



LIBRARY MANAGEMENT SYSTEM

User Manual



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KHULNA UNIVERSITY
Khulna – 9208, Bangladesh

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Library Management System User Manual

1. Introduction:

Library management system is software developed with SimTire framework to handle the basic functions of a library.

It keeps a track of book issued, returned and added to the library.

It helps to provide information on any book present in the library to the user as well as staff Member.

It helps to provide a trustworthy transaction management between the students and the university librarian authority with proper understanding.

2. Objectives:

- To eliminate the paper work in the library.
- Simplify search/discovery of library resources.
- Simplify payment system.
- Build Digital Library infrastructure.
- Build and manage library collections in support of academic programs.
- Managing multiple library simultaneously.
- Managing library facilities simply.
- Managing multiple users in different libraries.

3. Entity Relationship Diagram:

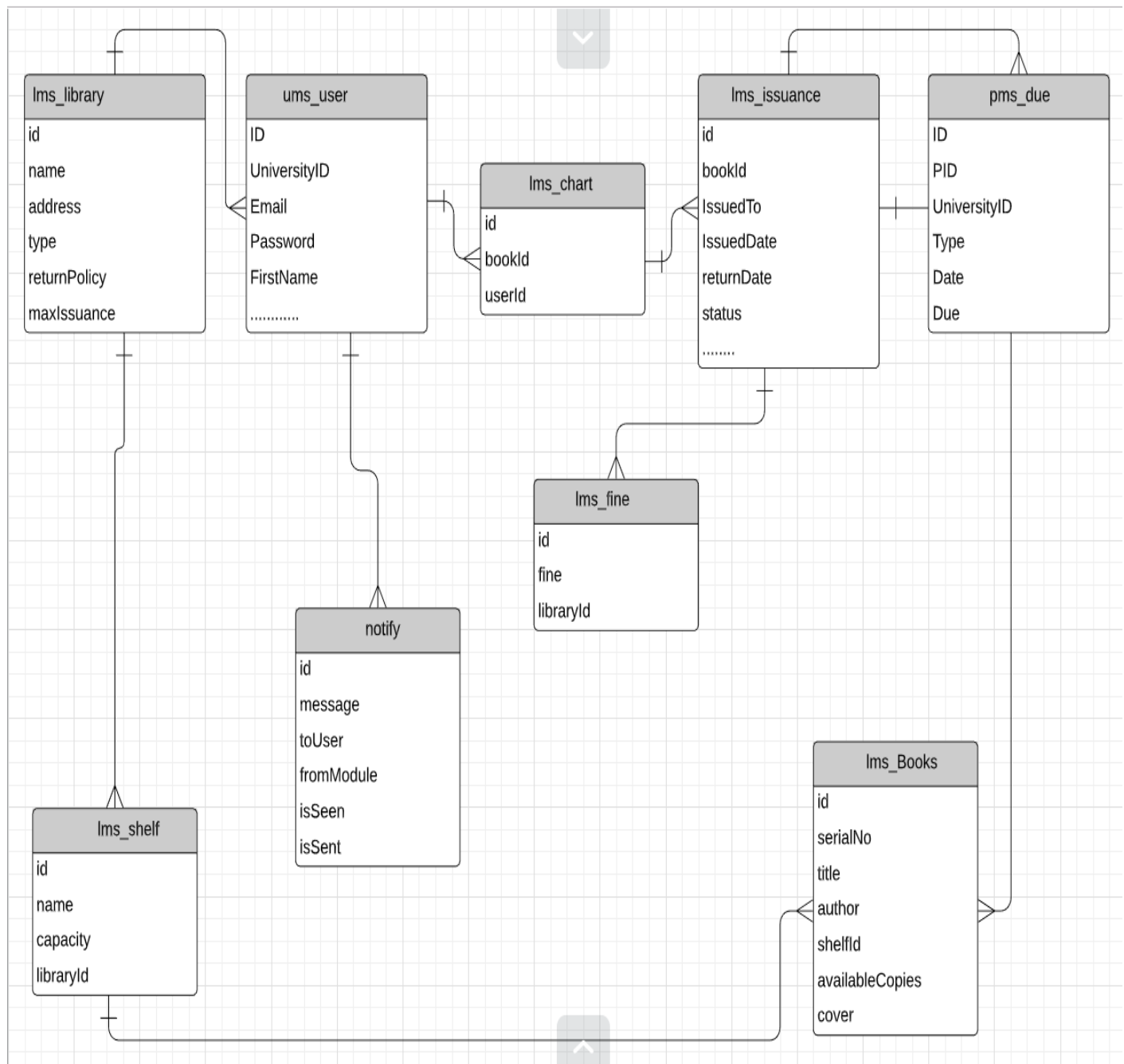
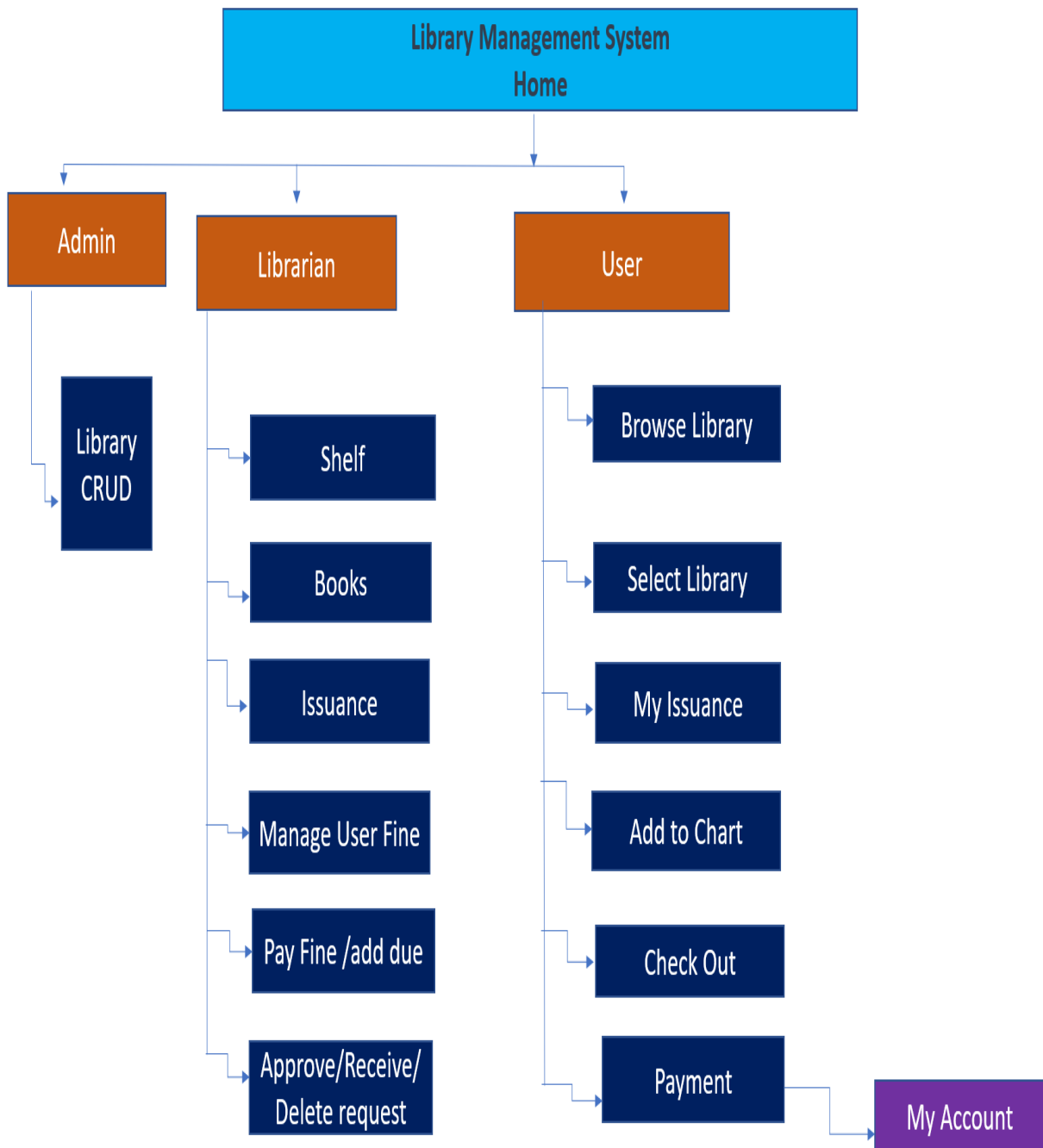


