



Library Report

Web Development 2

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List of PHP Pages

➤ database.php

This file is used to connect to the Library Database by using *mysqli()*. It creates a variable *\$conn* with the connection link for SQL uses. It also returns an error if the connection failed.

This file is included in all the pages which require the Library SQL Database.

➤ header.php

This file contains the header. It displays the navigation bar at the top of the page. The navigation bar contains the link to each page so that the user can navigate between pages easily. It also has a **login** button on the right-hand side. This changes to the **logout** button if the user is already logged in. It also indicates that the user is logged in by showing the name of the user.

This file is included in all the pages for a common header.

➤ footer.php

This file contains the footer. It displays that the *Site is made by Aayush Gaur*.

This file is included in all the pages for a common footer.

➤ logout.php

This file logs the user out. This is done by destroying the current session using *session_destroy()*. Then it redirects to the login page (*login.php*).

This file is used in logout button in the navigation bar in *header.php*.

➤ login.php

This is the main login page. This creates a session and asks the user to verify themselves to use the system.

This page asks the user to enter his username and password and checks if it is correct by using *MYSQL* to access the *users* table in the library database. If the

user details are correct, the page sets a session variable “*account*” with the username of the user.

It shows an error message when the user doesn’t enter a field or if the *username or password is incorrect*. It also shows an error message “*You must login to use library services*” when the user is redirected to the login page if he tries to use the other pages without logging in.

It also displays a feedback message “Account created successfully” when the user is redirected to the login page after creating an account.

It also has a link to the register page where the user can click to make a new account. This link redirects the user to *register.php*.

➤ *register.php*

This is the register page. This is where the user can create a new account. This page contains a form which the user must fill to make an account. The page performs validation on each field and displays error messages for each field. It checks:

1. if the field is empty.
2. if the Username does not already exist by checking the Library database.
3. if the Username does not contain any special characters.
4. if the password is exactly 6 characters.
5. if the password matches with the confirm password.
6. if the telephone and mobile numbers are numeric.
7. if the telephone number is 7 digits.
8. if the mobile number is 10 digits.

If there are no errors present the information is then inserted into the Library database, thus creating a new user (account).

If the *INSERT* was successful, the user is redirected to the login page with a feedback message stating that the account was created successfully.

If the *INSERT* was unsuccessful, the user is returned to the register page with an error message stating that there was an error in creating the account.

➤ home.php

This is the home screen. It shows a dashboard with buttons for all the things that the user can do in the library system.

The user can only access the dashboard if he has logged in. This is done by checking if the session variable “*account*” is set. If the user has not logged in, he is directed to the login page with an error message stating, “*You must login to use library services*”.

On the dashboard there are two buttons (*Search Books*, *View Reserved Books*). Each button redirects to their respective pages (*search.php*, *view_reserved.php*).

➤ search.php

This is the search page. Here the user can search for books by using:

- book title and/or author (including partial search)
- book category

The user can only access the search page if he has logged in. This is done by checking if the session variable “*account*” is set. If the user has not logged in, he is directed to the login page with an error message stating, “*You must login to use library services*”.

The page has two different buttons for each search (*title/author* or *category*).

The page performs validation on only the input fields for which the button was clicked.

For Title/Author:

User can select *and/or* option using the radio buttons. It is selected as *or* by default.

- If OR is selected, at least one of the fields should be filled.
- If AND is selected, both the fields should be filled.

It shows an error message if the above conditions are not met.

For Category:

User must select the category from the drop-down list. The dropdown is created by retrieving the all the categories from the *category* table in the Library database.

It shows an error message if the user does not select a category.

If there are no errors present, the page retrieves all the books from the *books* table in the Library database according to the conditions given by the user.

The data is then displayed as a table with a pagination system. The table only shows 5 rows per page. Each row has a link to reserve that book for the current user. The link shows up only if the book is not already reserved. If it is reserved, it says “*Reserved*” instead of the link. Clicking on the link redirects the user to the reserve confirmation page (*reserve.php*) with the *ISBN* of the book selected. If there are no books meeting the conditions “0 results” is displayed with a message saying “*No books found matching your criteria*” instead.

➤ *reserve.php*

This page is for the user to confirm reserving the book he selected. The book *ISBN* is sent from the search page (*search.php*) and is retrieved using the `$_GET` variable.

The page shows the name and author of the book to be reserved and gives two buttons. One to reserve the book and other to return to search. If the user selects to reserve the book, the page then *INSERTS* the *ISBN*, *Username* and the current date to the *reservations* table in the Library database.

If the query is successful it then also *UPDATES* the book’s reserved status to ‘Y’ in the *books* table.

It displays the feedback to the user if the book was reserved successfully or not.

➤ *view_reserved.php*

This is where the current user can view all the books that he has reserved.

The user can only access the page if he has logged in. This is done by checking if the session variable “*account*” is set. If the user has not logged in, he is directed to the login page with an error message stating, “*You must login to use library services*”.

The page shows all the books reserved by the current user in a table by retrieving it from the Library database. The table is displayed with a pagination system with 5 rows on each page. It shows the details of each book and the date the book was reserved. This is done by using *INNER JOIN* joining the tables *books*, *category* and *reservation*. Each row has a link to remove that book from reservation. Clicking on the link redirects the user to *unreserve.php* with the *ISBN* of the book in that row.

If there are no books reserved by the user, “0 results” is displayed with a message saying “*You have no reserved books*” instead.

A button to return to the home page (*home.php*) is also given.

➤ *unreserve.php*

This page is for the user to confirm removing the book he selected. The book ISBN is sent from the reserved books page (*view_reserved.php*) and is retrieved using the *\$_GET* variable.

The page shows the name and author of the book to be removed and gives two buttons. One to return the book and other to remove. If the user selects to remove the book, the page then *UPDATES* the book's reserved status to 'N' in the *books* table in the Library database.

If the query is successful it then also *DELETES* the reservation from the *reservation* table.

It redirects back to the Reserved Books page (*view_reserved.php*) with the feedback if the book was removed successfully or not.

Source Code of PHP Pages

➤ database.php

```
<?php
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "projectdb";

    $conn = new mysqli($servername, $username, $password, $dbname);

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }
?>
```

➤ footer.php

```
<footer class="container-fluid text-center">
    <p>Site by: Aayush Gaur &copy; 2021</p>
</footer>
```

➤ logout.php

```
<?php
    session_start();
    session_destroy();
    header("Location: login.php");
?>
```

➤ header.php

```
<html>
<body>
  <header>
    <nav class="navbar navbar-inverse navbar-fixed-top">
      <div class="container-fluid">
        <div class="navbar-header">
          <button type="button" class="navbar-toggle" data-toggle="collapse" data-
target="#myNavbar">
            <span class="icon-bar"></span>
            <span class="icon-bar"></span>
            <span class="icon-bar"></span>
          </button>
          <a class="navbar-brand" href="home.php" style="color: white;"><span
class="glyphicon glyphicon-book"></span> LIBRARY </a>
        </div>
        <div class="collapse navbar-collapse" id="myNavbar">
          <ul class="nav navbar-nav">
            <li><a href="home.php">Home</a></li>
            <li><a href="search.php">Search</a></li>
            <li><a href="view_reserved.php">Reserved Books</a></li>
          </ul>
          <ul class="nav navbar-nav navbar-right">
            <?php if ( !isset($_SESSION["account"])) { ?>
            <li><a href="login.php"><span class="glyphicon glyphicon-log-in"></span>
Login</a></li>
            <?php } else { ?>
            <li><a><span class="glyphicon glyphicon-user"></span> <?php echo
($_SESSION["name"]); ?></a></li>
            <li><a href="logout.php"><span class="glyphicon glyphicon-log-out"></span>
Logout</a></li>
            <?php } ?>
          </ul>
        </div>
      </div>
    </nav>
  </header>
</body>
</html>
```


➤ login.php

```
<?php

session_start();
unset($_SESSION["account"]);

require_once "database.php";

$username = '';
$password = '';

if (isset($_POST['username']) && isset($_POST['password'])) {

    $username = $conn -> real_escape_string($_POST['username']);
    $password = $conn -> real_escape_string($_POST['password']);

    if (empty($username)) {

        $_SESSION["error"] = "Username is required";

    } else if (empty($password)) {

        $_SESSION["error"] = "Password is required";

    } else {

        $sql = "SELECT * FROM users WHERE Username='$username' AND Password='$password'";

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

        if ($result->num_rows === 1) {

            $row = $result->fetch_assoc();

            if ($row['Username'] === $username && $row['Password'] === $password) {

                $_SESSION['account'] = $row['Username'];

                $_SESSION['name'] = $row['FirstName'] . ' ' . $row['Surname'];

                header("Location: home.php");

                return;

            } else {

                $_SESSION["error"] = "Incorrect Username or Password";
                header("Location: login.php");
            }
        }
    }
}
```

```

        return;

    }

} else {

    $_SESSION["error"] = "Incorrect Username or Password";
    header("Location: login.php");

    return;

}
}
}

?>

<html>

<head>

<title>Login</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<header>
    <?php include("header.php"); ?>
</header>
<div class="regisdiv">
    <form method="post">

        <h2>LOGIN</h2>

        <?php if (isset($_SESSION["error"])) { ?>

            <p class="error"><?php echo $_SESSION["error"]; ?></p>

        <?php unset($_SESSION["error"]); } ?>

