UNIVERSITY OF TECHNOLOGY, JAMAICA

FACULTY OF ENGINEERING AND COMPUTING

School of Computing and Information Technology

Data Structures (CMP2006)

Library Management System

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April 15, 2025

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# Introduction

This document provides a guide to the user regarding the use of the Library Management System. This is done through screenshots and explanations on how the user is to interact with the system and how the program should work as we go through its implementation.

# Welcome to the System

Upon entry to the system, the user is greeted with a status message to inform them if the files to store information on passwords, books and patrons have been successfully loaded. If the program is being opened for the first time on the device, the user will be informed that no information was retrieved because the file does not exist. If it isn’t the first time the information will be retrieved from its file. The user is then prompted to press enter to continue.

A black screen with white text

AI-generated content may be incorrect.

A screen shot of a computer

AI-generated content may be incorrect.

After the user presses enter, they are greeted with the Library Management System login menu where they are given the option to either login for administrator functionalities, patron functionalities or exit. The user is prompted to enter the corresponding integer of their choice. Once a valid menu option is selected the system will continue.

A screen shot of a computer

AI-generated content may be incorrect.

If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screenshot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A screen shot of a computer

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## Administrator Functionalities

Upon choosing option 1 of the Library Management System login menu the user is prompted to enter their username or library card number and their password. If both are correct the user will be taken to the administrator menu and prompted to select an option.

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A black screen with white text

AI-generated content may be incorrect.

If an invalid username or password is entered an error message will pop up. The message includes a warning to inform the user that they have a limited number of tries. Once the user clicks ‘ok’ they will be prompted to enter their username and password. If the limit is reached a new error message will pop up informing the user that the login failed and that they will be returned to the previous menu, Library Management System login menu.

A screenshot of a computer error

AI-generated content may be incorrect.A computer screen with a computer code

AI-generated content may be incorrect.

If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screenshot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A screen shot of a computer program

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### Book Functionalities

Upon choosing option 1 of the Administrator Menu the Admin – Book Functionalities Menu is displayed, and the admin user is prompted to enter an option.

A screen shot of a computer program

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If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A computer screen shot of a message

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A computer screen shot of a black screen

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#### Add a Book

Upon choosing option 1 the amin user is prompted to enter book details. Below are the various prompts that the admin user will see and must answer when adding a book. All questions must be answered. The ISBN must meet the following requirements:

* 4 dashes (-)
* 13 digits
* a total of 17 characters
* Must not start or end with a dash (-)
* Must not be an ISBN already in the system

The quantity must be greater than zero. Once details are entered the system displays a success message and is given the option to add another book. If 1 is entered the system will prompt the user with the questions to get the book details. Any other value will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer program

AI-generated content may be incorrect.

If the admin user does not enter a book title, author first name or author last name and attempts to move on, an appropriate error message will pop up. Once ‘ok’ is clicked the admin user will be prompted again to enter the appropriate information.

A screenshot of a computer error message

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer error

AI-generated content may be incorrect.

If the admin user enters an incorrectly formatted ISBN, an error message will pop up. Once ‘ok’ is clicked the admin user will be prompted again to enter book title.

A screenshot of a computer error message

AI-generated content may be incorrect.

If the admin user enters an integer zero or less, a letter (e.g.: a) or symbol (e.g.: @) for the quantity, an error message will be displayed. Once a valid integer is entered the system will continue.

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AI-generated content may be incorrect.

If the admin user enters a letter (e.g.: a) or symbol (e.g.: @) an error message will be displayed. Once a valid integer is entered the system will continue.

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#### Update Book Quantity

When Option 2 is chosen the admin user is prompted to enter the ISBN of the book they want to update. Once an existing and properly formatted ISBN is entered the system will prompt the admin to enter the new quantity. Once an integer that is greater than zero is entered a success message will be displayed and is given the option to update another book. If 1 is entered the system will prompt the user with questions to get the book ISBN and new quantity. Any other value will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer

AI-generated content may be incorrect.

If the admin user enters an incorrectly formatted ISBN, an error message will pop up. Once ‘ok’ is clicked the admin user will be prompted again to enter ISBN.

A screenshot of a computer error

AI-generated content may be incorrect.

If the admin user enters a new quantity that is zero or less, an error message will pop up. Once ‘ok’ is clicked the admin user will be prompted again to enter new quantity.

