Alex Judd Web Development 2 Project Report

As part of my Continuous Assessment for Web Development 2, I was tasked with the design, construction and thorough testing of a Book Reservation system. I have an immense passion for all things literature, so this project was extremely enticing to say the least!

<u>Design Document</u>

MY first task was the design process of my website, and how, with the implementation of HTML, CSS and PHP I would create a dynamic book reservation system. Below I have attached my design documents, where I brainstormed potential design/layouts for each of my pages:

Alex Judd - Initial Brainstorm for Website:

Search Page:
- Allows user to search for books; by title, author, ISBN, category and year published
- Implement a stylish, drop-down menu functionality aspect.

Book Reservation System:

Home Page:
- Symplistic, modern design
- Overview of Website's functions/purposes
- Guide on Using the Website

Login Page:
- Prompts user to login - using username + Password

  When Logged in, The reserve books section becomes available. Users can:
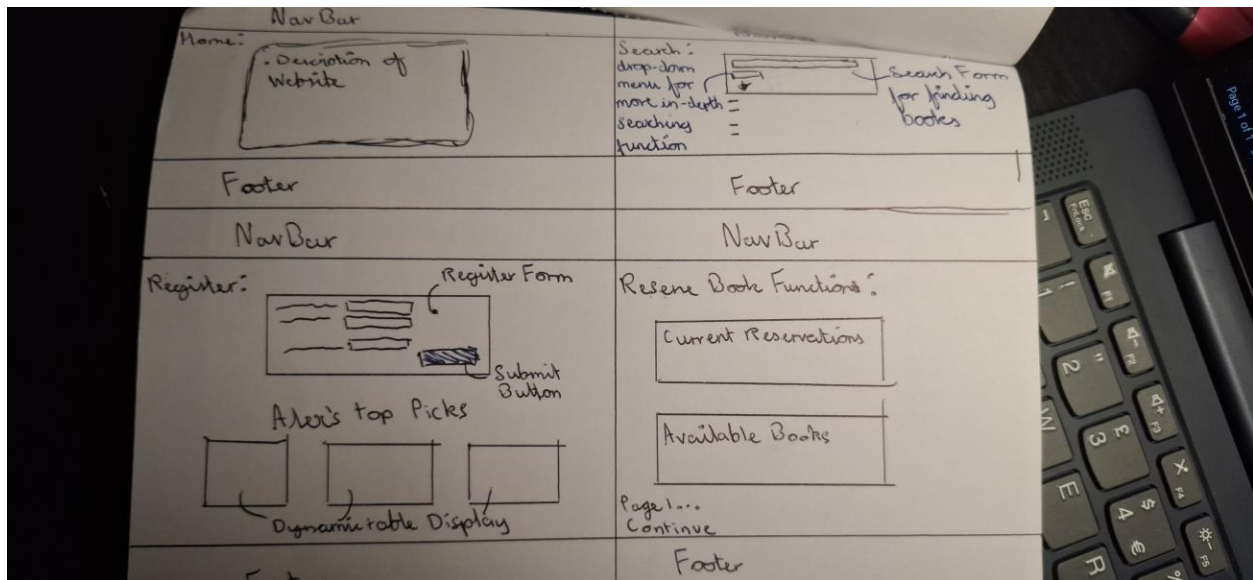 - Reserve/Unreserve books
  - View their current loans

Register Page:
- Register form to input Name, password, Address ect.
- Requirements:
  - Passwords Matched
  - Telephone/Mobile Numeric ≥10 characters
  - Password at least 6 characters

"Alex's Top Picks"
- Extend database to include some of my favourite books
- Include dynamic table

Alex Judd - Initial Brainstorm for Website:

Book Reservation System

Search Page:
- Allows user to search for books; by title, author, ISBN, category and year published
- Implement a stylish dropdown menu functionality aspect.

Login Page:
- Prompts user to login - using username + password
- When logged in, the reserve books section becomes available
- User can:
  - Reserve/Unreserve books
  - View their current loans

Home Page:
- Simplistic, modern design
- Overview of Website functions & purpose
- Guide on Using the Website

Register Page:
- Register form to input Name, Password, Address etc.
- Requirements:
  - Password Matches
  - Telephone/Mobile Numeric
  - Password at least 6 characters
- "Alex's Top Picks":
 - Extend database to include some of my favourite books
  - Include dynamic table

List of PHP files:

Here is a list of all the PHP/CSS pages I used within my website:

Header.php: Handles the header section of each page, where it is linked to the top of the page. It contains the navigation bar, which allows the user to seamlessly travel between pages.

Footer.php: Handles the footer section of each of the pages, where it is also linked. It contains a copyright notice, and a link to my social media.

