LIBRARY MANAGEMENT SYSTEM - DESIGN DOCUMENT

Library management systems helps librarians to perform various services in the library. Below are the functionalities.

BOOK SEARCH:

a) Any combination of ISBN, title, and/or Author(s) can be used to search for a book to get appropriate results using substring matching in the query.
b) Availability of the books are also displayed here

CHECK OUT BOOKS:

a) An option called checkout is available on mainpage which when clicked requires to enter ISBN and CARD_ID.
b) After entering, click checkout and the checkout is done and due date is set to 14 days from current date.

CHECK IN BOOKS:

a) If a borrower returns a book, librarian can perform checkin of books.
b) In order to do checkin, librarian needs to enter any of the combinations of ISBN or CARD_ID or the borrower name.
c) From all the loans available, we can return any book by clicking on the particular tuple displayed.

BORROWER MANAGEMENT:

a) To add a new borrower into the system, librarian needs to type the required borrower details in the New Borrower option.
b) The UI checks all the required mandatory fields and once clicked add, a new card_id is automatically generated for the borrower.

FINES:

a) There are 3 options available in fines for all the late return and fine amount information.
b) Card_id needs to entered to access all this information.
c) All fines due - To see fine amount on all the books this card_id has borrowed.

d) Paid fines - To check what all fines are repaid for this card_id.
e) Total amount due - To check the total fine due amount if any, for all the books the card_id has borrowed.

LANGUAGES/IDE USED:

1. Java
2. Java swing
3. SQL Workbench
4. SQL server

REQUIREMENTS TO TEST:

1. MySQL running host
2. JDK
3. JAVA SE