A screenshot of a computer error message

AI-generated content may be incorrect.

If the admin user enters a letter (e.g.: a) or symbol (e.g.: @) an error message will be displayed. Once a valid integer is entered the system will continue.

A black screen with white text

AI-generated content may be incorrect.

#### View Book Detail by ISBN

When option 3 is chosen the admin user is prompted to enter the ISBN of the book they want to view. Once an existing and properly formatted ISBN is entered the system will display the appropriate book details. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A black screen with white text

AI-generated content may be incorrect.

If the admin user enters an invalid ISBN an appropriate error message will pop up. Once the user clicks ‘ok’ the system will prompt them to enter the ISBN.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer screen

AI-generated content may be incorrect.

#### View Book Detailed by Author Name

When option 4 is chosen the admin user is prompted to enter the name or a part of the name of the author of the book they want to view. Once an author can be found based on what was entered the system will display the appropriate book details. If multiple books have an author that matches what was entered, a list will be displayed, and the user will be prompted to enter the number for the book they wish to view. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

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A black screen with white text

AI-generated content may be incorrect.

If the admin user enters the name or a part of the name of the author of a book that isn’t in the system an error message will pop up to tell the admin user that the book wasn’t found. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer error

AI-generated content may be incorrect.

If the admin user enters an invalid integer an error message will pop up. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer

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#### View Book Detail by Title

When option 5 is chosen the admin user is prompted to enter the title or a part of the title of the book they want to view. Once a title can be found based on what was entered the system will display the appropriate book details. If multiple books have a title that matches what was entered, a list will be displayed, and the user will be prompted to enter the number for the book they wish to view. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screen shot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

If the admin user enters the title or apart of the title of a book that isn’t in the system an error message will pop up to tell the admin user that the book wasn’t found. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer error message

AI-generated content may be incorrect.

If the admin user enters an invalid integer an error message will pop up. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

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AI-generated content may be incorrect.

#### View Total Number of Books

When option 6 is chosen the system will display the number of books in the Library Management System. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A black screen with white text

AI-generated content may be incorrect.

#### View Total Number of patrons with Books Checked Out

When option 7 is chosen the system will display the total number of patrons and the total number of checked out books in the Library Management System. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A black screen with white text

AI-generated content may be incorrect.

#### Delete Book

When option 8 is chosen the admin user is prompted to enter the ISBN of the book they want to delete. Once an existing and properly formatted ISBN is entered the system will display a success message and give the option to delete another book. If 1 is entered the system will prompt the user to enter the book ISBN for the book they want to delete. Any other value will return the admin user to the previous menu, Admin – Book Functionalities Menu.

A screenshot of a computer screen

AI-generated content may be incorrect.

If the admin user enters an invalid ISBN an appropriate error message will pop up. Once the user clicks ‘ok’ the system will prompt them to enter the ISBN.

A screenshot of a computer

AI-generated content may be incorrect.

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AI-generated content may be incorrect.

If the admin user enters a letter (e.g.: a) or symbol (e.g.: @) an error message will be displayed. Once a valid integer is entered the system will continue.

A black screen with white text

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#### Previous Menu

When option 9 is chosen the system displays a message to inform the admin user that they will be returned to previous menu and prompts the admin user to press enter. This returns the admin user to the previous menu, Administrator Menu.

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A screen shot of a program

AI-generated content may be incorrect.

#### Terminate Program

When option 10 is chosen the system displays a message to inform the admin user that any information entered in in the system has been stored and prompts the admin user to press enter which closes the program.

A screen shot of a computer error

AI-generated content may be incorrect.

### Patron Functionalities

Upon choosing option 2 of the Administrator Menu the Admin – Patron Functionalities Menu is displayed, and the admin user is prompted to enter an option.

A screen shot of a computer program

AI-generated content may be incorrect.

If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screen shot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A screenshot of a computer

AI-generated content may be incorrect.

#### Add a Patron

Upon choosing option 1 the amin user is prompted to enter patron details. Below are the various prompts that the admin user will see and must answer when adding a patron. All questions must be answered. The system will display the card number and default password assigned to the patron added and prompt the admin user to press enter. This returns the admin user to the previous menu, Admin – Patron Functionalities Menu.

A computer screen with white text

AI-generated content may be incorrect.

If the admin user does not enter a first or last name and attempts to move on, an error message will pop up. Once ‘ok’ is clicked the admin user will be allowed to enter the appropriate information.