Home.php: This is the main opening page of my website, with a simplistic, sleek desgin that allows for enhanced readability, and also gives a thorough breakdown of the websites main features/functionalities.
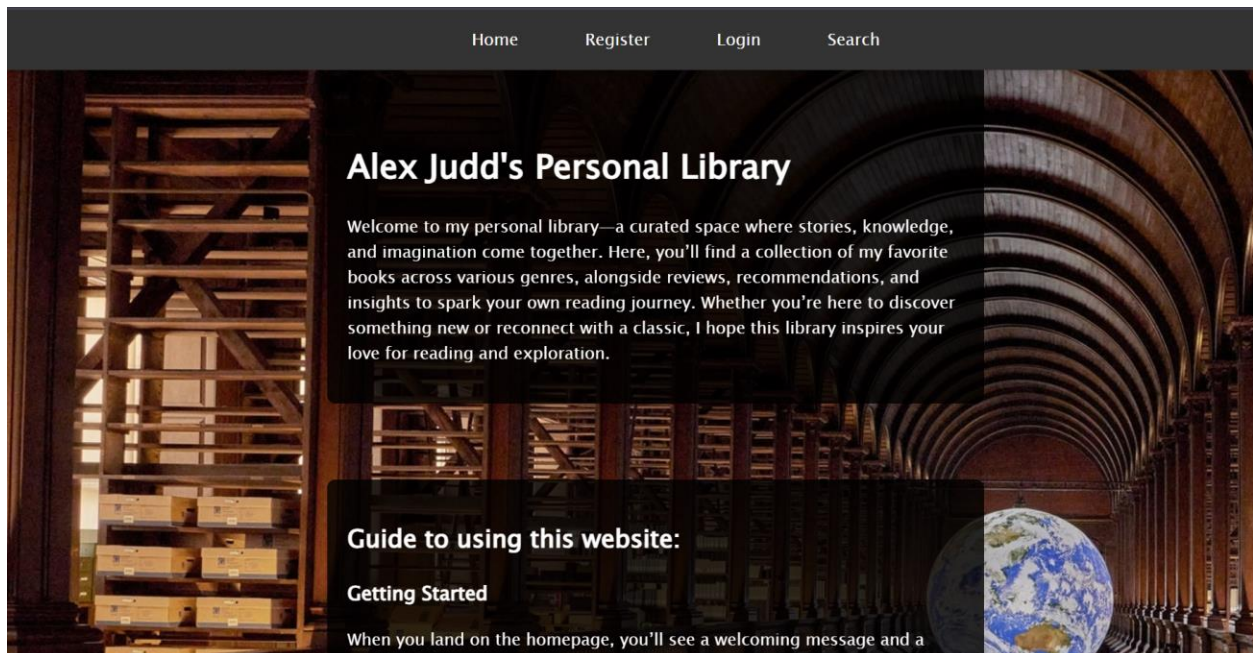
Register.php: This page allows the user to register as a member of my LIbrary book system, where there are fields for Username, Password, first and last names, addresses and phone numbers. I have implemented password hashing, a minimum character length for the password and a 10 digit numeric requirement for the telephone and mobile number.

```php
// Validate that passwords match
if ($password !== $password_repeat) {
    $message = "Passwords do not match!";
    exit;
}

// Validate password length (minimum 6 characters)
if (strlen($password) < 6) {
    $message = "Password must be at least 6 characters long!";
    exit;
}

// Validate telephone and mobile numbers (must be numeric and exactly 10 digits)
if (!preg_match('/^\d{10}$/', $telephone)) {
    $message = "Telephone number must be 10 digits long and numeric!";
    exit;
}

if (!preg_match('/^\d{10}$/', $mobile)) {
    $message = "Mobile number must be 10 digits long and numeric!";
    exit;
}

// Hash the password before inserting it into the database
$hashedPassword = password_hash($password, PASSWORD_DEFAULT);
```
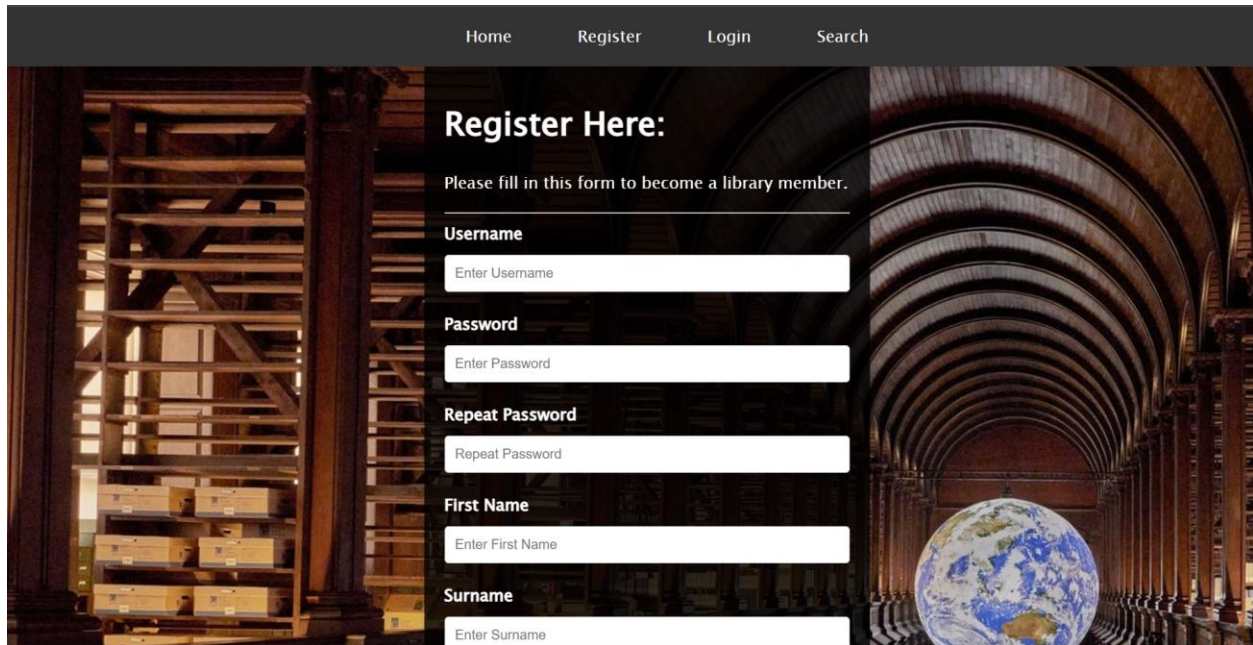
Login.php: This page allows the user to login and reserve books, after successfully registering as a User. Error messages will appear if the username entered is not recognised, or if the password entered does not match that of the one contained in the database.