Figure : E-R Diagram of LMS

4. Site Tree:

In the Library Management System, there are three characters. Admin, Librarian, User. Each has a unique view and their own functionalities. A simple site tree can show what this character can view.

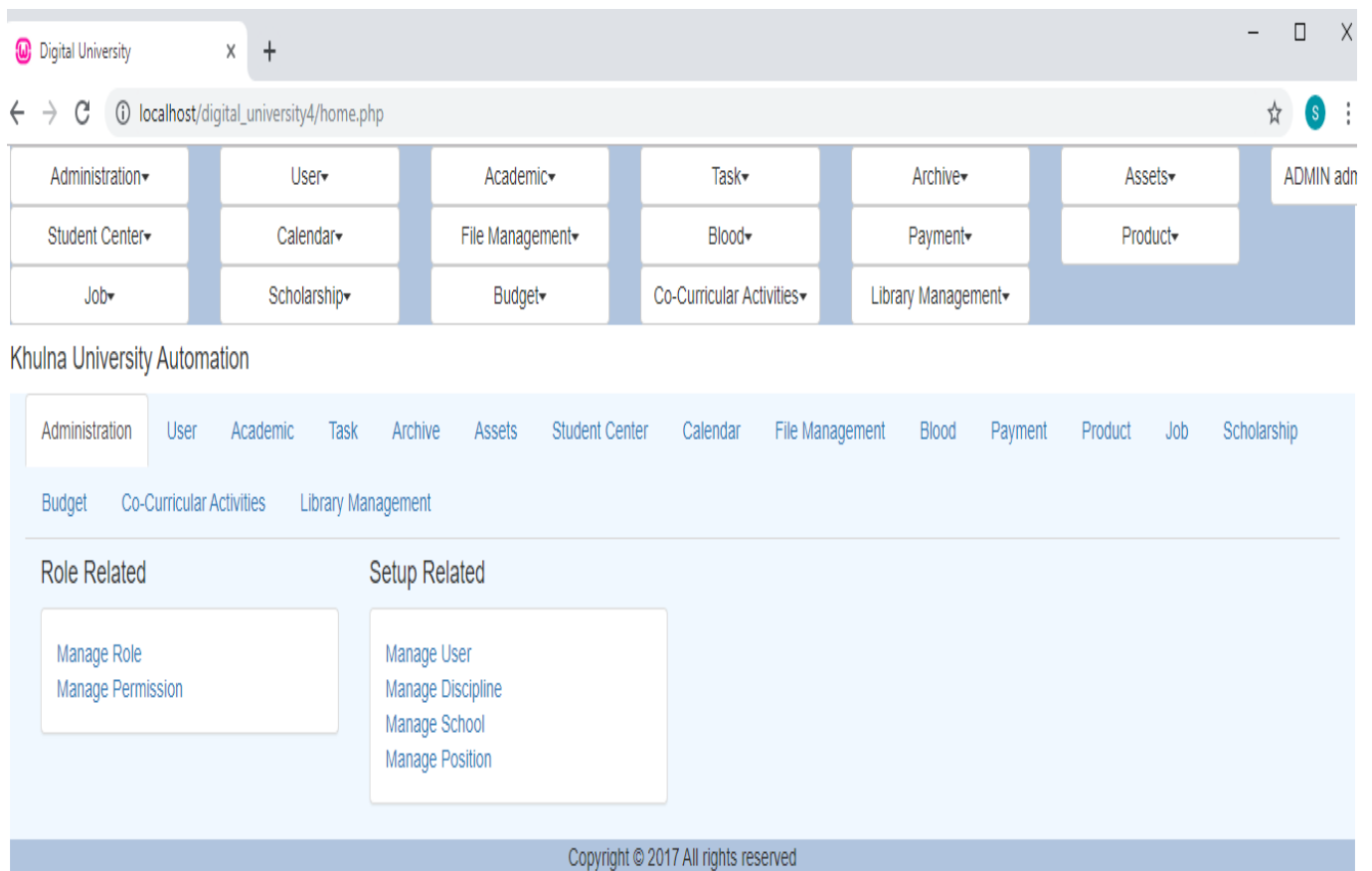


Here we can see each character has his own functions. Below all these functions are described according to their presence.