A screenshot of a computer error message

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

#### View Patron Details

Upon choosing 2 the admin user is prompted to enter the library card number of the patron they want to view. Once a valid library card number is entered the system will display the appropriate patron details and prompt the admin user to press enter. This returns the admin user to the previous menu, Admin – Patron Functionalities Menu.

A computer screen with white text

AI-generated content may be incorrect.

If the admin user enters an invalid patron card number, an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A computer screen shot of a computer

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A black screen with white text

AI-generated content may be incorrect.

#### View Total Number of Patrons

Upon choosing 3 the system will display the number of patrons in the Library Management System. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Patron Functionalities Menu.

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AI-generated content may be incorrect.

#### Make a Patron an Administrator

Upon choosing 4 the admin user is prompted to enter the library card number of the patron they want to make an admin and prompts the admin user to allow the patron to enter their password as proof of consent. Once both entries are valid the system will assign a new password to the patron. The system will then give a prompt to press enter which will return the admin user to the previous menu, Admin – Patron Functionalities Menu.

A screen shot of a computer

AI-generated content may be incorrect.

If the admin user enters an invalid card number, an error message will pop up. Once the user clicks ‘ok’ the system will prompt the admin user to press enter to continue and this will return them to the previous menu, Admin – Patron Functionalities.

A screenshot of a computer

AI-generated content may be incorrect.

If the patron enters an invalid password, an error message will pop up. Once the user clicks ‘ok’ the system will prompt the admin user to press enter to continue and this will return them to the previous menu, Admin – Patron Functionalities.

A screenshot of a computer screen

AI-generated content may be incorrect.

#### Change Patron Password

Upon choosing 5 of the Admin – Patron Functionalities Menu the Change Patron Password Menu is displayed, and the admin user is prompted to enter an option.

A screen shot of a computer

AI-generated content may be incorrect.

If the admin user enters an invalid menu option, an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screenshot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A screen shot of a computer

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##### Change Normal Patron Password

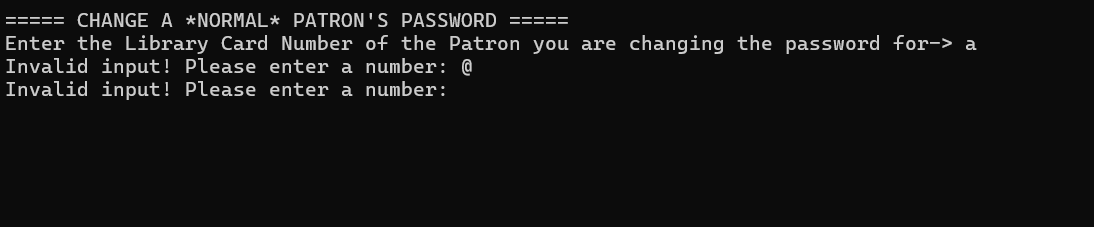
Upon choosing 1 for the Change Patron Password Menu. The system will prompt the user to enter the library card number of the patron whose password they want to change. Once a valid card number is entered the system will display the password for the patron.

NOTE: If you enter the card number of a patron who was made an admin their password will change, and they will no longer have admin access to the system.

A screenshot of a computer

AI-generated content may be incorrect.If the admin user enters an invalid card number, an error message will pop up. Once the user clicks ‘ok’ the system will prompt the admin user to press enter to continue and this will return them to the previous menu, Change Patron Password.A screenshot of a computer

AI-generated content may be incorrect. If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid card number is entered the system will continue.



##### Change Patron Administrator Password

Upon choosing 2 for the Change Patron Password Menu, the system will prompt the user to enter the library card number of the patron whose password they want to change. Once a valid card number is entered the system will display the password for the patron.

NOTE: If you enter the card number of a normal patron their password will change, and they will have admin access to the system.

A screenshot of a computer

AI-generated content may be incorrect.If the admin user enters an invalid card number, an error message will pop up. Once the user clicks ‘ok’ the system will prompt the admin user to press enter to continue and this will return them to the previous menu, Change Patron Password.

A screenshot of a computer

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid card number is entered the system will continue.

A computer screen with white text

AI-generated content may be incorrect.

##### Previous Menu

When option 3 is chosen the system displays a message to inform the admin user that they will be returned to previous menu and prompts the admin user to press enter. This returns the admin user to the previous menu, Admin – Patron Functionalities Menu.

