

# External Documentation

The Library Management System

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## Welcome

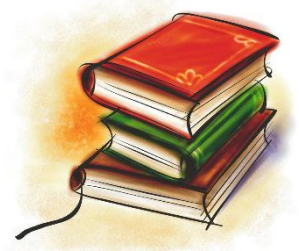
In this external documentation the main features of the library management system are listed and explained in detail.

## Introduction

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Possessing a treasure of knowledge, Books unlock many doors to the outside world. They enlighten individuals with knowledge of past, present and the future. Libraries house these valuable literature and allow people to have access to these books. This program aims to create a management system for the library to provide a clean, organized system where books can be tracked, checked-out, checked-in, renewed and many more functions.

Further, each member of the staff is provided with their own unique username and password providing both security and confidentiality of the staff and member details.



## Installation Instructions

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The ZIP folder consists of a lib folder, LibraryManagement.jar, Library.mdb, README.TXT and help. txt. Inside the lib folder are four jar files commons-lan-2.6.jar, commons-logging-1.1.1.jar, hsqldb.jar, jackcess-2.1.2.jar and ucanaccess-3.0.2.jar. The files in the lib folder support the *UCanAccess* program. In order to run the program, ensure all of the above files are located in the zip and then double click on the LibraryManagement.jar. This should open up the program. Here the user can create a New User and register themselves or use the following:

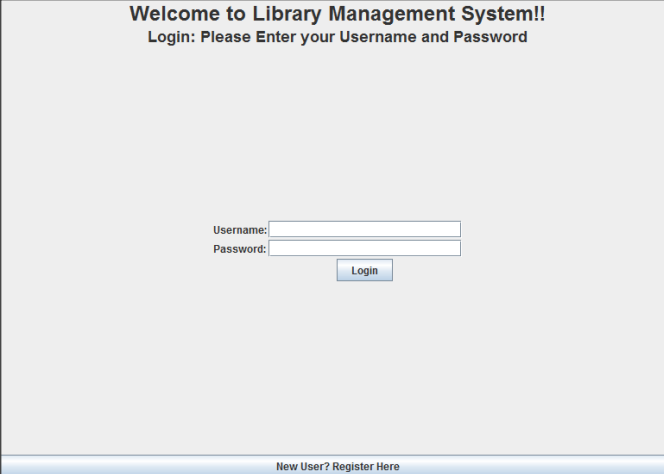
Username: abc

Password : cde

# User's Manual

## Login

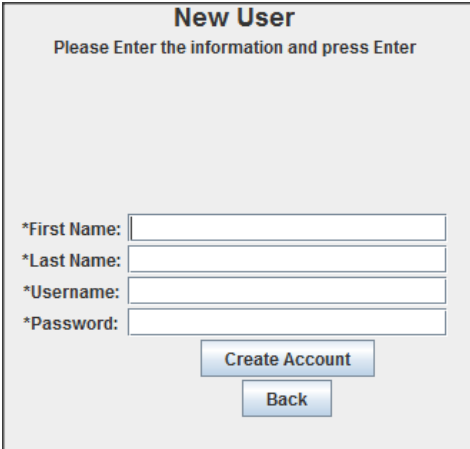
Once the library management system is started the user is first asked to enter their username and password. After entering their details, the user is required to click the login button. If the username and password are correct a welcome message is shown. If not the user is asked to try again.



The screenshot shows a login interface with the title "Welcome to Library Management System!!" and the instruction "Login: Please Enter your Username and Password". It features two input fields labeled "Username:" and "Password:", followed by a "Login" button. At the bottom, there is a link that says "New User? Register Here".

## Registration

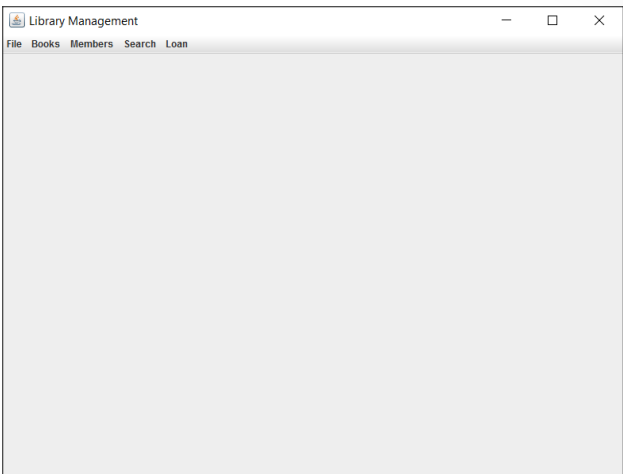
The first step to access the software is to register. This option is available for staff. Once the registration button is clicked, the staff member needs to enter their first name, last name, username and password. The username and password are required for login in future and therefore it is essential to remember these details. Once the create account button is clicked a registration update is printed. Once the back button is clicked the user is redirected to the login page.