Reserve.php: This functionality becomes availabla after the user has successfully logged in. Users Can see their current reservations, and can also reserve/unreserve books. I have implemented Pageination to allow only 5 books to appear per page, for better design.
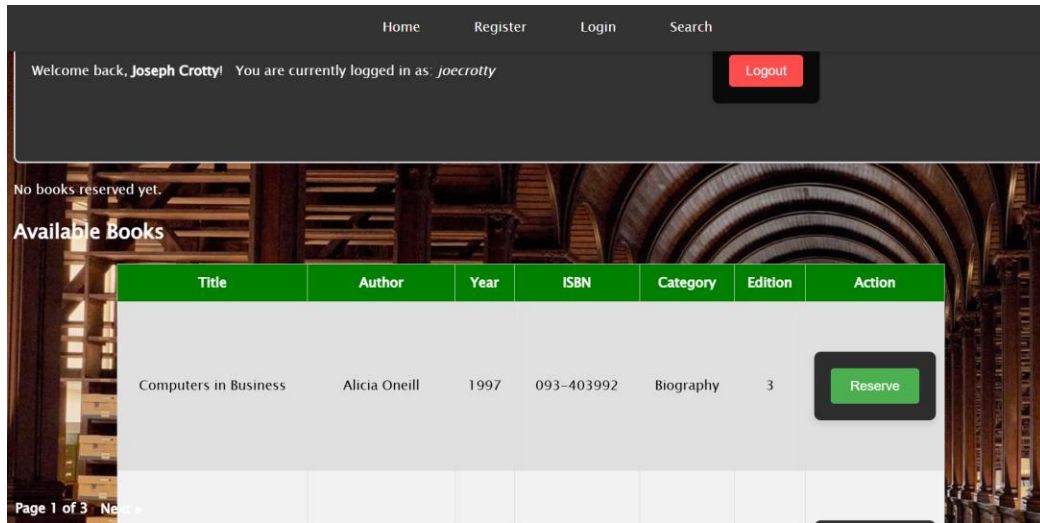
Search.php: This page allows users to search for books in my library system by title, author, ISBN, year and category. I have implemented a drop-down menu function so the user can specifically decide which way they would like to search for books.

_____

Source code:

Below I will attatch all of the source code from my Website:

Header.php:

```php
<!DOCTYPE html>
<html lang="en">
<head>
<link rel ="stylesheet" href ="style.css">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>

</head>
<body>
    <header>
        <div class = "navbar">
                <ul>
                    <li><a href ="home.php">Home</a></li>
                    <li><a href="register.php">Register</a></li>
                    <li><a href="login.php">Login</a></li>
                    <li><a href="search.php">Search</a></li>
                </ul>
            </div>
    </header>

</body>
</html>
```

Footer.php:

```php
<!DOCTYPE html>
<html lang="en">
<head>
    <link rel ="stylesheet" href ="style.css">
    <link href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-
beta3/css/all.min.css" rel="stylesheet">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
```

```
    <div class="footer">

        <footer>
                <p> @2024 copyright by Alex Judd</p><a
href="https://www.instagram.com/alex.judd4" target="_blank" class="social-icon">
                <i class="fab fa-instagram"></i> Instagram
        </footer>


    </div>

</body>
</html>
```

Home.php:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <link rel="stylesheet" href="style.css">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Home</title>
</head>
<body>
    <header>
        <?php include 'header.php'; ?>
    </header>

<div class = "content">
    <div class = "homepara">
        <br><br>
        <h1>Alex Judd's Personal Library</h1>
        <p>Welcome to my personal library—a curated space where stories,
knowledge, and imagination come together.
            Here, you'll find a collection of my favorite books across various
genres, alongside reviews, recommendations, and insights to spark your own
reading journey.
                Whether you're here to discover something new or reconnect with a
classic, I hope this library inspires your love for reading and exploration.</p>
    </div>
    <br><br><br>
```
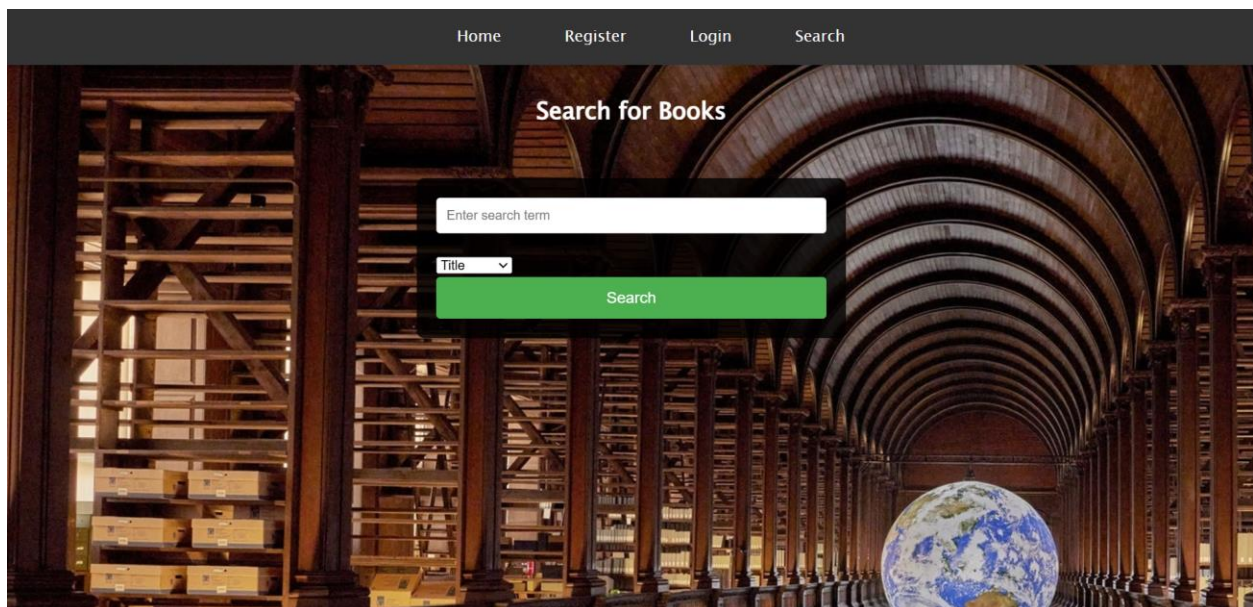
```html
    <div class = "about">
        <h2>Guide to using this website:</h2>