```

```
<?php if (isset($_SESSION["feedback"])) { ?>

    <p class="feedback"><?php echo $_SESSION["feedback"]; ?></p>

<?php unset($_SESSION["feedback"]); } ?>

<input type="text" name="uname" placeholder="User Name" value="<?php echo $uname;
?>"><br>

<input type="password" name="password" placeholder="Password"><br>

<button type="submit">Login</button>
<p>Don't have an account? <a href="register.php">Register now</a></p>

</form>
</div>
<div class="fixed-footer">
    <?php include("footer.php"); ?>
</div>

</body>

</html>
```

➤ register.php

```
<?php
    session_start();

    require_once "database.php";

    $uname = $pass = $pass2 = $fname = $surname = $line1 = $line2 = $city = $telephone =
    $mobile = "";
    $uname_err = $pass_err = $pass2_err = $fname_err = $surname_err = $line1_err =
    $line2_err = $city_err = $telephone_err = $mobile_err = "";

    if($_SERVER["REQUEST_METHOD"] == "POST") {

        // Validate username
        if(empty(trim($_POST["uname"]))) {
            $uname_err = "Please enter a username.";
        } elseif(!preg_match('/^[a-zA-Z0-9_]+$/', trim($_POST["uname"]))) {
            $uname_err = "Username can only contain letters, numbers, and underscores.";
        } else {
            $uname = $conn -> real_escape_string($_POST["uname"]);
            $sql = "SELECT * FROM users WHERE Username='$uname'";

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

            if ($result->num_rows === 1) {
                $uname_err = "This username is already taken.";
            }
        }

        // Validate password
        if(empty(trim($_POST["pass"]))) {
            $pass_err = "Please enter a password.";
        } elseif(strlen(trim($_POST["pass"])) != 6){
            $pass_err = "Password must have exactly 6 characters.";
        } else{
            $pass = $conn -> real_escape_string($_POST["pass"]);
        }

        // Validate confirm password
        if(empty(trim($_POST["pass2"]))) {
            $pass2_err = "Please confirm password.";
        } else {
            $passcheck = $conn -> real_escape_string($_POST["pass2"]);
            if(empty($pass_err) && ($pass != $passcheck)){
                $pass2_err = "Password did not match.";
            } else {
                $pass2 = $conn -> real_escape_string($_POST["pass2"]);
            }
        }
    }
}
```

```

// Validate first name
if(empty(trim($_POST["fname"]))) {
    $fname_err = "Please enter first name.";
} else {
    $fname = $conn -> real_escape_string($_POST["fname"]);
}

// Validate surname
if(empty(trim($_POST["surname"]))) {
    $surname_err = "Please enter surname.";
} else {
    $surname = $conn -> real_escape_string($_POST["surname"]);
}

// Validate Address line 1
if(empty(trim($_POST["line1"]))) {
    $line1_err = "Please enter address line 1.";
} else {
    $line1 = $conn -> real_escape_string($_POST["line1"]);
}

// Validate Address line 2
if(empty(trim($_POST["line2"]))) {
    $line2_err = "Please enter address line 2.";
} else {
    $line2 = $conn -> real_escape_string($_POST["line2"]);
}

// Validate city
if(empty(trim($_POST["city"]))) {
    $city_err = "Please enter city.";
} else {
    $city = $conn -> real_escape_string($_POST["city"]);
}

// Validate telephone
if(empty(trim($_POST["telephone"]))) {
    $telephone_err = "Please enter telephone number.";
} elseif(!is_numeric($_POST['telephone'])) {
    $telephone_err = "Invalid Number: Please enter only numbers.";
} elseif(strlen(trim($_POST["telephone"])) != 7) {
    $telephone_err = "Number must have 7 digits.";
} else {
    $telephone = $conn -> real_escape_string($_POST["telephone"] + 0);
}

// Validate mobile
if(empty(trim($_POST["mobile"]))) {
    $mobile_err = "Please enter mobile number.";
}

```

```

} elseif(!is_numeric($_POST['mobile'])) {
    $mobile_err = "Invalid Number: Please enter only numbers.";
} elseif(strlen(trim($_POST["mobile"])) != 10) {
    $mobile_err = "Number must have 10 digits.";
} else {
    $mobile = $conn -> real_escape_string($_POST["mobile"] + 0);
}

// If no errors are present, INSERT into the database
if(empty($username_err) && empty($pass_err) && empty($pass2_err) && empty($fname_err)
&& empty($surname_err) && empty($line1_err) && empty($line2_err) && empty($city_err) &&
empty($telephone_err) && empty($mobile_err)) {

    $sql = "INSERT INTO users (Username, Password, FirstName, Surname, AddressLine1,
AddressLine2, City, Telephone, Mobile) VALUES ('$uname', '$pass', '$fname', '$surname',
'$line1', '$line2', '$city', '$telephone', '$mobile')";
    if ($conn->query($sql) === TRUE)
    {
        $_SESSION["feedback"] = "Account created successfully";
    } else {
        $_SESSION["error"] = "Error in creating the account";
    }

    header("Location: login.php");
    return;
}
}
?>

<html>

<head>

<title>Register</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body style="display: block">

<header>

```

```

    <?php include("header.php"); ?>
</header>

<div class="regisdiv">
    <form method="post" id="register">

        <h2>REGISTER</h2>

        <label>User Name</label>
        <input type="text" name="uname" placeholder="User Name" value="<?php echo $uname;
?>">
        <span class="<?php echo (!empty($uname_err)) ? 'is-invalid' : ''; ?>"><?php echo
$uname_err; ?></span><br>

        <label>Password</label>
        <input type="password" name="pass" placeholder="Password" value="<?php echo $pass;
?>">
        <span class="<?php echo (!empty($pass_err)) ? 'is-invalid' : ''; ?>"><?php echo
$pass_err; ?></span><br>

        <label>Confirm Password</label>
        <input type="password" name="pass2" placeholder="Confirm Password" value="<?php
echo $pass2; ?>">
        <span class="<?php echo (!empty($pass2_err)) ? 'is-invalid' : ''; ?>"><?php echo
$pass2_err; ?></span><br>

        <label>First Name</label>
        <input type="text" name="fname" placeholder="First Name" value="<?php echo $fname;
?>">
        <span class="<?php echo (!empty($fname_err)) ? 'is-invalid' : ''; ?>"><?php echo
$fname_err; ?></span><br>

        <label>Surname</label>
        <input type="text" name="surname" placeholder="Surname" value="<?php echo
$surname; ?>">
        <span class="<?php echo (!empty($surname_err)) ? 'is-invalid' : ''; ?>"><?php echo
$surname_err; ?></span><br>

        <label>Address Line 1</label>
        <input type="text" name="line1" placeholder="Line 1" value="<?php echo $line1;
?>">
        <span class="<?php echo (!empty($line1_err)) ? 'is-invalid' : ''; ?>"><?php echo
$line1_err; ?></span><br>
        <input type="text" name="line2" placeholder="Line 2" value="<?php echo $line2;
?>">
        <span class="<?php echo (!empty($line2_err)) ? 'is-invalid' : ''; ?>"><?php echo
$line2_err; ?></span><br>

        <label>City</label>
        <input type="text" name="city" placeholder="City" value="<?php echo $city; ?>">

```

```
<span class="<?php echo (!empty($city_err)) ? 'is-invalid' : ''; ?>"><?php echo
$city_err; ?></span><br>

<label>Telephone</label>
<input type="text" name="telephone" placeholder="Telephone" maxlength="7"
value="<?php echo $telephone; ?>">
<span class="<?php echo (!empty($telephone_err)) ? 'is-invalid' : ''; ?>"><?php
echo $telephone_err; ?></span><br>

<label>Mobile</label>
<input type="text" name="mobile" placeholder="Mobile" maxlength="10" value="<?php
echo $mobile; ?>">
<span class="<?php echo (!empty($mobile_err)) ? 'is-invalid' : ''; ?>"><?php echo
$mobile_err; ?></span><br>

<button type="submit">Register</button>
<br><br>

</form>
</div>

<?php include("footer.php"); ?>

</body>

</html>
```


➤ home.php

```
<?php

session_start();

if (isset($_SESSION['account']) && isset($_SESSION['name'])) {

?>

<!DOCTYPE html>

<html>

<head>

<title>Home</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<header>
<?php include("header.php"); ?>
</header>
<h1>Welcome</h1>
<div class="regisdiv">
<div class="dashboard">

<h2>Dashboard</h2>

<?php if (isset($_SESSION["error"])) { ?>

<p class="error"><?php echo $_SESSION["error"]; ?></p>

<?php unset($_SESSION["error"]); } ?>

<a href="search.php" class="dashboard-button" >SEARCH BOOKS</a><br>
```

```
<a href="view_reserved.php" class="dashboard-button" type="submit">VIEW RESERVED  
BOOKS</a><br>  
  
</div>  
</div>  
  
<div class="fixed-footer">  
  <?php include("footer.php"); ?>  
</div>  
  
</body>  
  
</html>  
  
<?php  
  
  } else {  
  
    $_SESSION["error"] = "You must login to use Library Services";  
    header("Location: login.php");  
  
    return;  
  }  
  
?>
```