The screenshot shows a registration form titled "New User" with the instruction "Please Enter the information and press Enter". It contains four input fields labeled "\*First Name:", "\*Last Name:", "\*Username:", and "\*Password:". Below the fields are two buttons: "Create Account" and "Back".

## Main Window

The Main Window has a toolbar with file, books, members, search and loan. This is the main control panel as all the functions of the program can be accessed from this platform.



## Add Books

This panel allows for users to add books to the database. The book title, author, year, publisher, number of pages, number of copies and shelf number. Once the user enters the necessary details he can save the details using the “Add Book” Button. This will navigate the user to a success message and redirect him to this page for the additional books. If the Back to main is entered the user is returned to the main window.

### Add Books

Please Enter the information of the Book and press Enter

Book Title:

Author:

Year:

Publisher:

Number Of Pages:

Number of Copies:

Shelf Number:

Back To Main

Add Book

## Manage Books

<div>ModifyDeleteBack To Main</div>			Number	Title	Author	Year	Publisher	Pages	BookID	Copies	Copies Check...	ShelfNumber	Availability
			1	Java Basics	Edward Fineagan	2008	McGraw Hill	492	1234	2	0	3	Yes

This window is shown when the manage books command is called. Here all the books and their records are printed. Here one can click on a row in the table and choose either modify and delete. The back to Main button returns back to the main window.

## Modify Books

The Modify Records window is shown as follows. Here the user selected details are shown. Book ID cannot be changed. The user can make the desired edits which will return him to the manage books window. Once the back button is pressed, the user is redirected to the Main window.

**Modify Records**  
Please Enter the new information of the Book and press Enter

Book Title:

Author:

Year:

Publisher:

Number Of Pages:

Book ID:

Number of Copies:

Shelf Number:

## Delete Books

Delete books command is present in the modify window control panel. The user needs to select the appropriate row in the table and select the delete button which will subsequently delete the field selected.

## Renew Book

In order to renew a book the user needs to enter the book Id and Member ID. When the user clicks the renew button, the due date for the book is increased by 3 weeks. A user can only renew books for a maximum of 3 times.

**Renew Book**  
Please Enter the information and press Enter

Book ID:

Member ID:

## Add Members

In this section the library staff can add new members into the library community. They need the first name, last name, email, username and password. Once all fields are entered they can use the add member function to add members to this community.

**Add Members**  
Please Enter the information of the Member and press Enter

First Name:

Last Name:

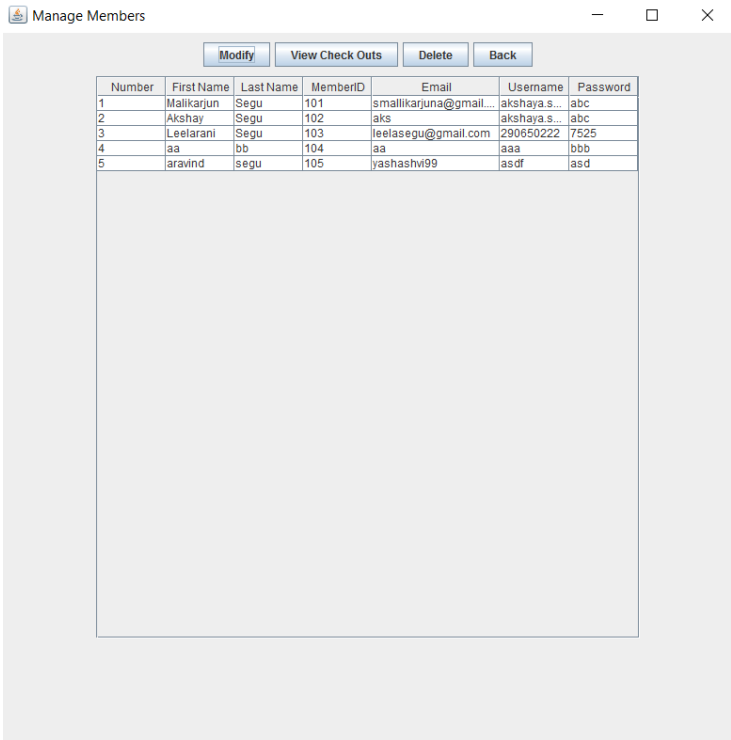
Email:

Username:

Password:

## Manage Members

In this section, the Librarian can manage the members of the library. This also acts as a center station for actions dealing with members. By clicking on a row, the librarian can modify the records, view checkouts of a specific user and delete a user's details. If the back button is used, the librarian is returned to main window.

