

# Database Design 6360.501

## Library Management System

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### Librarian System User guidelines:

Home page: Home page has a navigation bar to various other pages:

- Borrowers Page
- Check-out/Search Page
- Check-in Page
- Fines Page

**Borrower's Page:** Any new Borrower can be added to the database through this form in Borrower's page. The new borrower must have unique SSN and other details like :

- email-id -NOT NULL
- SSN-NOT NULL
- Fname/Lname -NOT NULL
- Address-NOT NULL
- CITY-NOT NULL
- PHONE NUMBER-NOT NULL
- STATE-NOT NULL

**Check-Out/Search Page:** The librarian can search for any book based on ISBN/AuthorName/Title of the book and has a toggle option to check-out books as per need.

In few cases, a single search tag might result in multiple results of same book with same ISBN; In such cases, toggling any of those books(multiple but same ISBN)/all books with same ISBN is considered as a single entity when you check out.

Checkout is considered both for check-out and Searching books.

**Check-in Page:** The search bar in Check-in page accepts three search tags: borrower.cardID, borrower name, books.book\_id. Once the list of books are displayed, any particular book can be checked in with respect to cardID of the borrower else, the book isn't accepted.

**Fines Page :** Display Fines- Displays the fines that aren't yet paid grouped by cardID.

- Display Paid Fines- Displays the fines that are payed and fines.paid='1' and grouped by cardIDs
- Pay Fines- A search bar is associated with the Pay fines button where a loanID can be searched and fine amount can be viewed which can be toggled and payed on pressing Pay button.
- No book's fine is accepted without the book being checked in.
- Paid in Fines table is chosen as a Boolean value(Either 1 or 0)
  - If paid, p\_value=1 else p\_value=0;(A book paid bool value is changed only if the book is checked-in)