➤ search.php

```
<?php

session_start();

if (isset($_SESSION['account']) && isset($_SESSION['name'])) {

?>

<html>
<head>

<title>Search</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body style="display: block">

<header>
<?php include("header.php"); ?>
</header>

<?php
require_once "database.php";

if (isset($_POST['search_submit']) || isset($_GET['pageno'])) {

    if (isset($_GET['pageno'])) {
        $pageno = $_GET['pageno'];
        $where = $_SESSION['where'];
    } else {
        $pageno = 1;
    }

    if (isset($_POST['search_submit'])) {
        if ($_POST['search_submit'] == 2) {
            if (isset($_POST["category"])) {
                $c = $conn->real_escape_string($_POST["category"]);
                $where = "WHERE Category='$c'";
            }
        }
    }
}
```

```

        $_SESSION['where'] = $where;
    } else {
        $_SESSION["error"] = "Please select a Category";
        header("Location: search.php");
        return;
    }
} else {
    if ($_POST['partial'] == 2) {
        $t = $conn->real_escape_string($_POST["title"]);
        $a = $conn->real_escape_string($_POST["author"]);
        if (empty($a)) {
            $_SESSION["error"] = "Please enter an Author";
            header("Location: search.php");
            return;
        } elseif (empty($t)) {
            $_SESSION["error"] = "Please enter a Book Title";
            header("Location: search.php");
            return;
        } else {
            $where = "WHERE BookTitle LIKE '%$t%' OR Author LIKE '%$a%'";
        }
        $where = "WHERE BookTitle LIKE '%$t%' AND Author LIKE '%$a%'";
        $_SESSION['where'] = $where;
    } else {
        $t = $conn->real_escape_string($_POST["title"]);
        $a = $conn->real_escape_string($_POST["author"]);
        if (empty($t) && empty($a)) {
            $_SESSION["error"] = "Please enter either a Title or an Author";
            header("Location: search.php");
            return;
        } elseif (empty($a)) {
            $where = "WHERE BookTitle LIKE '%$t%'";
        } elseif (empty($t)) {
            $where = "WHERE Author LIKE '%$a%'";
        } else {
            $where = "WHERE BookTitle LIKE '%$t%' OR Author LIKE '%$a%'";
        }
        $_SESSION['where'] = $where;
    }
}

}

$sql = "SELECT * FROM books $where";
$result = $conn->query($sql);

$numrows = $result->num_rows;
$rows_per_page = 5;
$lastpage = ceil($numrows/$rows_per_page);

$page = (int)$page;

```

```

if ($pageno > $lastpage) {
    $pageno = $lastpage;
}
if ($pageno < 1) {
    $pageno = 1;
}

$limit = 'LIMIT ' . ($pageno - 1) * $rows_per_page . ',' . $rows_per_page;
$sql = "SELECT * FROM books INNER JOIN categories ON books.Category =
categories.CategoryID $where $limit";
$result = $conn->query($sql);
echo "<div class='regisdiv'>";
echo "<div class='custom-table'>";
echo "<h2>Search Results:</h2>";

if ($result->num_rows > 0) {
    echo "<table class='table table-dark'>";
    echo "<thead>";
    echo "<tr>";
    echo "<th scope='col'>ISBN</th>";
    echo "<th scope='col'>BookTitle</th>";
    echo "<th scope='col'>Author</th>";
    echo "<th scope='col'>Edition</th>";
    echo "<th scope='col'>Year</th>";
    echo "<th scope='col'>Category</th>";
    echo "</tr>";
    echo "</thead>";
    echo "<tbody>";
    while ($row = $result->fetch_assoc())
    {
        echo "<tr><td>";
        echo(htmlentities($row["ISBN"]));
        echo "</td><td>";
        echo(htmlentities($row["BookTitle"]));
        echo "</td><td>";
        echo(htmlentities($row["Author"]));
        echo "</td><td class='text-center'>";
        echo(htmlentities($row["Edition"]));
        echo "</td><td>";
        echo(htmlentities($row["Year"]));
        echo "</td><td>";
        echo(htmlentities($row["CategoryDescription"]));
        echo "</td><td>";
        if ($row["Reserved"] == "N") {
            echo '<a
href="reserve.php?isbn=' . htmlentities($row["ISBN"]) . '">Reserve</a>';
        } else {
            echo 'Reserved';
        }
        echo "</td></tr>\n";
    }
}

```

```

    }
    echo "</tbody>";
    echo "</table>\n";
    if ($pageno == 1) {
        echo " <div class='search-button search-button-disabled'>FIRST</div> <div
class='search-button search-button-disabled'>PREV</div> ";
    } else {
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=1' class='search-
button'>FIRST</a> ";
        $prevpage = $pageno-1;
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$prevpage' class='search-
button'>PREV</a> ";
    }

    echo " <span style='margin: auto 20px;'> ( Page $pageno of $lastpage ) </span>
";

    if ($pageno == $lastpage) {
        echo " <div class='search-button search-button-disabled'>NEXT</div> <div
class='search-button search-button-disabled'>LAST</div> ";
    } else {
        $nextpage = $pageno+1;
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$nextpage' class='search-
button'>NEXT</a> ";
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$lastpage' class='search-
button'>LAST</a> ";
    }
    echo "<br>";

    } else {
        echo "<h3>0 Results</h3><p class='error'>No Books Found Matching Your
Criteria<p>";
    }

    echo "<br><a href='search.php' class='search-button'>Return to Search</a>";
    echo "<a href='home.php' class='search-button'>Return to Home</a>";
    echo "</div>";
    echo "</div>";
    echo "<div class='fixed-footer'>";
    include("footer.php");
    echo "</div>";
    return;
}

?>

<div class="regisdiv">
    <form method="post">

    <h2>Search</h2>

```

```

<?php if (isset($_SESSION["error"])) { ?>

    <p class="error"><?php echo $_SESSION["error"]; ?></p>

<?php unset($_SESSION["error"]); } ?>

<label>By Book Title:</label>
<input type="text" name="title" placeholder="Book Title"><br>

<div class="text-center">
    <label class="clickInput">
        <input type="radio" name="partial" value="1" checked> OR
    </label>

    <label class="clickInput">
        <input type="radio" name="partial" value="2"> AND
    </label>
</div>

<label>By Author:</label>
<input type="text" name="author" placeholder="Author"><br>
<button class="dashboard-button" name="search_submit" value="1"
type="submit">Search</button>

<br><br>

<label>By Book Category:</label>
<select name="category">
    <option value="" disabled hidden selected>Select Book Category</option>
    <?php
        $sql = "SELECT * FROM categories";
        $result = $conn->query($sql);
        while ($row = $result->fetch_assoc())
        {
            ?>
            <option value="<?php echo(htmlentities($row["CategoryID"])); ?>"><?php
echo(htmlentities($row["CategoryDescription"])); ?></option>
            <?php
            }
            ?>
        </select>
        <br>

        <button class="dashboard-button" name="search_submit" value="2"
type="submit">Search</button>

</form>
</div>

```

```
<?php include("footer.php"); ?>

</body>
</html>

<?php

} else {

    $_SESSION["error"] = "You must login to use Library Services";
    header("Location: login.php");

    return;
}

?>
```


➤ reserve.php

```
<?php

session_start();

if (isset($_SESSION['account']) && isset($_SESSION['name'])) {

?>

<html>
<head>

<title>Reserve</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<header>
<?php include("header.php"); ?>
</header>

<?php
require_once "database.php";

if ( isset($_POST['reserve']) && isset($_POST['isbn']) )
{
    $isbn = $conn -> real_escape_string($_POST['isbn']);
    $name = $conn -> real_escape_string($_SESSION['account']);
    $date = $conn -> real_escape_string(date('Y-m-d'));
    $sql = "INSERT INTO reservations (ISBN, Username, ReservedDate) VALUES ('$isbn',
'$name', '$date')";

    echo "<div class='regisdiv'>";
    echo "<div class='custom-feedback'>";

    if ($conn->query($sql) === TRUE)
    {
        $sql = "UPDATE books SET Reserved='Y' WHERE ISBN='$isbn'";
```

```

        if ($conn->query($sql) === TRUE)
        {
            echo "<p class='feedback'>Reservation Confirmed</p>";
        } else {
            // Return reservations to its original state
            $sql = "DELETE FROM reservations WHERE ISBN='$isbn'";
            $conn->query($sql);
            echo "<p class='error'>Error: Failed to Reserve Book</p>";
        }
    } else {
        echo "<p class='error'>Error: Failed to Reserve Book</p>";
    }
}

echo "<br><a href='search.php?pageno=1' class='search-button'>Return to
Search</a>";
echo "<a href='home.php' class='search-button'>Return to Dashboard</a>";
echo "</div>";
echo "</div>";
echo '<div class="fixed-footer">';
include("footer.php");
echo '</div>';
return;
}

$isbn = $conn -> real_escape_string($_GET['isbn']);
$sql = "SELECT BookTitle, Author, ISBN FROM books WHERE ISBN='$isbn'";
$result = $conn->query($sql);
$row = $result->fetch_assoc();

echo ('<form method="post">');
echo ("<label>Reserve <span style='color: black;'>" . $row["BookTitle"] . "</span>
by <span style='color: black;'>" . $row["Author"] . "</span> ?</label>");
echo ('<input type="hidden" ');
echo ('name="isbn" type="hidden" value="'.htmlentities($row["ISBN"]).'">' .
"<br><br>" );
echo ("<a href='search.php?pageno=1' class='search-button'>Return to Search</a>");
echo ('<button class="search-button reserve-button" type="submit" value="Reserve"
name="reserve">Reserve</button>');
echo ("\n</form>\n");
include("footer.php");
return;

?>

</body>

</html>

<?php