        <h3>Getting Started</h3>
        <p>When you land on the homepage, you'll see a welcoming message and a
quick introduction to what this library offers.
            From there, you can start browsing through various sections or use
the navigation bar to find specific content.</p>


        <h3>Navigation Guide</h3>
        <p>Home Page
            The homepage introduces you to the library and highlights featured
books, recent reviews, and special recommendations.


            <h3>Library Collection</h3>


            Genres: Browse by genre to find books within categories like fiction,
non-fiction, fantasy, science, history, and more.
            Favorites and Recommendations: Discover Alex's personal
recommendations, which include timeless classics and hidden gems across genres.
            New Arrivals: Stay updated with the latest additions to the library
collection.
            Book Reviews
            In the Book Reviews section, you'll find detailed insights into
individual books. Each review includes a summary, key themes, and Alex's personal
thoughts, helping you decide if it's the right read for you.


            <h3>Search Bar</h3>
            Use the search bar at the top of the page to quickly find books,
authors, or topics you're interested in. Simply enter a title, author name, or
genre keyword to locate related content.


            <h3>About & Contact</h3>


            <b>About:</b> Learn more about the inspiration behind this personal
library and what makes Alex passionate about reading and sharing books.<br><br>
            <b>Contact:</b> Reach out with questions, recommendations, or simply
to connect. Alex is always excited to discuss books and share reading
suggestions.</p>
    </div>
</div>
            <footer>
```

```
                    <?php include 'footer.php'?>
                </footer>

    </body>
    </html>
```

Register.php:

```php
<!DOCTYPE html>
<html lang="en">
    <head>
        <link rel="stylesheet" href="style.css">
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1.0">
        <title>Register</title>
    </head>
    <body>

    <?php

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "web_dev";



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



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

$message = "";



if (isset($_POST['register'])) {

    $username = mysqli_real_escape_string($conn, $_POST['UserName']);
    $password = mysqli_real_escape_string($conn, $_POST['Password']);
    $password_repeat = mysqli_real_escape_string($conn,
$_POST['password_repeat']);
    $FirstName = mysqli_real_escape_string($conn, $_POST['FirstName']);
```

```php
$surname = mysqli_real_escape_string($conn, $_POST['SurName']);
$addressLine1 = mysqli_real_escape_string($conn, $_POST['AddressLine1']);
$addressLine2 = mysqli_real_escape_string($conn, $_POST['AddressLine2']);
$city = mysqli_real_escape_string($conn, $_POST['City']);
$telephone = mysqli_real_escape_string($conn, $_POST['Telephone']);
$mobile = mysqli_real_escape_string($conn, $_POST['Mobile']);

// Validate that passwords match
if ($password !== $password_repeat) {
    $message = "Passwords do not match!";
    exit;
}

// Validate password length (minimum 6 characters)
if (strlen($password) < 6) {
    $message = "Password must be at least 6 characters long!";
    exit;
}

// Validate telephone and mobile numbers (must be numeric and exactly 10
digits)
if (!preg_match('/^\d{10}$/', $telephone)) {
    $message = "Telephone number must be 10 digits long and numeric!";
    exit;
}

if (!preg_match('/^\d{10}$/', $mobile)) {
    $message = "Mobile number must be 10 digits long and numeric!";
    exit;
}

// Hash the password before inserting it into the database
$hashedPassword = password_hash($password, PASSWORD_DEFAULT);

// Check if username already exists
$sqlCheck = "SELECT * FROM users WHERE UserName = '$username'";
$resultCheck = $conn->query($sqlCheck);

if ($resultCheck->num_rows > 0) {
    $message = "Username already exists. Please choose a different one.";
} else {
```

```php
        $sql = "INSERT INTO users (UserName, Password, FirstName, SurName,
AddressLine1, AddressLine2, City, Telephone, Mobile)
                VALUES ('$username', '$hashedPassword', '$FirstName', '$surname',
'$addressLine1', '$addressLine2', '$city', '$telephone', '$mobile')";


        if ($conn->query($sql) === TRUE) {
            $message = "Registration successful! You can now <a
href='login.php'>log in</a>.";
        } else {
            $message = "Error: " . $conn->error;
        }
    }
}


$conn->close();
?>


        <header>
            <?php include 'header.php'?>
        </header>

        <form action="register.php" method="POST">
            <h1> Register Here:</h1>
            <p>Please fill in this form to become a library member.</p>
            <hr>

            <label for="username"><b>Username</b></label>
            <input type="text" placeholder="Enter Username" name="UserName"
id="UserName" required>
            <br>

            <label for="psw"><b>Password</b></label>
            <input type="password" placeholder="Enter Password" name="Password"
id="Password" required minlength="6">
            <br>

            <label for="psw-repeat"><b>Repeat Password</b></label>
            <input type="password" placeholder="Repeat Password"
name="password_repeat" id="password_repeat" required>
            <br>
```