5. Description:

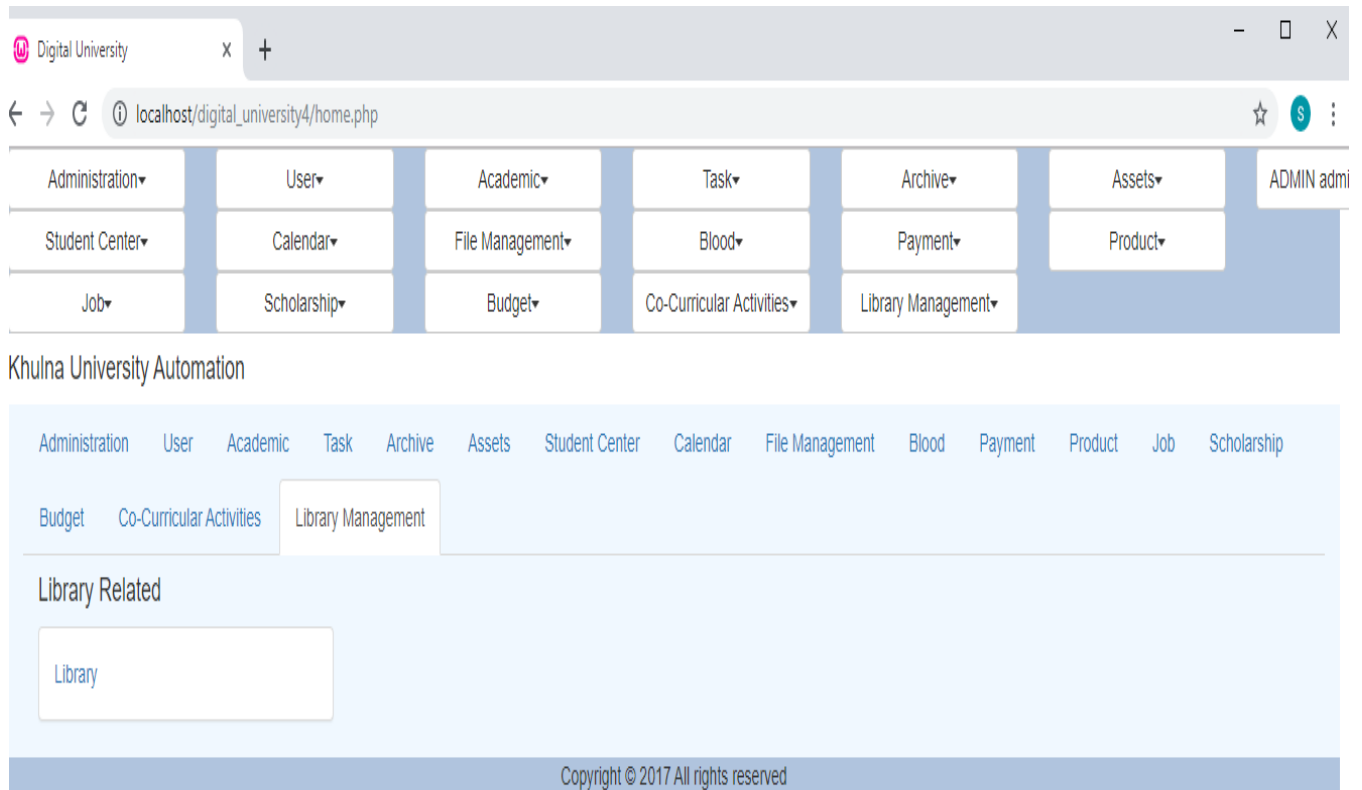
Admin Panel

After login, the admin can view the homepage of the Khulna University Automation system as follow.



In this page, an admin can view and add the library to the system. He appoints a librarian to manage it properly.

After Clicking the **Library Management** button the admin will view this following page.



After Clicking the **Library** button which is shown in the previous picture, the admin will view this following page.

Digital University

localhost/digital_university4/mylibrary.php

Student Center▼ Calendar▼ File Management▼ Blood▼ Payment▼ Product▼

Job▼ Scholarship▼ Budget▼ Co-Curricular Activities▼ Library Management▼

Khulna University Automation

Create New Library

Name
Name of the Library

Address
Where it is located?

Select Librarian
Librarian librarian librarian ▼

Select Library type
Public ▼



Return Policy
Return Policy(in days)

Max Issuance
Maximum num of books

Save

In this page, admin can create a library by filling the required fields. He has to fill the required fields and press Save button. By doing so he can create a library, assign a librarian, fix the return policy and maximum issuance one library can make.

Library Information

Name	Address	Librarian Name	Type	Return Policy	Max Issuance		
CSE Library	No 1 Academic Building, KU	Librarian librarian librarian	Seminar	3	3	Edit	Delete
ECE Library	No 1 Academic Building, KU	Librarian ECE librarian	Seminar	10	4	Edit	Delete

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In the lower portion of the page admin can also see which libraries he/she has created and all the information about it. It has also an Edit and Delete button. By clicking these buttons admin can edit the information about his created library and also can delete them.