```

```
} else {  
  
    $_SESSION["error"] = "You must login to use Library Services";  
    header("Location: login.php");  
  
    return;  
}  
  
?>
```

➤ view_reserved.php

```
<?php

session_start();

if (isset($_SESSION['account']) && isset($_SESSION['name'])) {

?>

<html>
  <head>

    <title>View Reserved</title>

    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
    <link rel="stylesheet" type="text/css" href="CSS/style.css">
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

  </head>

  <body>

    <header>
      <?php include("header.php"); ?>
    </header>

    <?php
      require_once "database.php";

      if (isset($_GET['pageno'])) {
        $pageno = $_GET['pageno'];
      } else {
        $pageno = 1;
      }

      $user = $conn->real_escape_string($_SESSION["account"]);
      $sql = "SELECT * FROM books INNER JOIN reservations ON books.ISBN =
reservations.ISBN INNER JOIN categories ON books.Category = categories.CategoryID WHERE
Username='$user'";
      $result = $conn->query($sql);

      $numrows = $result->num_rows;
      $rows_per_page = 5;
```

```

$lastpage = ceil($numrows/$rows_per_page);

$pageno = (int)$pageno;
if ($pageno > $lastpage) {
    $pageno = $lastpage;
}
if ($pageno < 1) {
    $pageno = 1;
}

$limit = 'LIMIT ' . ($pageno - 1) * $rows_per_page . ',' . $rows_per_page;
$sql = "SELECT * FROM books INNER JOIN reservations ON books.ISBN =
reservations.ISBN INNER JOIN categories ON books.Category = categories.CategoryID WHERE
Username='$user' $limit";
$result = $conn->query($sql);

echo "<div class='regisdiv'>";
echo "<div class='custom-table'>";
echo "<h2>Your Reserved Books</h2>";

if (isset($_SESSION["error"])) {
    echo "<p class='error'>" . $_SESSION['error'] . "</p>";
    unset($_SESSION["error"]);
}

if (isset($_SESSION["feedback"])) {
    echo "<p class='feedback'>" . $_SESSION['feedback'] . "</p>";
    unset($_SESSION["feedback"]);
}

if ($result->num_rows > 0) {
    echo "<table class='table table-dark'>";
    echo "<thead>";
    echo "<tr>";
    echo "<th scope='col'>ISBN</th>";
    echo "<th scope='col'>BookTitle</th>";
    echo "<th scope='col'>Author</th>";
    echo "<th scope='col'>Edition</th>";
    echo "<th scope='col'>Year</th>";
    echo "<th scope='col'>Category</th>";
    echo "<th scope='col'>Reserved Date</th>";
    echo "</tr>";
    echo "</thead>";
    echo "<tbody>";
    while ($row = $result->fetch_assoc())
    {
        echo "<tr><td>";
        echo(htmlentities($row["ISBN"]));
        echo "</td><td>";
        echo(htmlentities($row["BookTitle"]));
    }
}

```

```

        echo "</td><td>";
        echo(htmlentities($row["Author"]));
        echo "</td><td class='text-center'>";
        echo(htmlentities($row["Edition"]));
        echo "</td><td>";
        echo(htmlentities($row["Year"]));
        echo "</td><td>";
        echo(htmlentities($row["CategoryDescription"]));
        echo "</td><td>";
        $date = date_format(date_create($row["ReservedDate"]), "j-M-Y");
        echo(htmlentities($date));
        echo "</td><td>";
        echo ' <a href="unreserve.php?isbn=' . htmlentities($row["ISBN"]) . '">Remove</a>';
        echo "</td></tr>\n";
    }
    echo "</tbody>";
    echo "</table>\n";
    if ($pageno == 1) {
        echo " <div class='search-button search-button-disabled'>FIRST</div> <div
class='search-button search-button-disabled'>PREV</div> ";
    } else {
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=1' class='search-button'>FIRST</a>
";

        $prevpage = $pageno-1;
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$prevpage' class='search-
button'>PREV</a> ";
    }

    echo " <span style='margin: auto 20px;'> ( Page $pageno of $lastpage ) </span> ";

    if ($pageno == $lastpage) {
        echo " <div class='search-button search-button-disabled'>NEXT</div> <div
class='search-button search-button-disabled'>LAST</div> ";
    } else {
        $nextpage = $pageno+1;
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$nextpage' class='search-
button'>NEXT</a> ";
        echo " <a href='{$_SERVER['PHP_SELF']}'?pageno=$lastpage' class='search-
button'>LAST</a> ";
    }
    echo "<br>";

} else {
    echo "<h3>0 Results</h3><p class='error'>You Have No Reserved Books<p>";
}

echo "<br><a href='home.php' class='search-button'>Return to Home</a>";
echo "</div>";
echo "</div>";
echo "<div class='fixed-footer'>";

```

```
include("footer.php");
echo "</div>";
return;

?>

</body>
</html>

<?php

} else {

    $_SESSION["error"] = "You must login to use Library Services";
    header("Location: login.php");

    return;
}

?>
```

➤ unreserve.php

```
<?php

session_start();

if (isset($_SESSION['account']) && isset($_SESSION['name'])) {

?>

<html>
<head>

<title>Reserve</title>

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<link rel="stylesheet" type="text/css" href="CSS/style.css">
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<header>
<?php include("header.php"); ?>
</header>

<?php
require_once "database.php";

if ( isset($_POST['remove']) && isset($_POST['isbn']) )
{
    $isbn = $conn -> real_escape_string($_POST['isbn']);
    $sql = "UPDATE books SET Reserved='N' WHERE ISBN='$isbn'";

    if ($conn->query($sql) === TRUE)
    {
        $sql = "DELETE FROM reservations WHERE ISBN='$isbn'";

        if ($conn->query($sql) === TRUE)
        {
            $_SESSION["feedback"] = "Book has been removed from reservation successfully";
```



```

    } else {
        // Return books to the original state
        $sql = "UPDATE books SET Reserved='Y' WHERE ISBN='$isbn'";
        $conn->query($sql);
        $_SESSION["error"] = "Failed to remove the book from reservation";
    }

    } else {
        $_SESSION["error"] = "Failed to remove the book from reservation";
    }

    header("Location: view_reserved.php");
    return;
}

$isbn = $conn -> real_escape_string($_GET['isbn']);
$sql = "SELECT BookTitle, Author, ISBN FROM books WHERE ISBN='$isbn'";
$result = $conn->query($sql);
$row = $result->fetch_assoc();

echo ('<form method="post">');
echo ("<label>Remove <span style='color: black;'>" . $row["BookTitle"] . "</span> by
<span style='color: black;'>" . $row["Author"] . "</span> ?</label>");
echo ('<input type="hidden" ');
echo ('name="isbn" type="hidden" value="'.htmlentities($row["ISBN"]).'">' .
"<br><br>" );
echo ("<a href='view_reserved.php?pageno=1' class='search-button'>Return</a>");
echo ('<button class="search-button reserve-button" type="submit" value="Remove"
name="remove">Remove</button>');
echo ("\n</form>\n");
include("footer.php");
return;

?>

</body>

</html>

<?php

} else {

    $_SESSION["error"] = "You must login to use Library Services";
    header("Location: login.php");

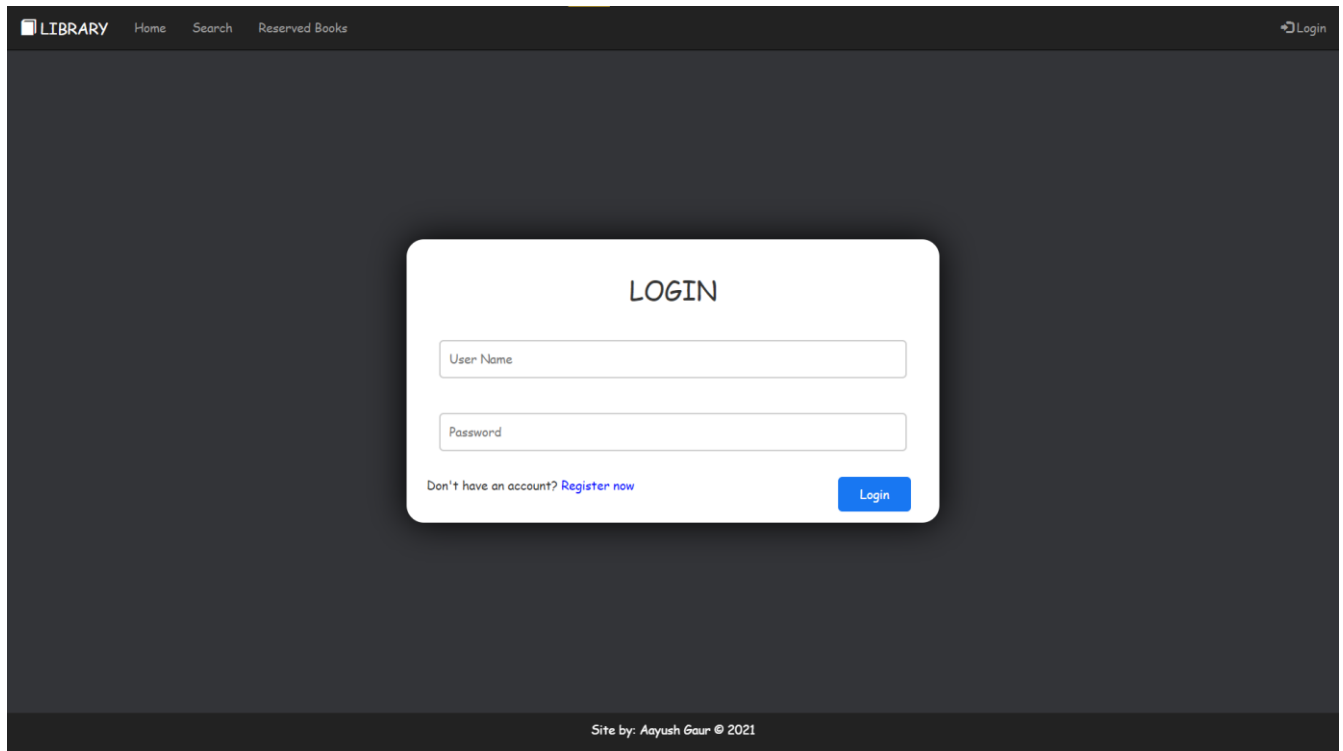
    return;
}

?>

