQL is a freely available open -source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use.

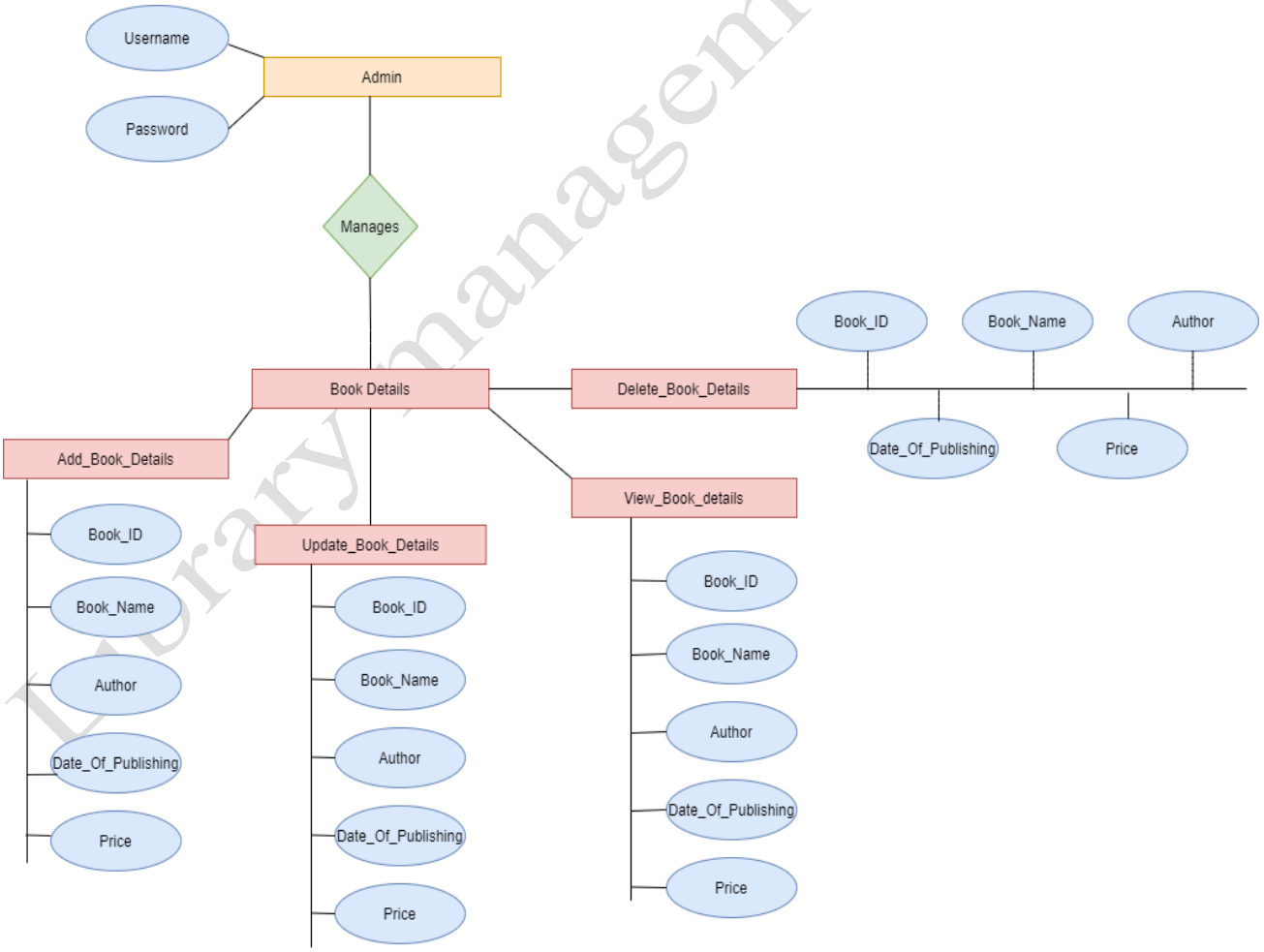
Hardware Requirements

- A Working PC
- Good network Connection
- Processor-Minimum 1GHz or more
- RAM-2GB/4GB/8GB or higher
- Hard Disk Capacity-1TB or more

ER DIAGRAM

An Entity Relationship Diagram (ERD) is a visual representation of different entities within a system and how they relate to each other. An ER diagram shows the relationship among entity sets. In terms of DBMS, an entity is a table or attribute of a table in database, so by showing relationship among tables and their attributes, ER diagram shows the complete logical structure of a database.