```html
        <label for="FirstName"><b>First Name</b></label>
        <input type="text" placeholder="Enter First Name" name="FirstName"
id="FirstName" required>
        <br>

        <label for="Surname"><b>Surname</b></label>
        <input type="text" placeholder="Enter Surname" name="SurName"
id="SurName" required>
        <br>

        <label for="AddressLine1"><b>Address Line 1</b></label>
        <input type="text" placeholder="Enter Address Line 1"
name="AddressLine1" id="AddressLine1" required>
        <br>

        <label for="AddressLine2"><b>Address Line 2</b></label>
        <input type="text" placeholder="Enter Address Line 2"
name="AddressLine2" id="AddressLine2" required>
        <br>

        <label for="City"><b>City</b></label>
        <input type="text" placeholder="Enter City" name="City" id="City"
required>
        <br>

        <label for="Telephone"><b>Telephone</b></label>
        <input type="text" placeholder="Enter Telephone" name="Telephone"
id="Telephone" required pattern="\d{10}">
        <br>

        <label for="Mobile"><b>Mobile</b></label>
        <input type="text" placeholder="Enter Mobile Number" name="Mobile"
id="Mobile" required pattern="\d{10}">
        <hr>

        <p>Already have an account? <a href="login.php">Sign in</a>.</p>

        <button type="submit" name="register">Register</button>
    </form>

    <div class="connection_success">
        <?php if ($message != ""): ?>
```

```php
                <p style="color: white; font-weight: bold; text-align: center;
font-size: 18px; background-color: #28a745; padding: 10px; margin-top: 10px;">
                    <?php echo $message; ?>
                </p>
            <?php endif; ?>
        </div>

        <div class="register_images">
            <h1>Alex's Top Picks:</h1>
            <p>These are some of my favourite titles over the past few years,
available for reservation in the library</p>

            <table border="1">
                <tr>
                    <td class="image-container">
                        <img src="it.png" alt="Image 1" width="100" height="100">
                        <span class="tooltip">IT by Stephen King: A group of
children in a small town confronts a terrifying, shape-shifting entity that preys
on their fears and returns decades later to haunt them as adults.</span>
                    </td>
                    <td class="image-container">
                        <img src="wotw.png" alt="Image 2" width="100"
height="100">
                        <span class="tooltip">The Gunslinger by Stephen King: In
a desolate, fantastical world, the last gunslinger, Roland, embarks on a
relentless quest to find the Dark Tower, a mystical place that holds the key to
the world's fate.</span>
                    </td>
                    <td class="image-container">
                        <img src="attenborough.png" alt="Image 3" width="100"
height="100">
                        <span class="tooltip">Living Planet by David
Attenborough: An exploration of Earth's diverse ecosystems, showcasing the
incredible adaptations of plants and animals that allow them to thrive in a wide
range of habitats.</span>
                    </td>
                    <td class="image-container">
                        <img src="cujo.png" alt="Image 4" width="100"
height="100">
                        <span class="tooltip">Cujo by Stephen King: A rabid dog
traps a mother and her son in their car, turning an ordinary day into a harrowing
battle for survival in a small Maine town.</span>
                    </td>
                    <td class="image-container">
```

```html
                                <img src="rp1.png" alt="Image 5" width="100"
height="100">
                                <span class="tooltip">Ready Player One by Ernest Cline:
In a dystopian future, teenager Wade Watts immerses himself in a virtual reality
world to compete in a high-stakes treasure hunt that promises unimaginable power
and wealth.</span>
                            </td>
                            <td class="image-container">
                                <img src="gunslinger2.png" alt="Image 6" width="100"
height="100">
                                <span class="tooltip">The Gunslinger by Stephen King: In
a desolate, fantastical world, the last gunslinger, Roland, embarks on a
relentless quest to find the Dark Tower, a mystical place that holds the key to
the world's fate.</span>
                            </td>
                        </tr>
                    </table>
            </div>
            <br><br><br><br><br><br><br>
            <footer>
                    <?php include 'footer.php'?>
            </footer>
        </body>
</html>
```

Login.php/Reserve.php:

```php
<?php
session_start();

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "web_dev";



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

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

```php
$books = [];
$reservedBooks = [];
$loggedIn = isset($_SESSION['username']);
$booksPerPage = 5;
$page = isset($_GET['page']) ? (int)$_GET['page'] : 1;



if ($_SERVER["REQUEST_METHOD"] == "POST" && !$loggedIn) {
    $inputUsername = $_POST['username'];
    $inputPassword = $_POST['password'];



    $stmt = $conn->prepare("SELECT Password, FirstName, SurName FROM users WHERE
UserName = ?");

    if ($stmt === false) {

        echo "Error preparing statement: " . $conn->error;
        exit;
    }

    $stmt->bind_param("s", $inputUsername);
    $stmt->execute();
    $stmt->store_result();

    if ($stmt->num_rows > 0) {
        $stmt->bind_result($dbPassword, $firstName, $surname);
        $stmt->fetch();


        if ($inputPassword == $dbPassword) {
            $_SESSION['username'] = $inputUsername;
            $_SESSION['firstName'] = $firstName;
            $_SESSION['surname'] = $surname;
            $loggedIn = true;
        } else {
            echo '<span style="color: red;">Invalid password.</span>';
        }
    } else {
        echo '<span style="color: red;">No user found with that
username.</span>';
```

```php
    }

    $stmt->close();
}


$totalBooksResult = $conn->query("SELECT COUNT(*) AS total FROM books");
$totalBooks = $totalBooksResult->fetch_assoc()['total'];
$totalPages = ceil($totalBooks / $booksPerPage);


$offset = ($page - 1) * $booksPerPage;
$query = "SELECT b.BookTitle, b.ISBN, b.Author, b.Year, b.Edition,
c.CategoryDescription
          FROM books b
          JOIN categories c ON b.Category = c.CategoryID
          LIMIT ?, ?";
$stmt = $conn->prepare($query);
$stmt->bind_param("ii", $offset, $booksPerPage);
$stmt->execute();
$result = $stmt->get_result();

if ($result && $result->num_rows > 0) {
    while ($row = $result->fetch_assoc()) {
        $books[] = $row;
    }
}
$stmt->close();


$reservedBooks = [];
if ($loggedIn) {
    $stmt = $conn->prepare("SELECT b.BookTitle, b.Author, b.Year, b.ISBN
                            FROM reservations r
                            JOIN books b ON r.ISBN = b.ISBN
                            JOIN users u ON r.UserName = u.UserName
                            WHERE u.UserName = ?");
    $stmt->bind_param("s", $_SESSION['username']);
    $stmt->execute();
    $result = $stmt->get_result();

    if ($result->num_rows > 0) {
        while ($row = $result->fetch_assoc()) {
            $reservedBooks[] = $row;
```

```php
        }
    }
    $stmt->close();
}

$conn->close();
?>
```