```

Sample of PHP Pages

➤ login.php



LIBRARY Home Search Reserved Books Login

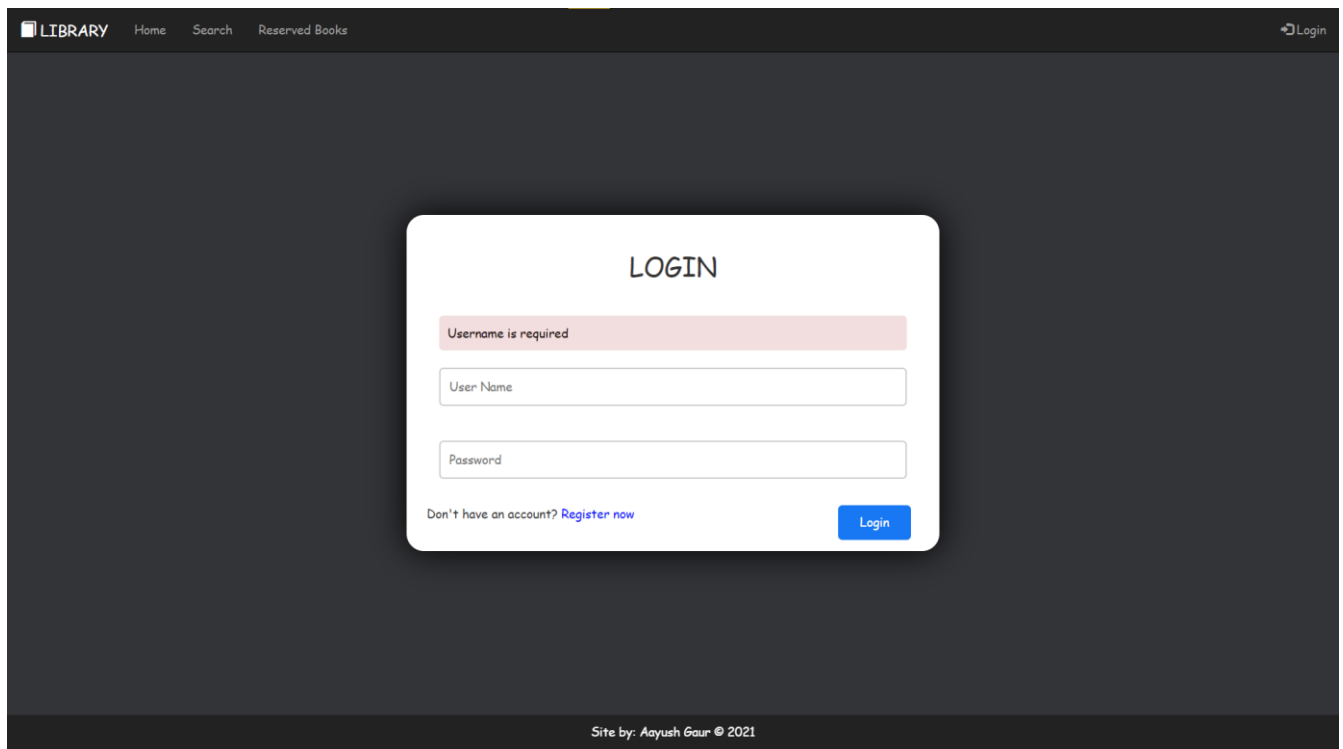
LOGIN

User Name

Password

Don't have an account? [Register now](#)

Site by: Aayush Gaur © 2021



LIBRARY Home Search Reserved Books Login

LOGIN

Username is required

User Name

Password

Don't have an account? [Register now](#)

Site by: Aayush Gaur © 2021

LIBRARY

Home

Search

Reserved Books

Login

LOGIN

Password is required

tommy100

Password

Don't have an account? [Register now](#)

Login

Site by: Aayush Gaur © 2021

LIBRARY

Home

Search

Reserved Books

Login

LOGIN

Incorrect Username or Password

User Name

Password

Don't have an account? [Register now](#)

Login

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LIBRARY

Home

Search

Reserved Books

Login

LOGIN

You must login to use Library Services

User Name

Password

Don't have an account? [Register now](#)

Login

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LIBRARY

Home

Search

Reserved Books

Login

LOGIN

Account created successfully

User Name

Password

Don't have an account? [Register now](#)

Login

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LIBRARY

Home

Search

Reserved Books

Login

REGISTER

User Name

User Name

Password

Password

Confirm Password

Confirm Password

First Name

First Name

Surname

Surname

Address Line 1

Line 1

LIBRARY

Home

Search

Reserved Books

Login

Surname

Address Line 1

Line 1

Line 2

City

City

Telephone

Telephone

Mobile

Mobile

Register

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LIBRARY

Home

Search

Reserved Books

Login

REGISTER

User Name

User Name

Please enter a username.

Password

Password

Please enter a password.

Confirm Password

Confirm Password

Please confirm password.

First Name

First Name

Please enter first name.

Surname

Surname

Please enter surname.

LIBRARY

Home

Search

Reserved Books

Login

Surname

Please enter surname.

Address Line 1

Line 1

Please enter address line 1.

Line 2

Please enter address line 2.

City

City

Please enter city.

Telephone

Telephone

Please enter telephone number.

Mobile

Mobile

Please enter mobile number.

Register

38

LIBRARY

Home

Search

Reserved Books

Login

REGISTER

User Name

tommy100

This username is already taken.

Password

Password

Password must have exactly 6 characters.

Confirm Password

...

First Name

Aayush

Surname

Gaur

Address Line 1

LIBRARY

Home

Search

Reserved Books

Login

Address Line 1

24

Ros Mor View

City

Dublin

Telephone

Telephone

Invalid Number: Please enter only numbers.