A black screen with a black border

AI-generated content may be incorrect.A computer screen with white text

AI-generated content may be incorrect.

#### Delete Patron

Upon choosing 6 the system will prompt the admin user to enter the library card number of the patron they want to delete. Once a valid card number is entered, the system will display a success message and prompt the admin user to press enter. This returns the admin user to the previous menu, Admin – Patron Functionalities Menu.

A screen shot of a computer

AI-generated content may be incorrect.

If the admin user enters an invalid card number, an error message will pop up. Once the user clicks ‘ok’ the system will prompt the admin user to press enter to continue and this will return them to the previous menu, Admin – Patron Functionalities Menu.

A screenshot of a computer

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid card number is entered the system will continue.

A computer screen with white text

AI-generated content may be incorrect.

#### Previous Menu

When option 7 is chosen the system displays a message to inform the admin user that they will be returned to previous menu and prompt the admin user to press enter. This returns the admin user to the previous menu, Administrator Menu.

A black screen with a black border

AI-generated content may be incorrect.

A screen shot of a computer

AI-generated content may be incorrect.

#### Terminate Program

When option 8 is chosen the system displays a message to inform the admin user that any information entered in in the system has been stored and prompts the admin user to press enter which closes the program.

A computer screen shot of a black screen

AI-generated content may be incorrect.

### Log Out

When option 3 is chosen the system displays a message to inform the admin user that they are being logged out and prompt the admin user to press enter. This returns the admin user to the first menu, Library Management System login menu.

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AI-generated content may be incorrect.

A screen shot of a computer screen

AI-generated content may be incorrect.

### Terminate Program

When option 4 is chosen the system displays a message to inform the admin user that any information entered in in the system has been stored and prompts the admin user to press enter which closes the program.

A screenshot of a computer screen

AI-generated content may be incorrect.

## Patron Functionalities

Upon choosing option 2 of the Library Management System login menu the user is prompted to enter their library card number and their password. If both are correct the user will be taken to the Patron menu and prompted to select an option.

A computer screen with white text

AI-generated content may be incorrect.

A computer screen shot of a black screen

AI-generated content may be incorrect.

NOTE: If the user is a new patron after they enter their default password, they will be immediately prompted to enter a new password that will be their permanent password. Once a valid password is entered the user will be taken to the Patron menu and prompted to select an option.

A screen shot of a computer

AI-generated content may be incorrect.

A computer screen shot of a black screen

AI-generated content may be incorrect.

If an invalid card number is entered an error message will pop up. The message includes a warning to inform the user that they have a limited number of tries. Once the user clicks ‘ok’ they will be prompted to enter their card number. If the limit is reached a new error message will pop up after the user clicks ‘ok’, informing the user that the login failed and that they will be returned to the previous menu, Library Management System login menu. The system will prompt the user to press enter which will return them to the previous menu, Library Management System login menu.

A computer screen with a login error

AI-generated content may be incorrect. A screenshot of a computer error

AI-generated content may be incorrect.

If an invalid password is entered an error message will pop up. The message includes a warning to inform the user that they have a limited number of tries. Once the user clicks ‘ok’ they will be prompted to enter their password. If the limit is reached a new error message will pop up after the user clicks ‘ok’, informing the user that the login failed and that they will be returned to the previous menu, Library Management System login menu.

A screenshot of a computer screen

AI-generated content may be incorrect. A screenshot of a computer error

AI-generated content may be incorrect.

If an incorrectly formatted password is entered for the patron’s new password, an error message will be displayed prompting the user to enter a properly formatted password. Once a valid password is entered the user will be taken to the Patron menu and prompted to select an option.

A screen shot of a computer

AI-generated content may be incorrect.

If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screen shot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A computer screen with white text

AI-generated content may be incorrect.

### View Book Detail by ISBN

When option 1 is chosen the patron user is prompted to enter the ISBN of the book they want to view. Once an existing and properly formatted ISBN is entered the system will display the appropriate book details. The system will then give a prompt to press enter which will return the patron user to the previous menu, Patron Menu.

A computer screen with white text

AI-generated content may be incorrect.

If the user enters an invalid ISBN an appropriate error message will pop up. Once the user clicks ‘ok’ the system will prompt them to enter the ISBN.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer screen

AI-generated content may be incorrect.