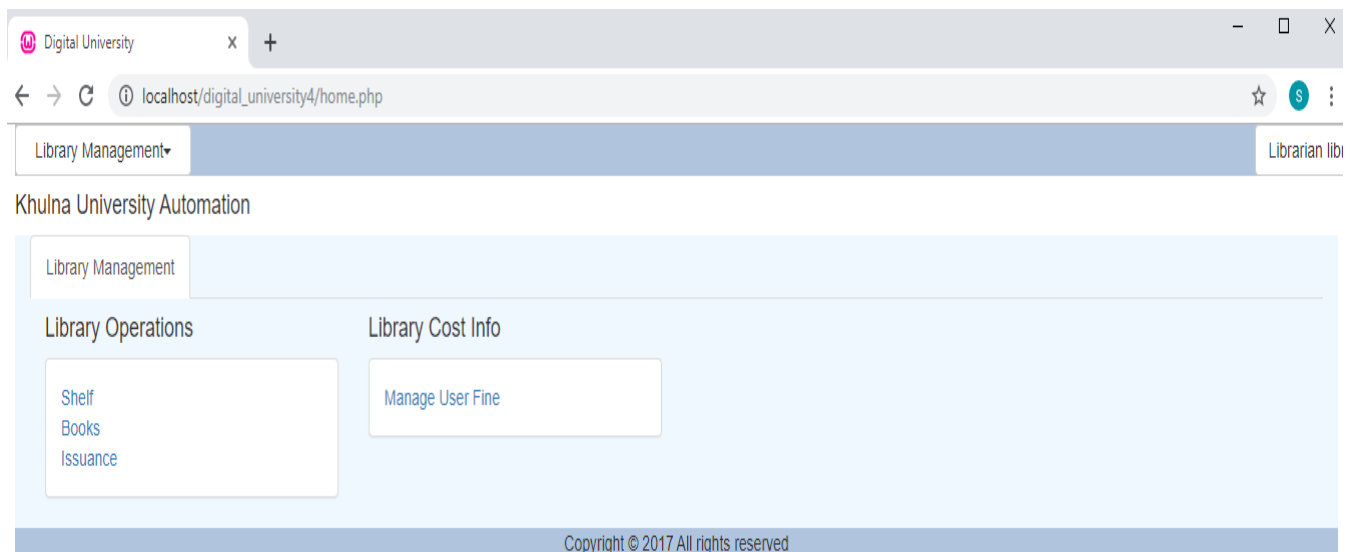
Liberian Mode

After login, the librarian can view the homepage of the Khulna University Automation system as follow.



This is librarian home page. In this page a librarian will see two panels.

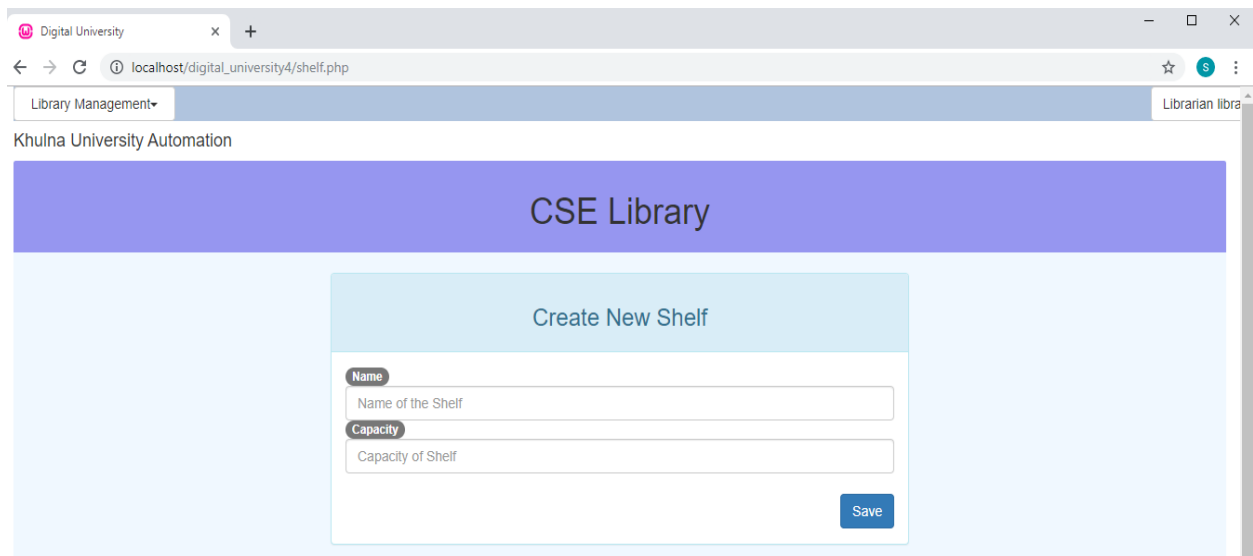
1. Library Operations
2. Library Cost Info



In the **Library Operations** panel librarian can insert shelf in the library and view them by clicking **Shelf**, insert books in the shelf and browse all the books of his library, can edit and delete them there. He can also check which book from his library is issued by users.



In the **Library Cost Info** panel librarian can set the amount of fine per day due to delay according to the instruction of the admin.

After clicking the **Shelf** button the librarian can view the following page .



The screenshot shows a web browser window with the URL `localhost/digital_university4/shelf.php`. The page title is "CSE Library". Below the title, there is a "Create New Shelf" form. The form has two input fields: "Name of the Shelf" and "Capacity of Shelf". A "Save" button is located at the bottom right of the form. The page also shows a "Library Management" dropdown menu and a "Librarian libra" dropdown menu.

In this page, librarian can create a shelf by filling up the required fields. And after clicking the “save” button the librarian can see all the shelves.

Shelf Information				
Name	Shelf Capacity	Library Name		
Artificial Intelligence	30	CSE Library	Edit	Delete
Data Structure	40	CSE Library	Edit	Delete
Programming Books	50	CSE Library	Edit	Delete

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The librarian can edit or delete the stored data when it is necessary by clicking the **Edit** and **Delete** button.

The librarian can also create, edit, delete new books. The functionality of books is managed under the menu **Books**. After clicking the menu librarian can view the following page.

Digital University

localhost/digital_university4/books.php

CSE Library

Create New Books

Serial No
Serial No

Title
Title of the Books

Author
Author of the Books

Select Shelf
Artificial Intelligence

Available Copies
Available Copies of Books



Thumbnail : No file chosen

In this page, librarian can create a book by filling up the required fields. And after clicking the “save” button the librarian can see all the books in the library. The librarian has also the search option.