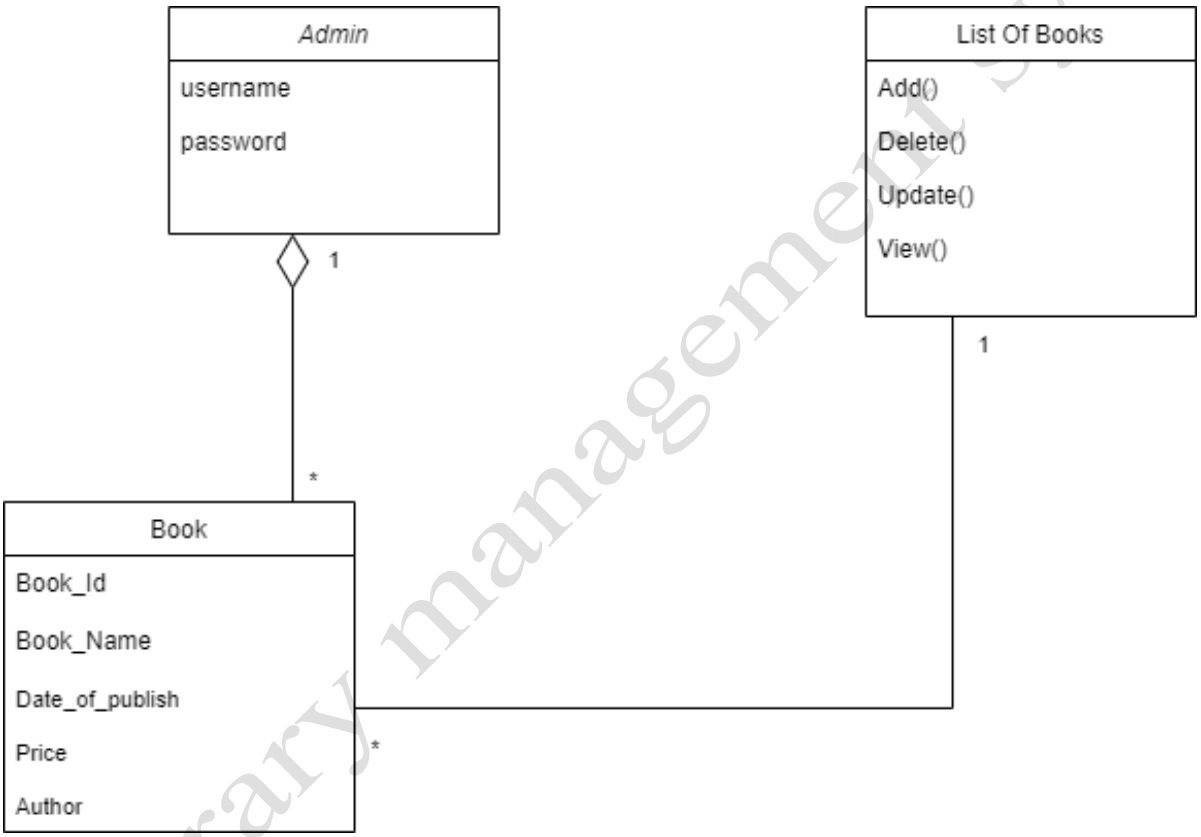
ER Diagram of Library Management System



CLASS DIAGRAM

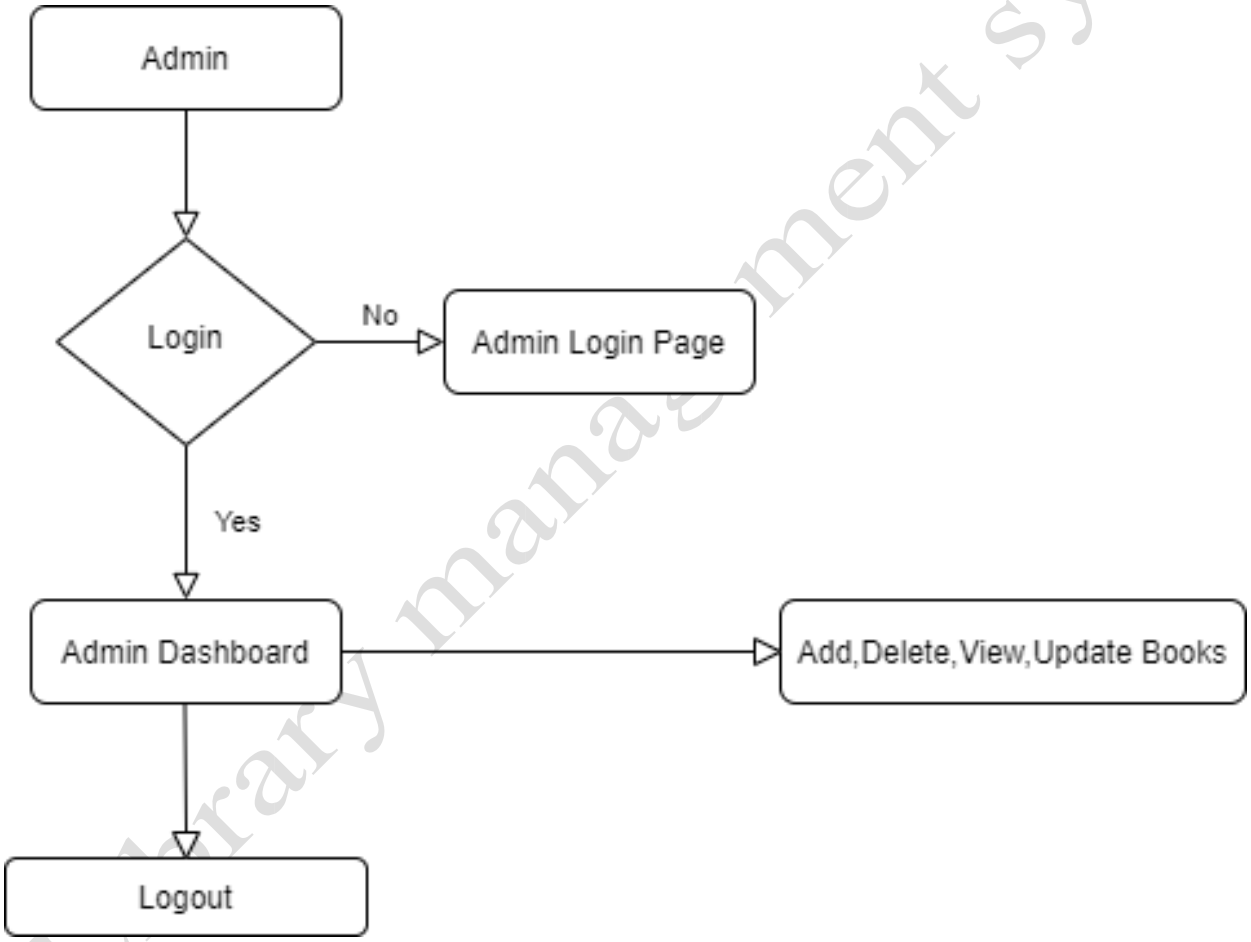
The class diagram is the main building block of object-oriented modelling. It is used for general conceptual modelling of the structure of the application, and for detailed modelling, translating the models into programming code. Class diagrams can also be used for data modelling.

Class Diagram of Library Management System



FLOW CHART

A flowchart is a type of diagram that represents a workflow or process. A flowchart can also



be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows.

EXISTING SYSTEM

Early days Libraries are managed manually. It required lot of time to record or to retrieve the details. The employees who have to record the details must perform their job very carefully. Even a small mistake would create a lot of problems. Security of information is very less. Report generations of all the information is very tough tas k. Maintenance of Library catalogue and arrangement of the books to the catalogue is very complex task. In addition to its maintenance of book details manually is a complex task. All the operations must be performed in perfect manner for the maintenance of the library without any degradation which may finally result in the failure of the entire system.

PROPOSED SYSTEM

To solve the inconveniences as mentioned in the existing system, proposed system is an automated Library Management System. Through this user can add books, update book details, delete book details, view book details. Our proposed system has the f ollowing advantages:

- Administrator can add, update the books.
- Time consuming is low, gives accurate results, reliability can be improved with the help of security
- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Look and Feel Environment
- Quick transaction