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <link rel="stylesheet" href="style.css">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Library System</title>
    <style>

        .pagination {
            position: fixed;
            bottom: 10px;
            left: 10px;
            color: white;
            font-weight: bold;
        }

        .pagination a {
            color: white;
            text-decoration: none;
            padding: 5px 10px;
        }

        .pagination a:hover {
            background-color: rgba(255, 255, 255, 0.2);
        }
    </style>
</head>
<body>

<header>
    <?php include 'header.php'; ?>
</header>

<?php if ($loggedIn): ?>
```

```php
    <div class="logout-container">
        <div class="welcome-message">
            <p>Welcome back, <strong><?php echo
htmlspecialchars($_SESSION['firstName'] . ' ' .
$_SESSION['surname']); ?></strong>!</p>
            <p>You are currently logged in as: <em><?php echo
htmlspecialchars($_SESSION['username']); ?></em></p>
        </div>
        <form action="logout.php" method="POST" class="logout-form">
            <button type="submit" class="logout-button">Logout</button>
        </form>
    </div>


    <?php if (!empty($reservedBooks)): ?>
        <div class="reserved-books">
            <h2>Your Reserved Books</h2>
            <div class="table-container">
                <table border="1" cellpadding="10" cellspacing="0">
                    <tr>
                        <th>Title</th>
                        <th>Author</th>
                        <th>Year</th>
                        <th>ISBN</th>
                    </tr>
                    <tbody>
                        <?php foreach ($reservedBooks as $book): ?>
                            <tr>
                                <td><?php echo
htmlspecialchars($book['BookTitle']); ?></td>
                                <td><?php echo
htmlspecialchars($book['Author']); ?></td>
                                <td><?php echo
htmlspecialchars($book['Year']); ?></td>
                                <td><?php echo
htmlspecialchars($book['ISBN']); ?></td>
                            </tr>
                        <?php endforeach; ?>
                    </tbody>
                </table>
            </div>
        </div>
```

```php
    <?php else: ?>
        <p style="color: white;">No books reserved yet.</p>
    <?php endif; ?>



    <?php if (!empty($books)): ?>
        <div class="available-books">
            <h2>Available Books</h2>
            <div class="table-container">
                <table border="1" cellpadding="10" cellspacing="0">
                    <tr>
                        <th>Title</th>
                        <th>Author</th>
                        <th>Year</th>
                        <th>ISBN</th>
                        <th>Category</th>
                        <th>Edition</th>
                        <th>Action</th>
                    </tr>
                    <tbody>
                    <?php foreach ($books as $book): ?>
                        <tr>
                            <td><?php echo
htmlspecialchars($book['BookTitle']); ?></td>
                            <td><?php echo
htmlspecialchars($book['Author']); ?></td>
                            <td><?php echo
htmlspecialchars($book['Year']); ?></td>
                            <td><?php echo
htmlspecialchars($book['ISBN']); ?></td>
                            <td><?php echo
htmlspecialchars($book['CategoryDescription']); ?></td>
                            <td><?php echo
htmlspecialchars($book['Edition']); ?></td>
                            <td>
                                <?php
                                // Checks if the book is already reserved by the
user

                                $isReserved = in_array($book['ISBN'],
array_column($reservedBooks, 'ISBN'));

                                if ($isReserved) {
```

```php
                                                echo "<form action='reserve.php'
method='POST'>
                                                    <input type='hidden' name='bookID'
value='" . $book['ISBN'] . "'>
                                                    <button
type='submit'>Unreserve</button>
                                                </form>";
                                        } else {
                                            echo "<form action='reserve.php'
method='POST'>
                                                    <input type='hidden' name='bookID'
value='" . $book['ISBN'] . "'>
                                                    <button
type='submit'>Reserve</button>
                                                </form>";
                                        }
                                        ?>
                                    </td>
                                </tr>
                            <?php endforeach; ?>
                            </tbody>
                        </table>
                    </div>
                </div>
            <?php else: ?>
                <p>No books available.</p>
            <?php endif; ?>


            <div class="pagination">
                <?php if ($page > 1): ?>
                    <a href="?page=<?php echo $page - 1; ?>">&laquo; Previous</a>
                <?php endif; ?>
                <span>Page <?php echo $page; ?> of <?php echo $totalPages; ?></span>
                <?php if ($page < $totalPages): ?>
                    <a href="?page=<?php echo $page + 1; ?>">Next &raquo;</a>
                <?php endif; ?>
            </div>

