**LIBRARY MANAGEMENT SYSTEM**

1. Program starts with login/Register frame. Register frame takes First name, Last name, Address, Phone number and SSN. If the validation doesn’t pass, then error message is displayed over the screen.
2. If the record already exists, then it will give the error message. If not a new borrower is created.
3. After successful registration, a unique auto incremented card number is assigned to the borrower which is used as the primary key.
4. Librarian can use Search functionality in search tab. Search can be done over ISBN number, title of the book or author name as input and the results matching the search are displayed with the corresponding ISBN, title, author and availability.
5. Librarian can issue the book by entering the card no and selecting a book from search result. When a book is checked in, corresponding record is updated into book\_loans table and the availability is set to ‘NO’.
6. If the borrower already has 3 books issued, then check-in button displays an error. Also, if a not available book is tried to be issued an error is displayed.
7. Borrower details tab shows the history and active book loans of a borrower. It also contains “Calculate fine” button, which takes the user to pay fine tab and on entering borrowers card number the exact fine amount is displayed for each loan.
8. Borrower details tab also allows librarian to check-in the book for the borrower.
9. Pay fine tab allows librarian to know the fine amount and make a fine payment. After which the paid column will be set to ‘YES’.