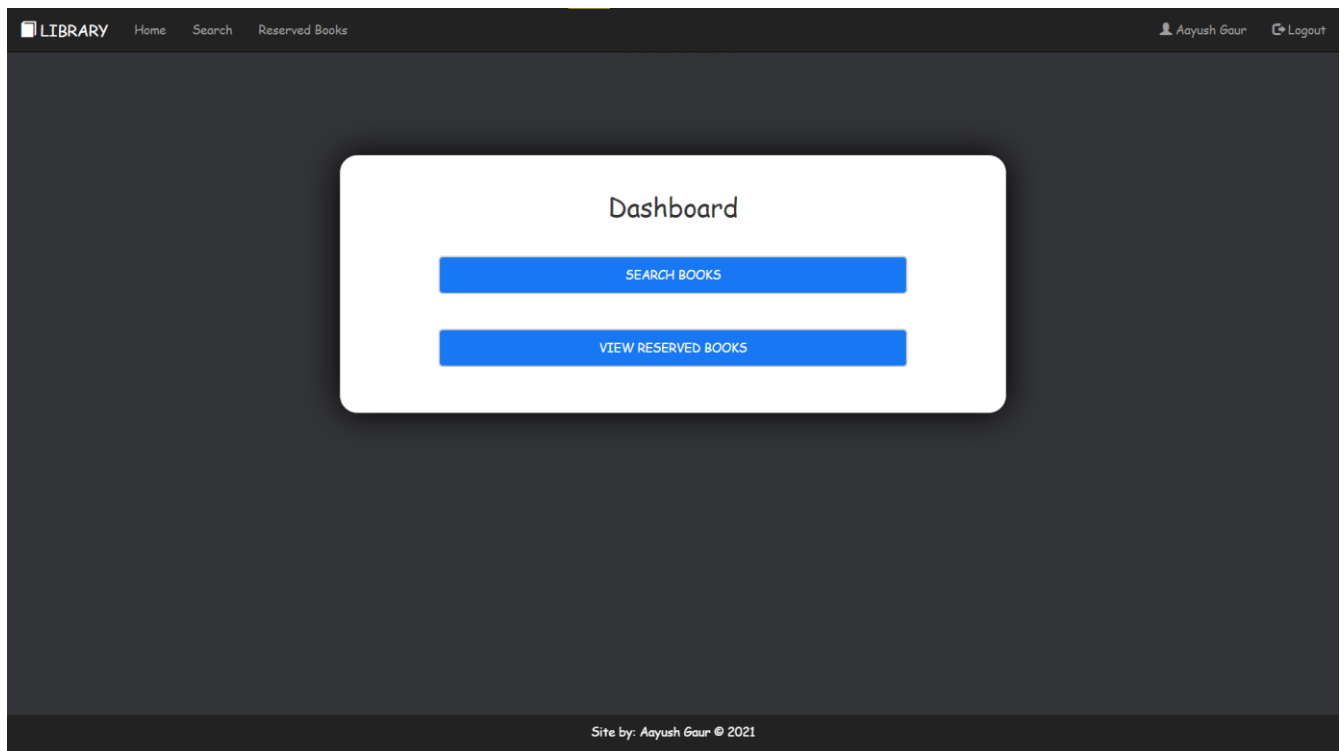
Mobile

Mobile

Number must have 10 digits.

Register

Site by: Aayush Gaur © 2021



LIBRARY

Home

Search

Reserved Books

Aayush Gaur

Logout

Search

By Book Title:

Book Title

☒ OR

☐ AND

By Author:

Author

Search

By Book Category:

Select Book Category

Search

LIBRARY

Home

Search

Reserved Books

Aayush Gaur

Logout

Search

By Book Title:

Book Title

☒ OR

☐ AND

By Author:

Author

Health

Business

Biography

Technology

Travel

Self-Help

Cookery

Fiction

Select Book Category

Search

LIBRARY

Home

Search

Reserved Books

Aayush Gaur

Logout

Search

Please enter either a Title or an Author

By Book Title:

Book Title

☒

OR

☐

AND

By Author:

Author

Search

By Book Category:

Select Book Category

Search

LIBRARY

Home

Search

Reserved Books

Aayush Gaur

Logout

Search

Please select a Category

By Book Title:

Book Title

☒

OR

☐

AND

By Author:

Author

Search

By Book Category:

Select Book Category

Search

Searched by Author "jo":

LIBRARY

HomeSearchReserved Books

Aayush GaurLogout

Search Results:

ISBN	BookTitle	Author	Edition	Year	Category	
23u8-923849	A guide to nutrition	John Thorpe	2	1997	Health	Reserve
993-004-00	My life in bits	John Smith	1	2001	Health	Reserve
9987-0039882	Shooting History	Jon Snow	1	2003	Health	Reserve
237-34823	Business Strategy	Joe Peppard	2	2002	Business	Reserve

FIRST

PREV

(Page 1 of 1)

NEXT

LAST

Return to Search

Return to Home

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Searched by Category "Health":

LIBRARY

HomeSearchReserved Books

Aayush GaurLogout

Search Results:

ISBN	BookTitle	Author	Edition	Year	Category	
23u8-923849	A guide to nutrition	John Thorpe	2	1997	Health	Reserve
9823-23984	My life in picture	Kevin Graham	8	2004	Health	Reserve
98234-029384	My ranch in Texas	George Bush	1	2005	Health	Reserved
993-004-00	My life in bits	John Smith	1	2001	Health	Reserve
9987-0039882	Shooting History	Jon Snow	1	2003	Health	Reserve

FIRST

PREV

(Page 1 of 2)

NEXT

LAST

Return to Search

Return to Home

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LIBRARY

HomeSearchReserved Books

Aayush GaurLogout

Search Results:

ISBN	BookTitle	Author	Edition	Year	Category	
e4tttetet	test	test	3	2021	Health	Reserve

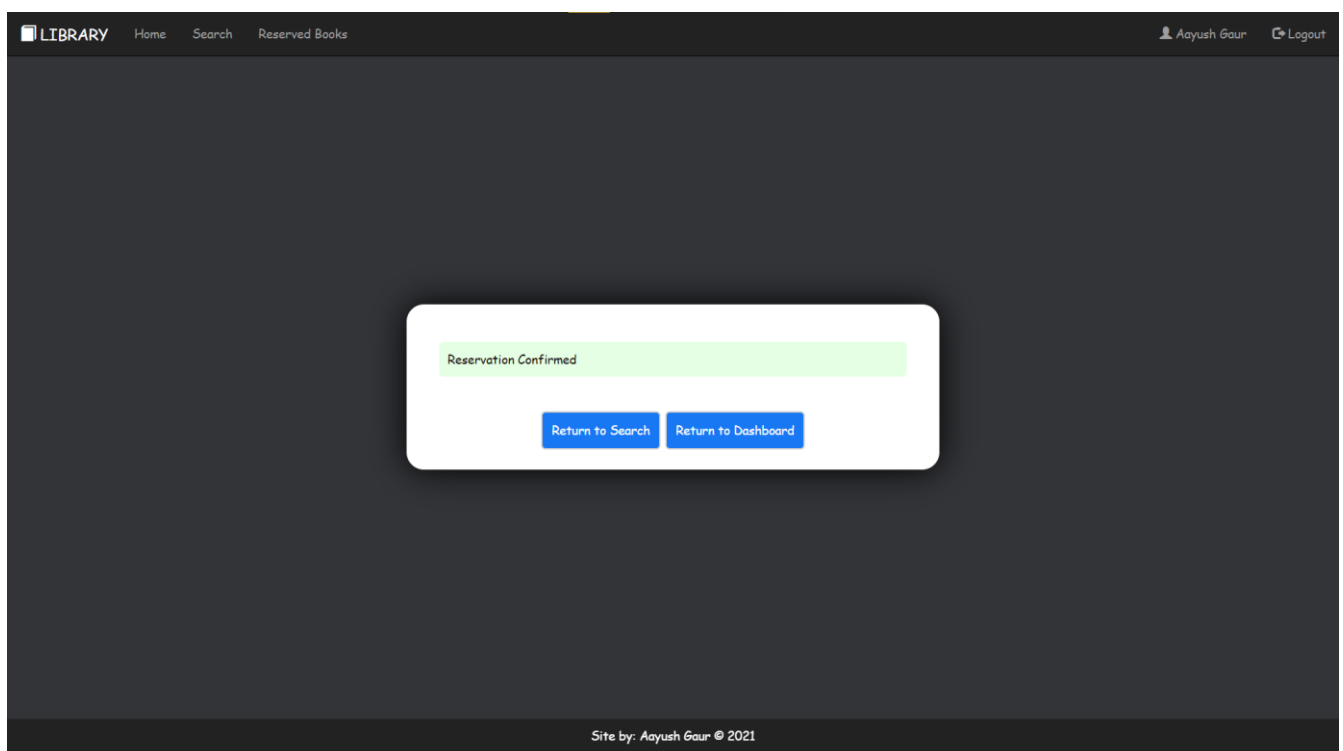
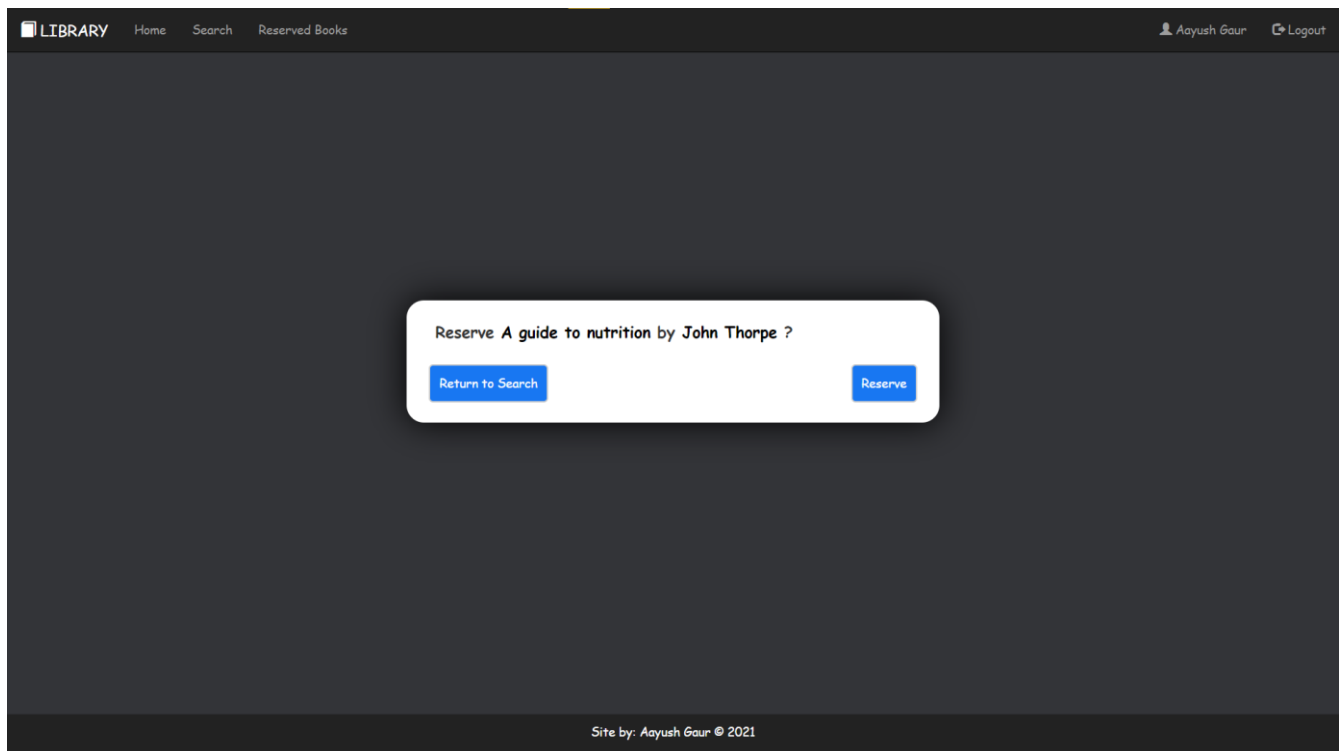
FIRSTPREV