SOURCE CODE

admin_login.php

```
<!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>Admin Login</title>
    <link rel="stylesheet" href="CSS/style.css">
</head>
<body>
    <!-- Library management system -->
    <h1 id="library">Library Management System</h1>
    <!-- Login form starts here -->
    <div id = "form">
        <h1 id="admin">ADMIN LOGIN</h1>
        <form name="f1" action = "authentication.php"
onsubmit = "return validation()" method = "POST">
         <label id="user"> username </label>
          <input type = "text" id ="user" name = "user
" required>
         <div class="password">
         <label id="passw"> Password</label>
          <input type = "password" id ="pass" name = "
pass" required>
    </div>
    <div class="buttons">
        <input type = "submit" id = "btn" value = "Lo
gin">
        <button class = "btn" type='button'>Cancel</bu
tton>
    </div>
     </form>
    </div>
    <!-- Login form ends here -->
```

```
                                                    -->
    <script>
            function validation()
            {
                var id=document.f1.user.value;
                var ps=document.f1.pass.value;
                if(id.length=="" && ps.length=="") {
                    alert("User Name and Password fiel
ds are empty");
                    return false;
                }
                else
                {
                    if(id.length=="") {
                        alert("User Name is empty");
                        return false;
                    }
                    if (ps.length=="") {
                    alert("Password field is empty");

                    return false;
                    }
                }
            }
        </script>
<!-- //validation for empty field
</body>
</html>
```

Style.css

```
#library
{ margin-left: 500px;
```

```
    margin-top: 50px;
    color: #1B998B,#4b4b4b;
    font-size: 50px;
}

#admin{
    margin-left: 70px;
    color: darkred;
}


#form{
    border: solid gray 1px;
    width:25%;
    border-radius: 12px;
    margin: 100px auto;
    background: white;
    height: 250px;

}
#btn{
    color: #fff;
    background: lightskyblue;
    padding: 7px;
    margin-left:150px;
    color: black;
}
.btn{
    color: #fff; background:
    lightskyblue; padding:
    7px;
    color: black;

}
```

```
#user
{
    margin-left: 15px;
    border-radius: 12px;
    height: 25px;
    width: 218px;
}
#pass
{
    margin-left: 15px;
    height: 25px;
    border-radius: 12px;
    width: 220px;
}
#user{
    margin-left: 22px;
}
#passw{
    margin-left: 27px;

}
.password{
    margin-top: 20px;
}
.buttons{
    margin-top: 30px;
}
.form-group
{ width: 50px;
}

.details{ margin-left:
    600px; color: blue;
```

```
}
table {
    font-family: arial, sans-serif;
    border-collapse: collapse;
    width: 100%;
}

td, th {
    border: 1px solid #dddddd;
    text-align:  left;
    padding: 8px;

}

tr:nth-child(even) {
    background-color: white;
}
```


Connection.php

```
<?php
    $host = "localhost";
    $user = "root";
```

```
    $password = '';
    $db_name = "Library";
    $con = mysqli_connect($host, $user, $password, $db
_name); //dabase connection
    if(mysqli_connect_errno()) {
        die("Failed to connect with MySQL: ". mysqli_c
onnect_error());
    }
?>
```


authentication.php

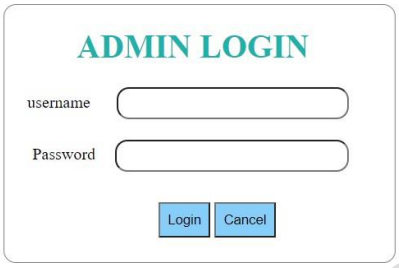
```
<?php include('connection.php');
    //connection
    $username = $_POST['user'];
    $password = $_POST['pass'];
```

```
        //to prevent from mysqli injection
        $username = stripcslashes($username);
        $password = stripcslashes($password);
        $username = mysqli_real_escape_string($con, $u
sername);
        $password = mysqli_real_escape_string($con, $p
assword);

        $sql = "select *from admin where username = '$
username' and password = '$password'";
        $result = mysqli_query($con, $sql);
        $row = mysqli_fetch_array($result, MYSQLI_ASSO
C);
        $count = mysqli_num_rows($result);

        if($count == 1){
            header("location: dashboard.php");

        }

        else{
            echo "<h1> Login failed. Invalid username
or password.</h1>";
            header("Refresh:3; url=admin_login.php");


        }
?>
```

