Quick Start User Guide

Upon launching the application, users are greeted with a main page featuring the title '**LIBRARY SYSTEM**'. A '**CONTINUE**' button is provided to seamlessly transition users into the **EMPLOYEE MENU**, where they can efficiently carry out various required tasks.

Adding a new Borrower

To add a new borrower, users can simply click on the "**ADD BORROWER**" button. It is mandatory for the borrower to provide their Social Security Number (SSN), Name, Phone Number, and Address. The system requires all these fields to be completed; failure to do so triggers an error message, "**Please fill in all fields**" ensuring data completeness.

Each SSN is unique within the system. Attempting to register a borrower with an already existing SSN results in the error message, "**Borrower already exists, card_id is IDXXXXXX**" thereby preventing duplicate entries.

Moreover, the system enforces specific format requirements: the SSN must be a 9-digit number, and the phone number must be 10 digits. If these criteria are not met, appropriate error messages will appear, such as "**Invalid SSN: Please enter a valid 9-digit number**" or "**Invalid Phone: Please enter a valid 10-digit number**" ensuring the accuracy and standardization of borrower information.

Each borrower is assigned a unique Card ID upon registration, which is central to all their transactions, including book check-outs, check-ins, and fine payments. This Card ID is immediately displayed in a message box as soon as a new borrower is added. For future reference, if you need to check a borrower's Card ID, there's a convenient feature: the "**DISPLAY BORROWER DETAILS**" button. This function allows you to look up a borrower's details using their Social Security Number (SSN), phone number, or their name and address, making it easy to access their Card ID and other relevant information at any time.

Book Search and Check-out

To search for or check out a book, the "**CHECK-OUT BOOK**" button must be clicked. Any search pattern entered will be matched against the ISBN, book name, and author names, with the matching records being displayed, if no records match a message saying "**No books with matching Isbn/Title/Author_Names Pattern**" will be displayed. For checking out a specific book, a click can be made anywhere on the book tuple to select it. A maximum of three books may be selected at one time, as the system does not permit checking out more than three books simultaneously. Should the total number of books selected exceed three, the error message "**Cannot select more than 3 entries at a time**" will be displayed.

Once the books are chosen and the "**ISSUE**" button is clicked, users are led to the "**ISSUE BOOK**" page. On this page, the Card ID of the borrower must be entered. Should an invalid Card ID be entered, an error message stating "**Card_id doesn't exist. Please enter a valid card**

id" will be displayed. In cases where a valid Card ID is entered but the borrower has previously borrowed books and is attempting to borrow more than three books in total, an error message, "**Maximum No. of Book Loans for a borrower is 3. Please select X or less books**", will be displayed. However, if a valid card ID is entered and the total number of book loans does not exceed three per person, the books will be issued to the borrower of that Card ID.

If an attempt is made to select an unavailable book, namely a book already borrowed by someone else, an error message, "**Cannot select unavailable books**", will be received. To determine whether a book is available, reference can be made to the "**AVAILABLE**" column on the right. This column displays "**Yes**" if a book is available, and "**No**" if it is not.

Check-in a book

For the check-in of a book, the "**CHECK-IN BOOK**" button is to be clicked. Search patterns entered are matched against ISBN, Card ID, and Borrower name, with any matching records being displayed; if no records match, a message saying "**No book loans with matching Isbn/Card id/Borrower Name Pattern**" will be shown. To check in a specific book, a selection is made by clicking on the book tuple. It is important to note that only one book can be checked in at a time. After a book is selected and the "**CHECK-IN**" button is clicked, the book will be checked in, accompanied by a success message "**Successfully Checked in Book**".

Refresh fines

The fines can be refreshed by clicking the "**REFRESH FINES**" button. Upon clicking this button, the fines will be refreshed and displayed, grouped by card ID.

Pay fines

The fines can be paid by clicking on the "**PAY FINES**" button, which leads to a Card ID search. When a valid Card ID is entered, the fines associated with it are displayed; however, if an invalid Card ID is entered, a message stating "**Card_id doesn't exist. Please enter a valid card id**" is displayed. The fines for each book are shown, but they can only be paid in full, as indicated by the amount displayed on the button labeled "**Pay Fine XX.XX**". If the fine is ready to be paid, clicking this button will update the records accordingly. Should there be an attempt to pay fines before returning books that have passed their due date, a message, "**Please return back books that crossed due date before paying the fine**" is shown.