(Page 2 of 2)

NEXTLAST

Return to SearchReturn to Home

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LIBRARY
Home
Search
Reserved Books
Aayush Gaur
Logout

Your Reserved Books

ISBN	BookTitle	Author	Edition	Year	Category	Reserved Date	
237-34823	Business Strategy	Joe Peppard	2	2002	Business	3-Dec-2021	Remove
23u8-923849	A guide to nutrition	John Thorpe	2	1997	Health	3-Dec-2021	Remove

FIRST
PREV
(Page 1 of 1)
NEXT
LAST

Return to Home

Site by: Aayush Gaur © 2021

LIBRARY
Home
Search
Reserved Books
Aayush Gaur
Logout

Your Reserved Books

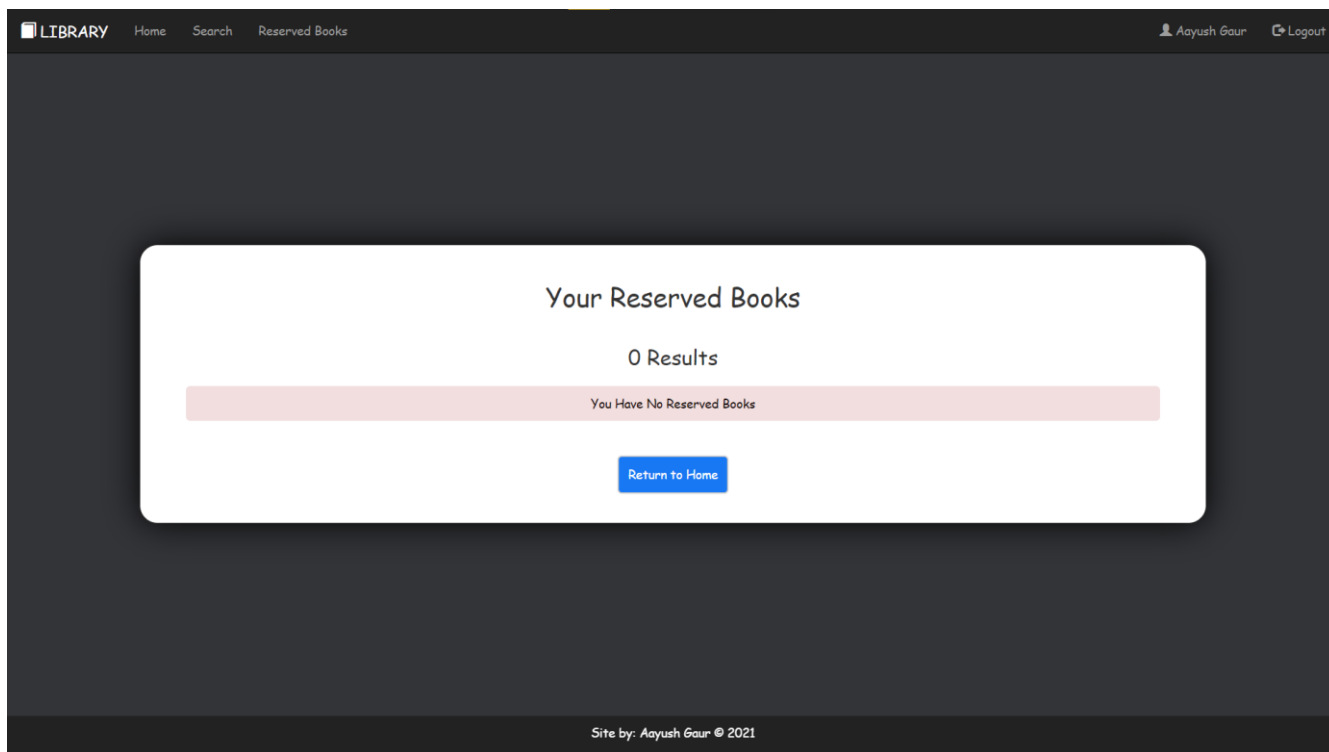
Book has been removed from reservation successfully

ISBN	BookTitle	Author	Edition	Year	Category	Reserved Date	
23u8-923849	A guide to nutrition	John Thorpe	2	1997	Health	3-Dec-2021	Remove