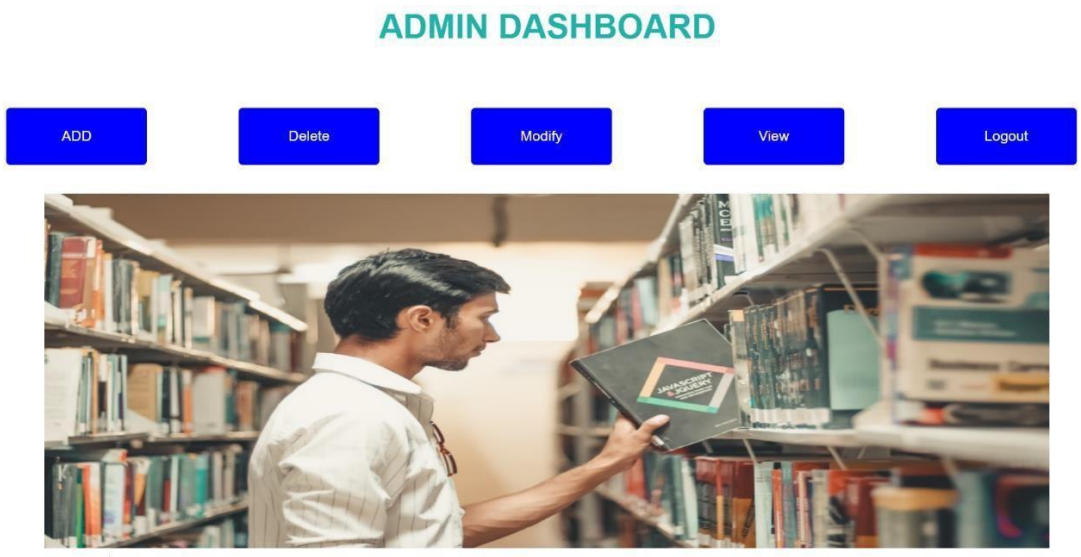
OUTPUT

Admin Login Page

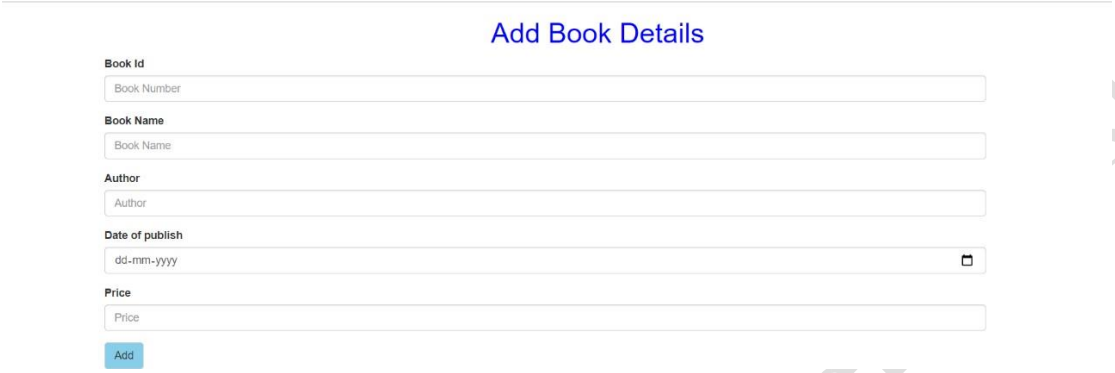
Library Management System



Admin Dashboard



Book Details Adding Page



Book Details Deleting Page

Delete Book Details

Book ID	Book name	Author	Date of publish	Price	Delete Book
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150	Delete
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150	Delete
2	The Bloomsbury Anthology of Great Indian Poems	Abhay K	2021-05-19	200	Delete
3	The Bloomsbury Anthology of Great Indian Poems	Amit Shah	2021-05-21	300	Delete

Book Details Modifying Page

Modify Book Details

Book ID	Book name	Author	Date of publish	Price	Update Book
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150	Update
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150	Update
2	The Bloomsbury Anthology of Great Indian Poems	Abhay K	2021-05-19	200	Update
3	The Bloomsbury Anthology of Great Indian Poems	Amit Shah	2021-05-21	300	Update

Book Details Page

All Book Details

Book ID	Book name	Author	Date of publish	Price
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150
1	A Commentary and Digest on The Air, Act 1981	Apoorva Kumar Singh	2021-05-18	150
2	The Bloomsbury Anthology of Great Indian Poems	Abhay K	2021-05-19	200
3	The Bloomsbury Anthology of Great Indian Poems	Amit Shah	2021-05-21	300

Result

Created Library Management System which helps user(librarian) to manage the library daily

activity in electronic format.

REFERENCE

- Destiny Library Manager

- Odoo Website Library Management System