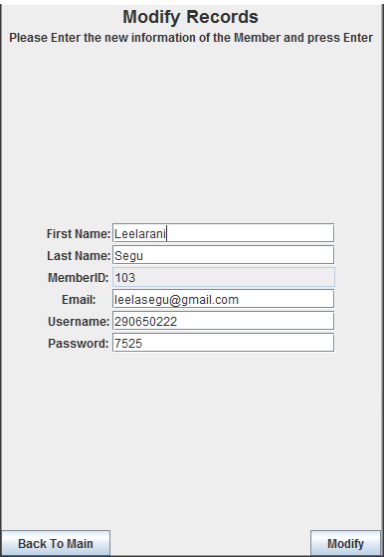


## Modify Members

In order to modify the member details, all the records of the selected member of the user is shown. The librarian can change the required details except the memberID. Once the fields are changed then the user can modify the records.

## Delete Members

Delete command is present in the manage members window control panel. The user needs to select the appropriate row in the table and select the delete button which will subsequently delete the field selected.



## View Check-Outs

The view check-outs tab shows the check-outs of a specific. In this table, the specific books and their borrowed and return date are shown. Here a renew option giving the librarian with the opportunity to renew their selection.

BookID	Book Title	Date Borrowed	Return Date	Times Rene...
1239	a	21-Dec-2015	11-Jan-2016	0
1237	Aravind	24-Dec-2015	14-Jan-2016	0
1238	akshay	24-Dec-2015	4-Feb-2016	2
1237	Aravind	24-Dec-2015	14-Jan-2016	0
1234	Java Basics	9-Jan-2016	30-Jan-2016	0
1237	afsd	9-Jan-2016	30-Jan-2016	0
1234	Java Basics	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0
1237	afsd	9-Jan-2016	30-Jan-2016	0
1236	af	9-Jan-2016	30-Jan-2016	0

## Search

The Search Option in this program allows the librarian to search for books in the database. A keyword needs to be entered, that should match exactly as the title required. A small gist of a word is not sufficient. The librarian can search based on Book Title, Author, BookID and Publisher. Once searched, the result of the search is shown.

**Search**  
Please Enter the information and press Enter

Keyword:

Publisher ▼

- Book Title
- Author
- BookID
- Publisher

Back To Main Search

## Check-Out

The checkout section of the program requires the librarian to enter two inputs. Once the BookID and MemberID have been entered, the program searches if the book and member identification is valid. The due date of the book is fixed at 3 weeks from the date of check-out. This command will also decrease the copies of the book in the database and also change the availability status if necessary.

**Check-Out**  
Please Enter the information and press Enter

Book ID:

Member ID:

Date: 14-Jan-2016

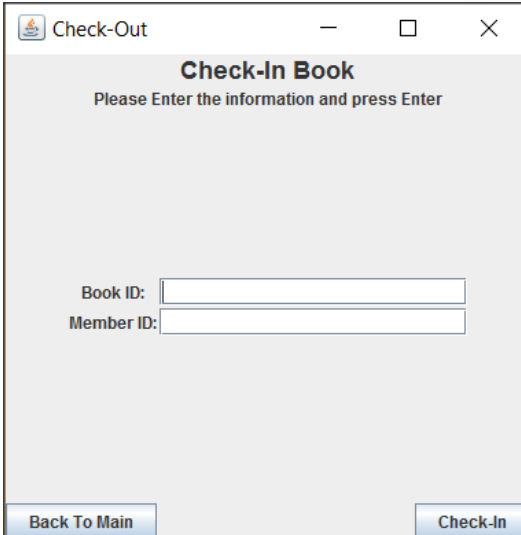
Due Date: 4-Feb-2016

Back To Main Check-Out



## Check-In

In order to return or check-in a book, the librarian needs to enter the book and member ID. The system then searches for the details in its check-out database and checks-in the subsequent book. This command will also increase the copies of the book in the database and also change the availability status if necessary. In the event when the user signs out many copies of the same book, one of his check-outs will be returned.



The screenshot shows a window titled "Check-Out" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, the main heading is "Check-In Book" in bold. Below it, a prompt reads "Please Enter the information and press Enter". There are two input fields: "Book ID:" and "Member ID:". At the bottom of the window, there are two buttons: "Back To Main" on the left and "Check-In" on the right.