Search

Search

Books Information

Serial No	Title	Author	Shelf	Available Copies		
23	Object Oriented Programming	Ashly Nurse	Programming Books	14	Edit	Delete
35	Operating System	Abdur Rahman	Data Structure	5	Edit	Delete
12	C Programming	Balagurusamy	Programming Books	9	Edit	Delete
67	Data Structure	Md. Rafiqul Islam	Data Structure	10	Edit	Delete
15	C++ Programming	Abdul Karim	Programming Books	8	Edit	Delete
5	Python Programming	A.R Ross	Programming Books	4	Edit	Delete
56	Java Programming	Balagurusamy	Programming Books	7	Edit	Delete

The librarian can edit or delete the stored data when it is necessary by clicking the **Edit** and **Delete** button.

The most important part for the librarian is the issuance part. All the issuances of books are managed under the **Issuance** menu. By clicking the menu the librarian can view the following page.

Digital University





localhost/digital_university4/issuance.php

Issuance Information

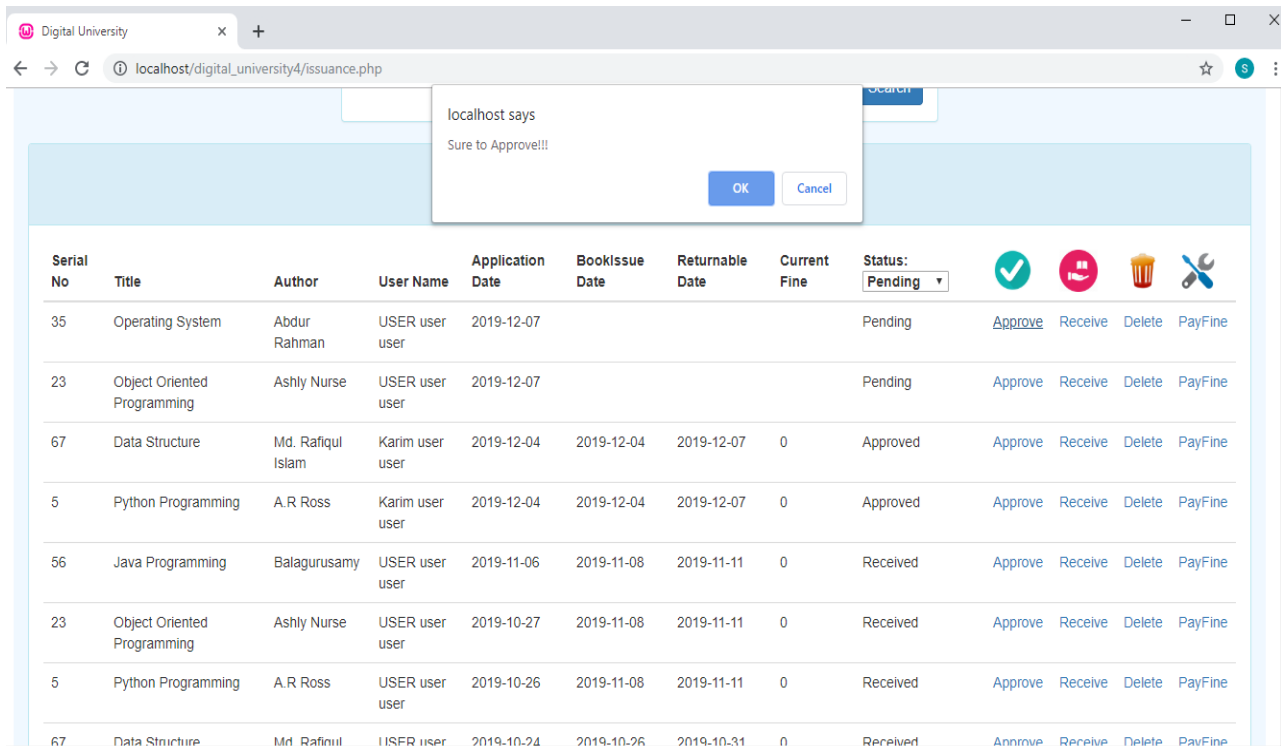
Serial No	Title	Author	User Name	Application Date	Book Issue Date	Returnable Date	Current Fine	Status: Pending				
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
56	Java Programming	Balagurusamy	USER user user	2019-11-06	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-10-27	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	USER user user	2019-10-26	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
15	C++ Programming	Abdul Karim	USER user user	2019-10-24	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
12	C Programming	Balagurusamy	USER user user	2019-10-24	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	USER user user	2019-10-24	2019-10-26	2019-10-31	0	Received	Approve	Receive	Delete	PayFine

When a user requests for books, the information will come forward to the concerned librarian to approve or delete the request. The issuance page can have the such kind of following form with the status **Pending**.

Issuance Information

Serial No	Title	Author	User Name	Application Date	BookIssue Date	Returnable Date	Current Fine	Status: Pending				
35	Operating System	Abdur Rahman	USER user user	2019-12-07				Pending	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-12-07				Pending	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
56	Java Programming	Balagurusamy	USER user user	2019-11-06	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine





The librarian can approve the pending request simply by clicking the **approve** button.



The screenshot shows a web browser window with the URL `localhost/digital_university4/issuance.php`. A confirmation dialog box is displayed in the center, with the text "localhost says" and "Sure to Approve!!!". The dialog has "OK" and "Cancel" buttons. The background shows the same Issuance Information table as in the previous image, but with the status of the first two rows (Serial No 35 and 23) changed from "Pending" to "Approved". The "Current Fine" for these rows is now 0, and the "BookIssue Date" and "Returnable Date" are set to 2019-12-04 and 2019-12-07 respectively.





After the confirmation the status will be changed to approved. At the same time the BookIssue Date and Returnable Date will be set according to the library return policy. And Initially the fine will be zero.

Issuance Information

Serial No	Title	Author	User Name	Application Date	BookIssue Date	Returnable Date	Current Fine	Status: Pending ▾				
35	Operating System	Abdur Rahman	USER user user	2019-12-07	2019-12-07	2019-12-10	0	Approved	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-12-07				Pending	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	0	Approved	Approve	Receive	Delete	PayFine
56	Java Programming	Balagurusamy	USER user user	2019-11-06	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-10-27	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	USER user user	2019-10-26	2019-11-08	2019-11-11	0	Received	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	USER user user	2019-10-24	2019-10-26	2019-10-31	0	Received	Approve	Receive	Delete	PayFine

There is a feature for transferring the library fine to that particular user's account as due amount. Previously the issuance page look like

Issuance Information

Serial No	Title	Author	User Name	Application Date	BookIssue Date	Returnable Date	Current Fine	Status: Pending ▾				
35	Operating System	Abdur Rahman	USER user user	2019-12-07	2019-12-07	2019-12-10	10	Approved	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-12-07	2019-12-07	2019-12-10	10	Approved	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine

The librarian can update the due table of particular user by just clicking the **PayFine** button.

localhost says

Sure to Pay Fine For This User!!!