        <?php else: ?>

            <form action="login.php" method="POST">
                <h2>Login Page</h2>
```

```
        <label for="username">Username:</label>
        <input type="text" id="username" placeholder="Enter Username:"
name="username" required><br><br>
        <label for="password">Password:</label>
        <input type="password" id="password" placeholder="Enter Password"
name="password" required><br><br>
        <p>New to the library? <a href="register.php">Create an account</a></p>
        <button type="submit">Login</button>
    </form>
<?php endif; ?>


</body>
</html>
```

Logout.php:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>


<?php
session_start();
session_unset(); // Unset all session variables
session_destroy(); // Destroy the session
header("Location: login.php"); // Redirect to login page
exit();
?>


</body>
</html>
```

Search.php:

```
<?php
session_start();
```

```php
if (!isset($_SESSION['username'])) {

    header("Location: login.php");
    exit;
}

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "web_dev";



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

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

$searchResults = [];
$searchQuery = '';
$searchCategory = 'BookTitle';



if ($_SERVER["REQUEST_METHOD"] == "GET" && isset($_GET['search'])) {
    $searchQuery = $_GET['search'];
    $searchCategory = $_GET['category'];


    if ($searchCategory == 'Category') {

        $stmt = $conn->prepare("SELECT b.BookTitle, b.Author, b.Year, b.ISBN,
c.categoryDescription AS Category, b.Edition
                                FROM books b
                                JOIN categories c ON b.Category = c.categoryID
                                WHERE LOWER(c.categoryDescription) LIKE
LOWER(?)");
    } else {

        $stmt = $conn->prepare("SELECT BookTitle, Author, Year, ISBN, Category,
Edition FROM books WHERE
                                LOWER($searchCategory) LIKE LOWER(?)");
```

```php
    }

    $searchTerm = "%" . $searchQuery . "%";
    $stmt->bind_param("s", $searchTerm);
    $stmt->execute();
    $result = $stmt->get_result();

    if ($result && $result->num_rows > 0) {
        while ($row = $result->fetch_assoc()) {
            $searchResults[] = $row;
        }
    } else {
        $searchResults[] = "No books found matching your search.";
    }


    $stmt->close();
}


$conn->close();
?>


<!DOCTYPE html>
<html lang="en">
<head>
    <link rel="stylesheet" href="style.css">
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Search Books</title>
</head>
<body>

<header>
    <?php include 'header.php'; ?>
</header>

<?php if (isset($_SESSION['username'])): ?>

    <div class="search-container">
        <h2>Search for Books</h2>
        <form action="search.php" method="GET">
```

```php
            <input type="text" name="search" value="<?php echo
htmlspecialchars($searchQuery); ?>" placeholder="Enter search term" required>

            <!-- Dropdown Menu -->
            <select name="category">
                <option value="BookTitle" <?php if ($searchCategory ==
'BookTitle') echo 'selected'; ?>>Title</option>
                <option value="Author" <?php if ($searchCategory == 'Author')
echo 'selected'; ?>>Author</option>
                <option value="Year" <?php if ($searchCategory == 'Year') echo
'selected'; ?>>Year</option>
                <option value="ISBN" <?php if ($searchCategory == 'ISBN') echo
'selected'; ?>>ISBN</option>
                <option value="Category" <?php if ($searchCategory == 'Category')
echo 'selected'; ?>>Category</option>
                <option value="Edition" <?php if ($searchCategory == 'Edition')
echo 'selected'; ?>>Edition</option>
            </select>

            <button type="submit">Search</button>
        </form>
    </div>


    <?php if (!empty($searchResults)): ?>
        <div class="search-results">
            <h2>Search Results</h2>
            <div class="table-container">
                <table border="1" cellpadding="10" cellspacing="0">
                    <tr>
                        <th>Title</th>
                        <th>Author</th>
                        <th>Year</th>
                        <th>ISBN</th>
                        <th>Category</th>
                        <th>Edition</th>
                    </tr>
                    <tbody>
                        <?php foreach ($searchResults as $book): ?>
                            <?php if (is_array($book)): ?>
                                <tr>
                                    <td><?php echo
htmlspecialchars($book['BookTitle']); ?></td>
```

```php
                                        <td><?php echo
htmlspecialchars($book['Author']); ?></td>
                                        <td><?php echo
htmlspecialchars($book['Year']); ?></td>
                                        <td><?php echo
htmlspecialchars($book['ISBN']); ?></td>
                                        <td><?php echo
htmlspecialchars($book['Category']); ?></td>
                                        <td><?php echo
htmlspecialchars($book['Edition']); ?></td>
                                    </tr>
                                <?php else: ?>
                                    <tr>
                                        <td colspan="6"><?php echo $book; ?></td>
                                    </tr>
                                <?php endif; ?>
                            <?php endforeach; ?>
                        </tbody>
                    </table>
                </div>
            </div>
        <?php endif; ?>


<?php else: ?>
    <div class="login-prompt">
        <p>You must be logged in to search for books. Please <a
href="login.php">log in</a> first.</p>
    </div>
<?php endif; ?>

</body>
</html>
```

