**Library Management System**

**Use case :**

Create an application that simulate the library functionalities. Types of users for this application is given below. There must be one login page. Once the user login that user should get respective home page. i.e. if an admin user logs in then that admin should get admin home page.

**1. Types of users**

a. Admin

b. Librarian

c. Normal Users

**2. Admin User Functionalities**

a. Login as admin

b. Add user

c. Update user

d. Search user

e. Remove user

**3. Normal User Functionalities**

a. Login as normal user

b. Search for the book

c. Search for category

d. Search for author

e. Request for the book

f. Request for renew a book

**4. Librarian User Functionalities**

a. Login as Librarian user

b. Add books

c. Delete Books

d. Allocate a book to a user

e. Deallocate a book from a user (Getting book back from the user)

f. Renew the book to a user after 15 days (only 3 times)

**Table used**

1. **Table name - Books**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data type** | **Description** |
| **BookId** | **Number** | **Primary-key** |
| **BookTitle** | **Text(30)** | **-** |
| **Subject** | **Text(30)** | **-** |
| **Author** | **Text(30)** | **-** |
| **Publisher** | **Text(30)** | **-** |
| **Copyright** | **Text(30)** | **-** |
| **Edition** | **Text(30)** | **-** |
| **AvailableNo** | **Number(int)** | **-** |
| **AvailableStatus** | **Boolean** | **-** |
| **ShelfNo** | **Number(int)** | **-** |
| **IssuedNo** | **Number(int)** | **-** |

1. **Table name – Users**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data type** | **Description** |
| **UserId** | **Number(int)** | **Primary-key** |
| **UserName** | **Text(40)** | **-** |
| **UserType** | **Text(40)** | **-** |
| **password** | **Text(40)** | **-** |
| **email** | **Text(40)** | **-** |
| **NoOfBooks** | **Text(40)** | **-** |
| **Expired** | **Date** | **-** |
| **FineDues** | **Number(double)** | **-** |
| **Phone\_no** | **Number(int)** | **-** |
| **ActiveStatus** | **boolean** | **-** |

1. **Table Name – Book-Status**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data type** | **Description** |
| **BookId** | **Number(int)** | **Primary-key** |
| **UserId** | **Text(40)** | **-** |
| **IssueDate** | **Date** | **-** |
| **NoOfDays** | **Number(int)** | **-** |
| **IsDamage** | **Boolean** | **-** |

1. **Table Name – User-Status**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data type** | **Description** |
| **UserId** | **Number(int)** | **Primary-key** |
| **RegistrationDate** | **Date** | **-** |
| **FeeSubmitAmount** | **Number(double)** | **-** |
| **FeeSubmitDate** | **Date** | **-** |
| **FeeDues** | **Boolean** | **-** |
| **RegistrationExpired** | **Date** | **-** |
| **FreeUser** | **Boolean** | **-** |

**View Pages**

• **Login Page (common for all user type)**

o Accept User id and password

• **Admin User Pages**

o Admin Home Page

* + 1. Form for search a user
    2. View all users
    3. Delete option (hyperlink) for every user
    4. Update option (hyperlink) for every user
    5. Option (hyperlink) for create new user
    6. Option for (hyperlink) Logout

o Search page

* + 1. Option (hyperlink) for home page
    2. Form for search a user
    3. View searched user
    4. Delete option (hyperlink) for every user
    5. Update option (hyperlink) for every user
    6. Option for (hyperlink) Logout

o Update Page

* + 1. Option (hyperlink) for home page
    2. Form to accept user details with old values
    3. Option for (hyperlink) Logout

• **Normal User Pages**

o Normal User Home Page

* + 1. Option (hyperlink) for home page
    2. One form for search a book/category/author
    3. Display the books the user borrowed
    4. Option for (hyperlink) Logout

o Search Page

* + 1. Option (hyperlink) for home page
    2. One form for search a book/category/author
    3. Display the book details which is available
    4. Option (hyperlink) to request a book
    5. Option for (hyperlink) Logout

• **Librarian User Pages**

o Librarian User Home Page

* + 1. Option (hyperlink) for home page
    2. Form to insert a book
    3. Option (hyperlink) to allot book to a user
    4. Option (hyperlink) to accept the returned book
    5. Check all the allotted books
    6. Option (hyperlink) to go to the User Request Page
    7. Option for (hyperlink) Logout

o Allot Book Page

* + 1. Option (hyperlink) for home page
    2. Form to accept user id, book id, and date to allot book
    3. Option for (hyperlink) Logout

o Return Book Page

* + 1. Option (hyperlink) for home page
    2. Form to accept user id, book id, and date to return book
    3. Option for (hyperlink) Logout

o Allotted Book Page

* + 1. Option (hyperlink) for home page
    2. View all allotted books
    3. Option (hyperlink) to return book
    4. Option for (hyperlink) Logout

o User Request Page

* + 1. Option (hyperlink) for home page
    2. View all the user request for the books
    3. Option (hyperlink) to accept the request
    4. Option (hyperlink) to reject the request
    5. Option for (hyperlink) Logout

**FrontEnd with React**

**Login Page**

* 1. Login as normal user
  2. Login as admin
  3. Login as librarian

**Homepage**

* 1. Search books
  2. Request book