OK Cancel

Issuance Information

Serial No	Title	Author	User Name	Application Date	BookIssue Date	Returnable Date	Current Fine	Status: Pending				
35	Operating System	Abdur Rahman	USER user user	2019-12-07	2019-12-07	2019-12-10	10	Approved	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-12-07	2019-12-07	2019-12-10	10	Approved	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine



After the confirmation the due table will be updated and the Current Fine will be set to zero. Then the page looks like

Issuance Information

Serial No	Title	Author	User Name	Application Date	BookIssue Date	Returnable Date	Current Fine	Status: Pending				
35	Operating System	Abdur Rahman	USER user user	2019-12-07	2019-12-07	2019-12-10	0	Received	Approve	Receive	Delete	PayFine
23	Object Oriented Programming	Ashly Nurse	USER user user	2019-12-07	2019-12-07	2019-12-10	10	Approved	Approve	Receive	Delete	PayFine
67	Data Structure	Md. Rafiqul Islam	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine
5	Python Programming	A.R Ross	Karim user user	2019-12-04	2019-12-04	2019-12-07	13	Approved	Approve	Receive	Delete	PayFine

There is also a feature for setting up the fine per day due to delay. This operation can also be done by the librarian by the menu **Manage User Fine**

The screenshot shows a web browser window with the address bar displaying 'localhost/digital_university4/test.php'. The page has a purple header with the text 'CSE Library'. Below the header, there is a light blue box titled 'Change User Fine Information'. Inside this box, there is a tab labeled 'User Fine' and a text input field labeled 'Fine per day'. A blue 'Save' button is located at the bottom right of the form. Below the form, there is another light blue box titled 'Fine Information'. Inside this box, there is a table with the following data:

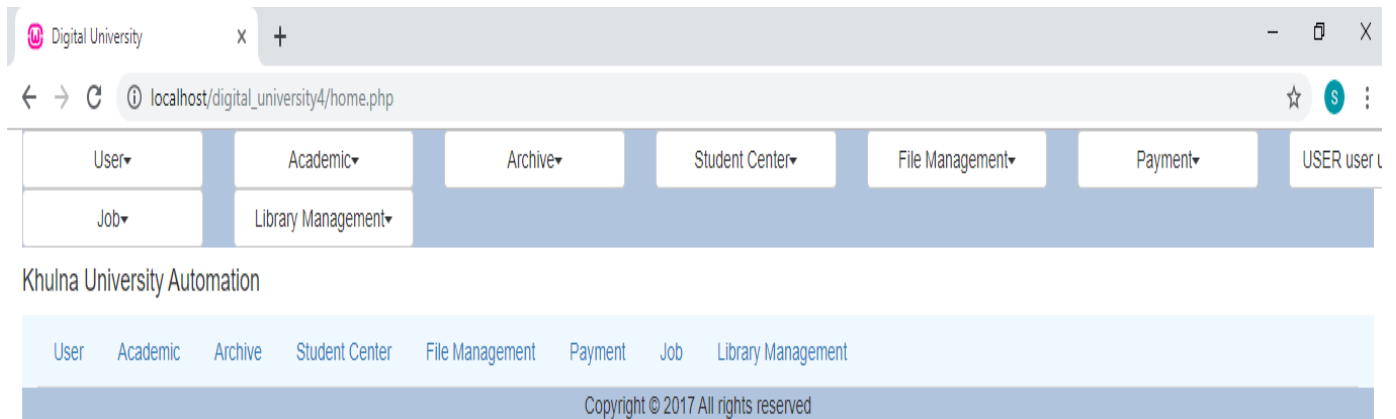
Library Name	Fine Per Day		
CSE Library	10	Edit	Delete

At the bottom of the page, there is a footer that reads 'Copyright © 2017 All rights reserved'.

This is the basis for updating the due amount. The due amount for all the users are evaluated according to the fine per day. This is a fixed entity for a particular library.

User Mode

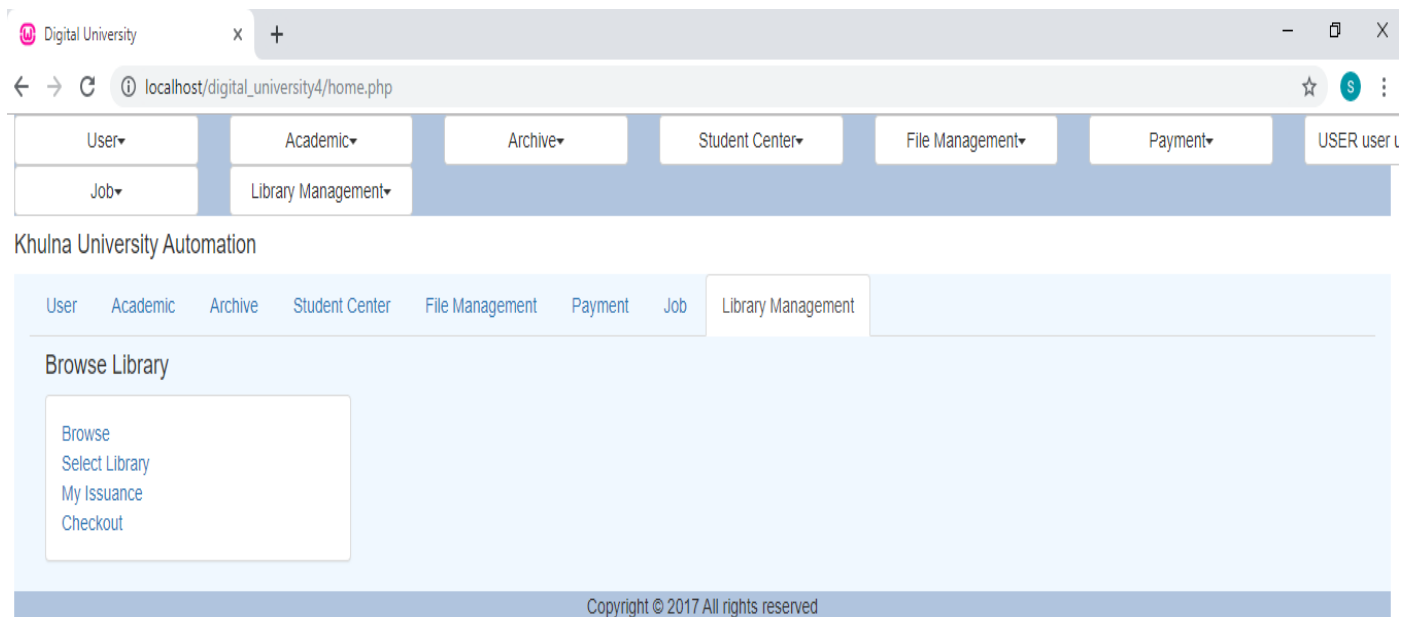
After login, the user can view the homepage of the Khulna University Automation system as follow.