### View Book Detail by Author Name

When option 2 is chosen the patron user is prompted to enter the name or a part of the name of the author of the book they want to view. Once an author can be found based on what was entered the system will display the appropriate book details. If multiple books have an author that matches what was entered, a list will be displayed, and the user will be prompted to enter the number for the book they wish to view. The system will then give a prompt to press enter which will return the patron user to the previous menu, Patron Menu.

A computer screen with white text

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

If the patron user enters the name or a part of the name of the author of a book that isn’t in the system an error message will pop up to tell the patron user that the book wasn’t found. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the user to the previous menu, Patron Menu.

A screenshot of a computer error

AI-generated content may be incorrect.

If the patron user enters an invalid integer an error message will pop up. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the user to the previous menu, Patron Menu.

A screenshot of a computer

AI-generated content may be incorrect.

### View Book Detail by Title

When option 3 is chosen the patron user is prompted to enter the title or a part of the title of the book they want to view. Once a title can be found based on what was entered the system will display the appropriate book details. If multiple books have a title that matches what was entered, a list will be displayed, and the user will be prompted to enter the number for the book they wish to view. The system will then give a prompt to press enter which will return the user to the previous menu, Patron Menu.

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

If the patron user enters the title or apart of the title of a book that isn’t in the system an error message will pop up to tell the user that the book wasn’t found. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the user to the previous menu, Patron Menu.

A screenshot of a computer error message

AI-generated content may be incorrect.

If the patron user enters an invalid integer an error message will pop up. Once the user clicks ‘ok’ the system will prompt them to press enter which will return the patron user to the previous menu, Patron Menu.

A black screen with white text

AI-generated content may be incorrect.

### Check-Out Books

Upon choosing option 4 of the Patron Menu the user will be taken to the Check-Out Books menu and prompted to select an option.

A screenshot of a computer

AI-generated content may be incorrect.

If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screenshot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A computer screen with white text

AI-generated content may be incorrect.

#### Add a book to your checkout list

When option 1 is chosen the system will prompt the patron user to enter the ISBN of the book they want to add to their checkout list. Once an existing and properly formatted ISBN is entered the system will display a success message and a prompt to add another book. If the user wishes not to add another book the system will prompt the patron user to press enter which will return the patron user to the previous menu, Check-Out Books Menu.

A screenshot of a computer

AI-generated content may be incorrect.

If the user enters an invalid ISBN an appropriate error message will pop up. Once the user clicks ‘ok’ the system will prompt them to enter the ISBN.

A screenshot of a computer error

AI-generated content may be incorrect.

If the user enters an ISBN for a book already in the check-out list an appropriate error message will pop up. Once the user clicks ‘ok’ the system will display a prompt to add another book. If the user wishes not to add another book the system will prompt the patron user to press enter which will return the patron user to the previous menu, Check-Out Books Menu.

A screenshot of a computer error message

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid number is selected the system will continue.

A screenshot of a computer

AI-generated content may be incorrect.

#### Remove last book from your current checkout list

When option 2 is chosen the last book added to the patron check out list will be displayed to inform the patron of the book that will be removed. The system will prompt the user to confirm the removal. Once the removal is confirmed a success message will be displayed and the system will prompt the user to remove another book. Anything else entered than what the system specifies will cancel the removal. The system will prompt the user to press enter which will return the user to the previous menu, Check-Out Book Menu.

A screen shot of a computer

AI-generated content may be incorrect.A computer screen with white text

AI-generated content may be incorrect.

#### View the last book added and total books in your current checkout list

When option 3 is chosen the system will display the last book added to the patron’s current check-out list and the total books in the current check-out.

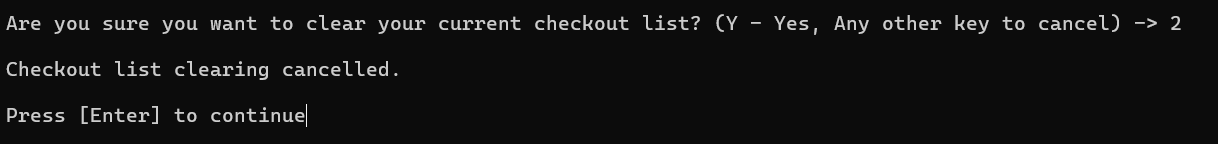
A black screen with white text

AI-generated content may be incorrect.