Style.css:

```css
.navbar {
    background-color:#333;
    width: 100%;
    position: fixed;
    top: 0;
    left: 0;
    z-index: 1000;
```

```css
    padding: 0 20px;
    box-shadow: 0 4px 6px rgba(0, 0, 0, 0.1);
}

.navbar a {
    display: block;
    color: white;
    text-align: center;
    padding: 17px 30px;
    text-decoration: none;
}

.navbar a:hover {
    color: white;
    background-color: cadetblue;
}

.navbar li {
    display: inline-block;
}

.navbar ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    overflow: hidden;
    background-color:#333;
    text-align: center;
}

body {
    font-family: 'Lucida Sans', 'Lucida Sans Regular', 'Lucida Grande', 'Lucida Sans Unicode', Geneva, Verdana, sans-serif;
    background-image: url(library2.png);
    background-attachment: fixed;
    padding-top: 60px;
}

.homepara {
    background-color: rgba(0, 0, 0, 0.8);
    padding: 20px;
    border-radius: 8px;
    color: white;
```

```css
        max-width: 600px;
        margin: auto;
}

.about {
        background-color: rgba(0, 0, 0, 0.8);
        padding: 20px;
        border-radius: 8px;
        color: white;
        max-width: 600px;
        margin: auto;
}

.footer {
        background-color: #333;
        color: white;
        width: 100%;
        padding: 5px 0;
        bottom: 0;
        left: 0;
        margin: 0;
        overflow: hidden;
}

.footer a {
        color: white;
        text-decoration: none;
        font-size: 18px;
        margin-top: 10px;
        display: inline-block;
}

.footer a:hover {
        color: #E1306C;
}

.content {
        min-height: 100%;
        padding-bottom: 50px;
}

form {
        max-width: 400px;
```

```css
        margin: 50px auto;
        padding: 20px;
        background-color: rgba(0, 0, 0, 0.8);
        border-radius: 8px;
        box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
        color: white;
}

form label {
        display: block;
        margin-bottom: 8px;
        font-weight: bold;
        color: white;
}

form input {
        width: 100%;
        padding: 10px;
        margin-bottom: 20px;
        border: 1px solid #ccc;
        border-radius: 4px;
        box-sizing: border-box;
}

form button {
        width: 100%;
        padding: 12px;
        background-color: #4CAF50;
        color: white;
        border: none;
        border-radius: 4px;
        font-size: 16px;
        cursor: pointer;
}

form button:hover {
        background-color: #45a049;
}

form a {
        color: green;
}
```

```css
.centered {
    text-align: center;
}

.register_images {
    color: white;
    text-align: center;
}

.register_images table {
    width: 100%;
    border-collapse: collapse;
    background-color: rgba(0, 0, 0, 0.8);
    padding: 20px;
    border-radius: 8px;
}

.register_images table, td {
    border: none;
    padding: 10px;
    text-align: center;
}

.register_images td img {
    max-width: 100%;
    height: auto;
    display: block;
    margin: 0 auto;
    border: none;
}

.register_images td img:hover {
    transform: scale(1.3);
}

.image-container {
    position: relative;
    display: inline-block;
}

.tooltip {
  visibility: hidden;
  background-color: #333;
```

```css
    color: #fff;
    text-align: center;
    padding: 8px;
    border-radius: 5px;
    position: absolute;
    top: 110%;
    left: 50%;
    max-width: 300px;
    transform: translateX(-50%);
    width: max-content;
    z-index: 1;
    opacity: 0;
    transition: opacity 0.3s;
}

.image-container:hover .tooltip {
    visibility: visible;
    opacity: 1;
}

.connection_success {
    color: white;
    text-align: center;
}

.login_message {
    border-collapse: collapse;
    background-color: rgba(0, 0, 0, 0.8);
    padding: 20px;
    border-radius: 8px;
    color: white;
}

.reservepage {
    text-align: center;
    background-color: #f4f4f4;
    border: 2px solid #ddd;
    border-radius: 10px;
    padding: 20px;
    margin: 20px auto;
    width: 50%;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
}
```

```css
.table-container {
    display: flex;
    justify-content: center;
    margin: 20px auto;
}

table {
    border-collapse: collapse;
    width: 80%;
    text-align: left;
    background-color: gainsboro;
}

th, td {
    padding: 10px;
    border: 1px solid #ddd;
}

th {
    background-color: green;
    color: white;
    text-align: center;
}

tbody tr:nth-child(even) {
    background-color: #f2f2f2;
}

tbody tr:hover {
    background-color: #e0e0e0;
}

.logout-container {
    display: flex;
    align-items: center;
    justify-content: space-between;
    background-color: #333;
    padding: 20px;
    border: 2px solid #ddd;
    border-radius: 8px;
    margin-bottom: 20px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
```

```css
}

.welcome-message p {
    margin: 5px 0;
    color: white;
}

.logout-container p {
    display: inline-block;
    margin-right: 10px;
    font-size: 16px;
    color: white;
}

.logout-container button {
    background-color: #ff4d4d;
    color: white;
    border: none;
    padding: 10px 20px;
    cursor: pointer;
    font-size: 16px;
    border-radius: 5px;
}

.logout-container button:hover {
    background-color: #e04350;
}

.available-books h2 {
    color: white;
}

.reserved-books h2 {
    color: white;
}

.error-message {
    background-color: #f8d7da;
    color: #721c24;
    border: 1px solid #f5c6cb;
    padding: 10px;
    border-radius: 5px;
    margin-top: 20px;
```

```
    font-size: 16px;
    font-weight: bold;
    text-align: center;
}

.search-container h2 {
    color: white;
    text-align: center;
}

.search-results h2 {
    color: white;
    text-align: center;
}

.search-results {
    color: black;
}
```

_____

<u>Conclusion:</u>

I'm thrilled to have successfully completed my book reservation system! This project allowed me to create a user-friendly platform where users can easily browse, reserve books, and manage their accounts. I've implemented features like user registration, login, and a clean interface with an organized table layout to display available and reserved books.

The system works smoothly, with a responsive navbar, well-designed forms, and a simple logout function. I'm proud of how the design looks and how easy it is to use.

This project has been a great learning experience, and I'm excited about the possibility of adding more features in the future, like advanced search or an admin panel.