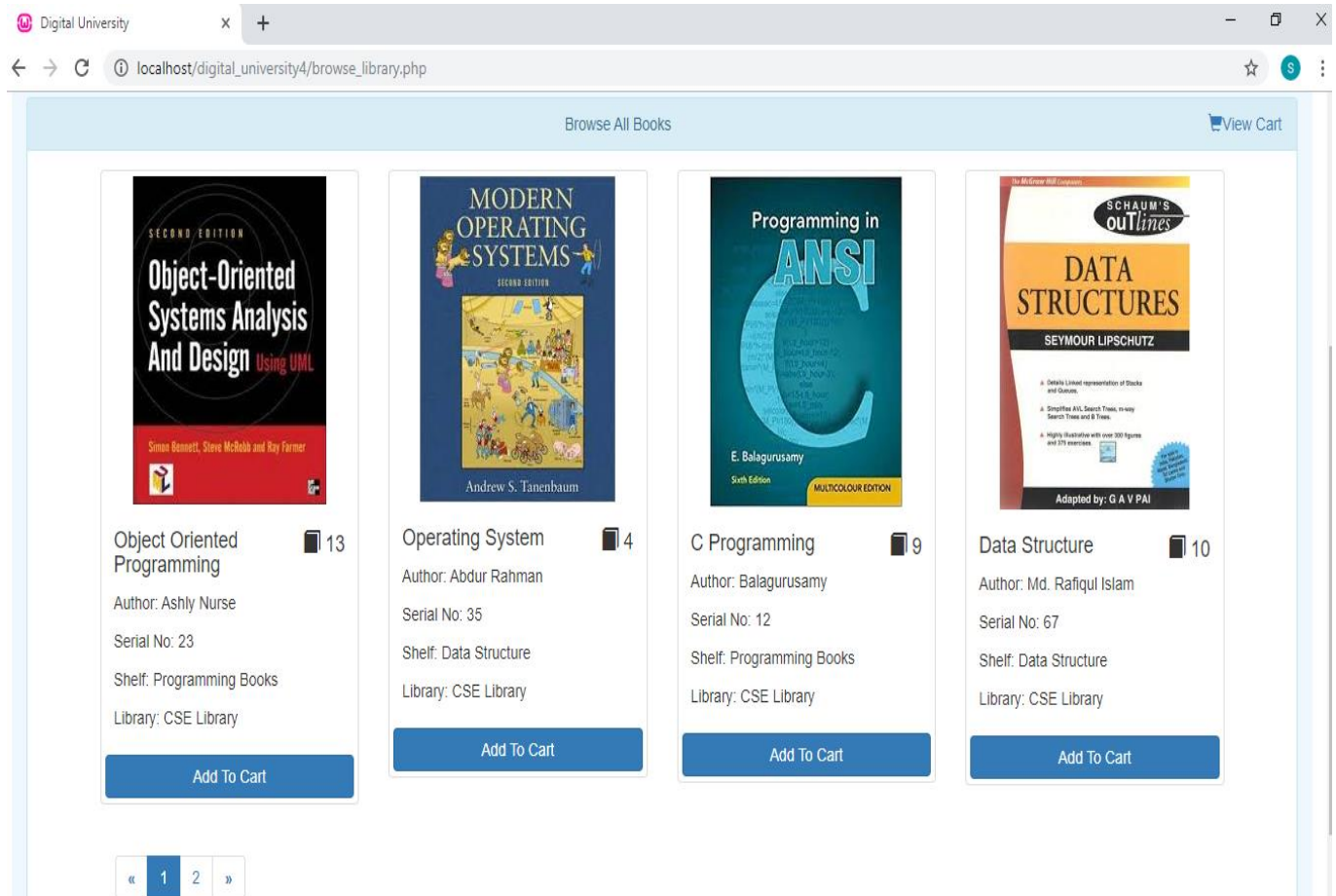
From the homepage the user can perform such functionalities. These are

1. Browse
2. Select Library
3. My Issuance

To observe these functionalities the user has to click the **Library Management** button.



This is the user home page. From here he can browse for the desired books. Select the library from where he wants to issue a book. And from my issuance option he can see which books he has issued and their status. After clicking the **Browse** button the user can see the following page.



This is the browse option from home page of the user. Here he can search for his desired books and also some suggested books by the system. Every book has an **Add To Cart** button. By clicking that button that book will be added to his cart. When the user select some books by clicking the Add To Cart button , then he needs to click the **View Cart** button to confirm for the books request to a library. For this purpose there is a **Checkout** button. The user has then the following view

Khulna University Automation

Checkout List

Serial No	Title	Author	Library	Remove
12	C Programming	Balagurusamy	CSE Library	✕
67	Data Structure	Md. Rafiqul Islam	CSE Library	✕

[Checkout](#)

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The user can remove any book from the selected books by simply clicking the **Remove** button.

There is a feature for the user to select a specific library and then browse. This is under the button **Select Library**.