#### Clear your current checkout list

When option 4 is chosen the system will prompt the user to confirm the removal of all books in their check-out. Once the removal is confirmed a success message. Anything else entered than what the system specifies will cancel the removal. The system will prompt the user to press enter which will return the user to the previous menu, Check-Out Book Menu.

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AI-generated content may be incorrect.

#### Confirm and Exit check-out system

When option 5 is chosen the system will display a confirmation message that signifies that all books in the patron’s check-out list have been checked-out. The system will prompt the user to press enter which will return the user to the Patron Menu.

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### Return Books

Upon choosing option 5 of the Patron Menu the user will be taken to the Return Books menu and prompted to select an option.

A screenshot of a computer screen

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If an incorrect integer entry is made an error message will pop up. Once the user clicks ‘ok’ the menu is given again with the prompt. Once a valid menu option is selected the system will continue.

A screen shot of a computer error

AI-generated content may be incorrect.

If a letter (e.g.: a) or symbol (e.g.: @) entry is made an error message will be displayed and the user will be prompted to enter a number. Once a valid menu option is selected the system will continue.

A screenshot of a computer

AI-generated content may be incorrect.

#### Return a book

When the user enters option 1 the system displays the last book that was checked out and prompts the user to confirm that the want to return it. Once the return is confirmed a success message will be displayed and the system will prompt the user to return another book. Anything else entered other than what the system specifies will cancel the return. The system will prompt the user to press enter which will return the user to the previous menu, Check-In Book Menu.

A computer screen with white text

AI-generated content may be incorrect.

A computer screen with white text

AI-generated content may be incorrect.

#### Undo the last book returned

When the user enters option 2 the system displays the last book that was returned and prompts the user to confirm that the want to undo it. Once the undo is confirmed a success message will be displayed and the system will prompt the user to undo another return. Anything else entered other than what the system specifies will cancel the return. The system will prompt the user to press enter which will return the user to the previous menu, Check-In Book Menu.

A screenshot of a computer

AI-generated content may be incorrect.

A computer screen with white text

AI-generated content may be incorrect.

#### View last book in your checked-out list & total books

Once option 3 is chosen the system will display the last book the user checked-out and the total books they have checked out. The system will then give a prompt to press enter which will return the user to the previous menu, Check-In Book Menu.A screen shot of a computer

AI-generated content may be incorrect.

#### View last book you returned & total books checked in

Once option 4 is chosen the system will display the last book the user returned and the total books they have checked in. The system will then give a prompt to press enter which will return the user to the previous menu, Check-In Book Menu.

A computer screen with white text

AI-generated content may be incorrect.

#### Cancel check-in and restore original checked-out list

Once option 5 is chosen the system will display a message to inform the user that their current check in list has been canceled and no books were returned. The system will then give a prompt to press enter which will return the user to the previous menu, Check-In Book Menu.

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#### Exit Check-In System

Once option 6 is chosen the system will display an exit message. The system will then give a prompt to press enter which will return the patron user to the Patron Menu.

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### Change Password

When option 6 is chosen the system will prompt the user to enter their old password and their new password. Once both are valid the system will display a success message and prompt the user to press enter which will return the user to the Patron Menu.

A screen shot of a computer

AI-generated content may be incorrect.

If an invalid current password is entered an appropriate error message will pop up. Once the user clicks ‘ok’ the system will display a prompt to press enter which will return the patron user to the Patron Menu.

A screenshot of a computer error

AI-generated content may be incorrect.

A screen shot of a computer

AI-generated content may be incorrect.

If an invalid new password is entered the user will be prompted to enter a valid new password. When a valid new password is entered the system will display a success message and prompt the user to press enter which will return the patron user to the Patron Menu.

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### Log Out

When option 7 is chosen the system displays a message to inform the user that they are being logged out and prompt the user to press enter. This returns the user to the first menu, Library Management System login menu.

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A screen shot of a computer screen

AI-generated content may be incorrect.

### Terminate Program

When option 8 is chosen the system displays a message to inform the user that any information entered in in the system has been stored and prompts the user to press enter which closes the program.

A screenshot of a computer screen

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## Exit

When option 3 is chosen from the Library Management System login menu, the system displays a message to inform the user that any information entered in in the system has been stored and prompts the user to press enter which closes the program.

A screenshot of a computer screen

AI-generated content may be incorrect.