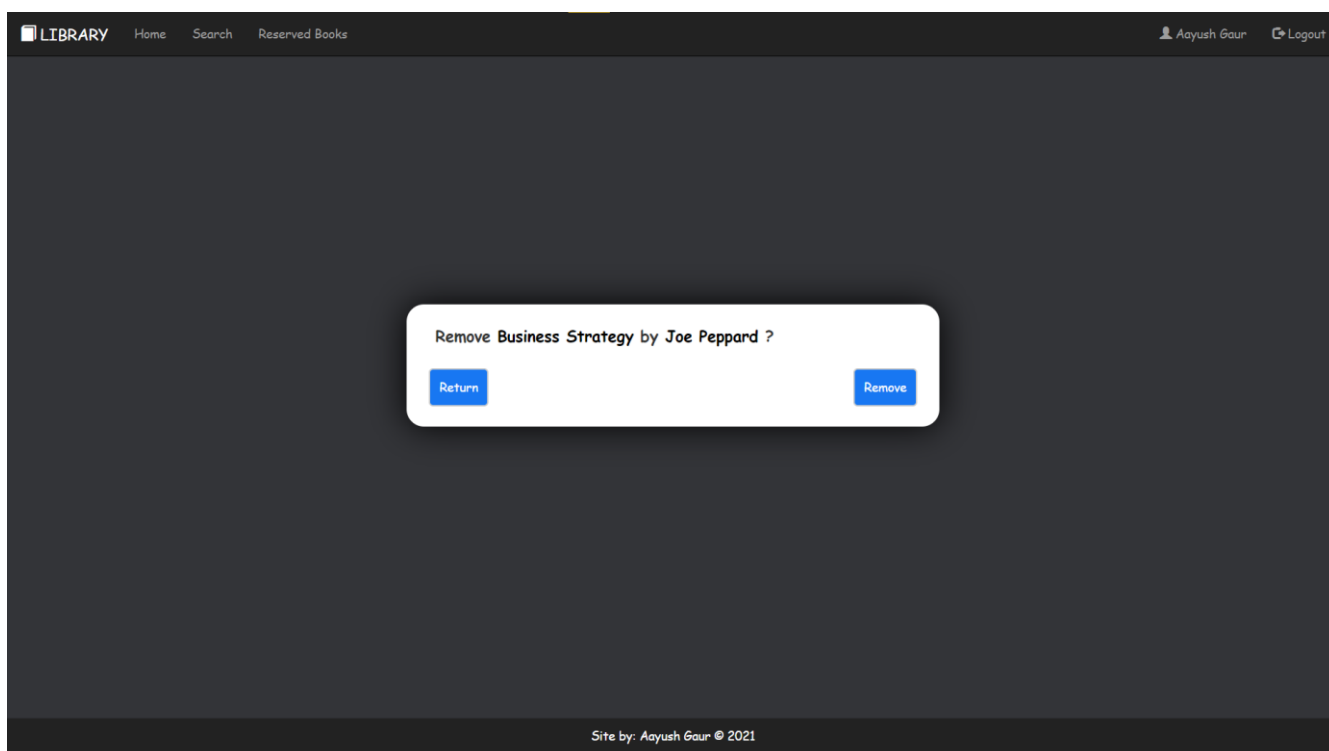
FIRST
PREV
(Page 1 of 1)
NEXT
LAST

Return to Home

Site by: Aayush Gaur © 2021

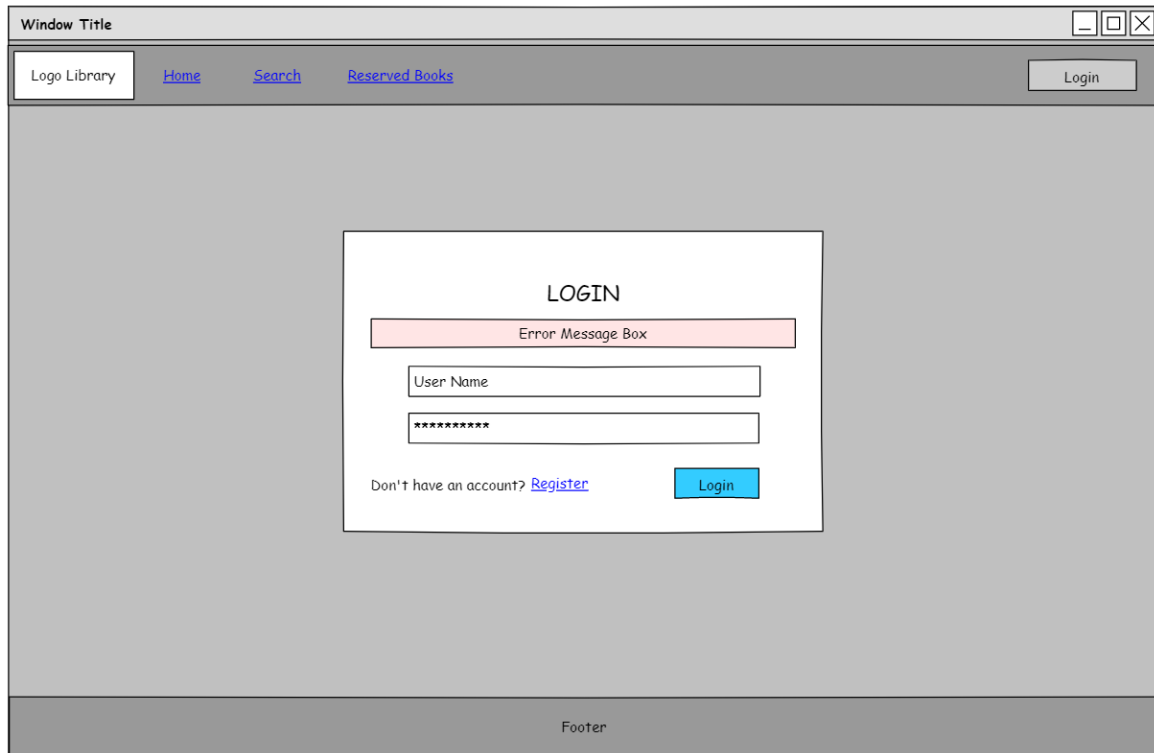


➤ [unreserve.php](#)



Design (Wireframes)

➤ login.php



Window Title

Logo Library [Home](#) [Search](#) [Reserved Books](#) Login

LOGIN

Error Message Box

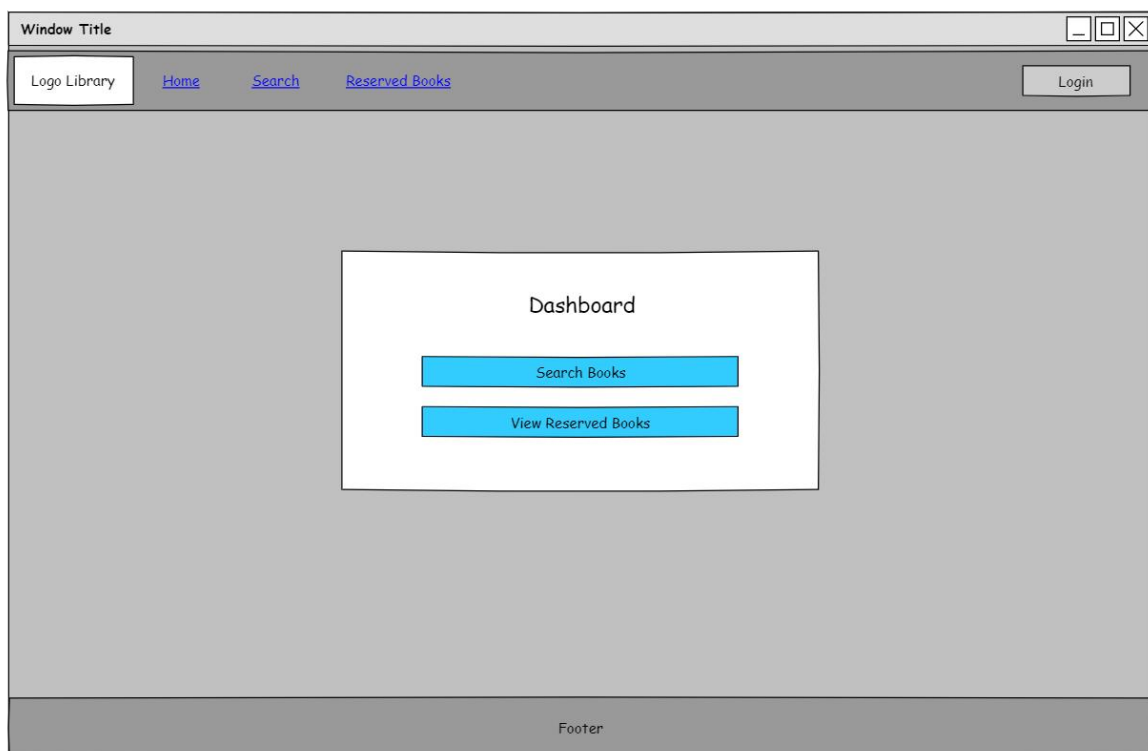
User Name

Don't have an account? [Register](#) Login

Footer

This wireframe shows a login page layout. It features a header with a logo, navigation links, and a login button. The main content area contains a central login form with a title, an error message box, input fields for username and password, and links for registration and login. A footer is located at the bottom.

➤ home.php



Window Title

Logo Library [Home](#) [Search](#) [Reserved Books](#) Login

Dashboard

Search Books

View Reserved Books

Footer

This wireframe shows a dashboard page layout. It features a header with a logo, navigation links, and a login button. The main content area contains a central dashboard box with two buttons: 'Search Books' and 'View Reserved Books'. A footer is located at the bottom.

➤ register.php

The screenshot shows a web browser window with the title 'Window Title'. The browser's address bar contains 'Logo Library' and navigation links for 'Home', 'Search', and 'Reserved Books'. A 'Login' button is located in the top right corner. The main content area displays a registration form titled 'REGISTER'. The form includes the following fields: 'User Name', 'Password', 'Confirm Password', 'First Name', 'Surname', 'Address' (with sub-fields 'Line 1' and 'Line 2'), 'City', 'Telephone', and 'Mobile'. A blue 'Register' button is positioned at the bottom right of the form. The browser window has a standard title bar with minimize, maximize, and close buttons. The footer of the page contains the text 'Footer'.

Window Title

Logo Library [Home](#) [Search](#) [Reserved Books](#) Login

REGISTER

User Name

Password

Confirm Password

First Name

Surname

Address

City

Telephone

Mobile

Register

Footer

Window Title

Logo Library

[Home](#)
[Search](#)
[Reserved Books](#)

Login

Search

Error Message Box

By Book Title:

Book Title

☒ OR
☐ AND

By Author:

Author

Search

By Book Category:

Select Book Category

Search

Footer

Window Title

Logo Library

[Home](#)
[Search](#)
[Reserved Books](#)

Login

Search Results:

ISBN	BookTitle	Author	Edition	Year	Category	
ISBN	Title	Author	Edition	Year	Category	Reserve
ISBN	Title	Author	Edition	Year	Category	Reserved
ISBN	Title	Author	Edition	Year	Category	Reserve

First

Prev

(Page 1 of 2)

Next

Last

Return to Search

Return to Home

Footer

➤ reserve.php

Window Title

Logo Library [Home](#) [Search](#) [Reserved Books](#) Login

Reserve Book by Author?

[Return to Search](#) [Reserve](#)

Footer

➤ view_reserved.php

Window Title

Logo Library [Home](#) [Search](#) [Reserved Books](#) Login

Your Reserved Books

Feedback Message

ISBN	BookTitle	Author	Edition	Year	Category	Reserved Date	
ISBN	Title	Author	Edition	Year	Category	Date	Remove
ISBN	Title	Author	Edition	Year	Category	Date	Remove
ISBN	Title	Author	Edition	Year	Category	Date	Remove

[First](#) [Prev](#) (Page 1 of 2) [Next](#) [Last](#)

[Return to Home](#)

Footer

➤ unreserve.php