Khulna University Automation

Name: CSE Library

Address: No 1 Academic Building, KU

Librarian: librarian1@gmail.com

[Enter](#)

Name: ECE Library

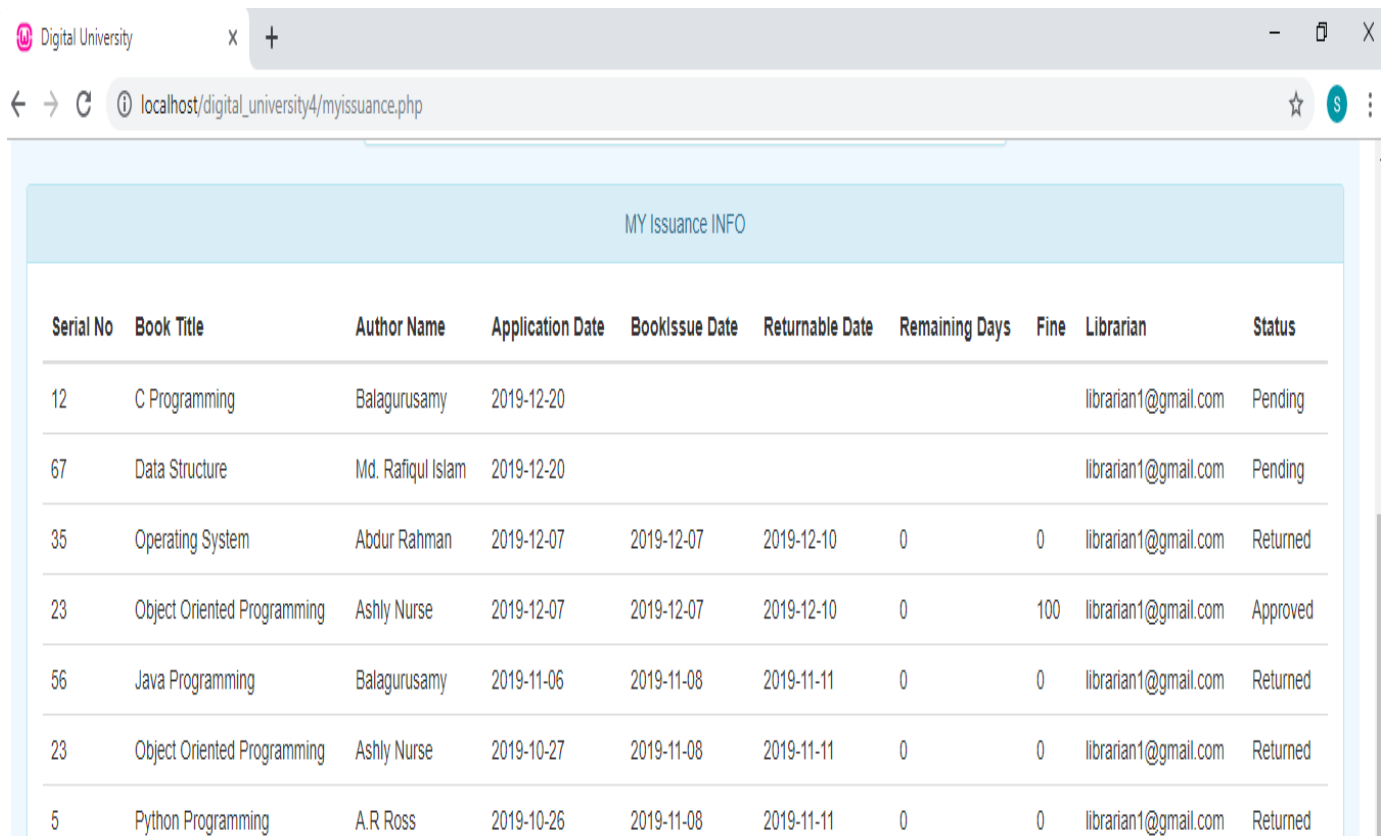
Address: No 1 Academic Building, KU

Librarian: librarianece@gmail.com

[Enter](#)

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The user can also see his previous issuance history by just clicking the button **My Issuance** where different book having various status.



MY Issuance INFO									
Serial No	Book Title	Author Name	Application Date	BookIssue Date	Returnable Date	Remaining Days	Fine	Librarian	Status
12	C Programming	Balagurusamy	2019-12-20					librarian1@gmail.com	Pending
67	Data Structure	Md. Rafiqul Islam	2019-12-20					librarian1@gmail.com	Pending
35	Operating System	Abdur Rahman	2019-12-07	2019-12-07	2019-12-10	0	0	librarian1@gmail.com	Returned
23	Object Oriented Programming	Ashly Nurse	2019-12-07	2019-12-07	2019-12-10	0	100	librarian1@gmail.com	Approved
56	Java Programming	Balagurusamy	2019-11-06	2019-11-08	2019-11-11	0	0	librarian1@gmail.com	Returned
23	Object Oriented Programming	Ashly Nurse	2019-10-27	2019-11-08	2019-11-11	0	0	librarian1@gmail.com	Returned
5	Python Programming	A.R Ross	2019-10-26	2019-11-08	2019-11-11	0	0	librarian1@gmail.com	Returned

The user can see his payment section to observe if any due is added to his account by just clicking **My Account** from the **Payment** module.

Digital University x +

localhost/digital_university4/myaccount.php

User Academic Archive Student Center File Management Payment USER user us

Job Library Management

Khulna University Automation

Account Details

Account Details

Name: USER user user
 Student id: 555555
 Discipline: Computer Science and Engineering
Balance: 44

Due	Date	Type	Payment
10	2019-12-20	Library Fee	Pay
22	2019-12-03	Library Fee	Pay
11	2019-11-29	Library Fee	Pay
18	2019-11-22	Library Fee	Pay

6. Dependencies:

1. SimTire: The Library Management System (LMS) is built on SimTire framework. So SimTire framework is needed to run this system properly.
2. User Module: SimTire's built in "User Module" is needed to run LMS properly. Also notification class and other configurations is need to set the notification of various actions.
3. Payment Module: SimTire's built in "Payment Module" is needed to run LMS properly.

Special Thanks to:

Dr. Kazi Masudul Alam

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