**Library Management System**

**User Instructions for Librarians**

The Library Management System consists of four parts: Book Search, Check out, Check In and Adding a new user. Each functionality is implemented in separate tab in the user interface.

**Book Search**:

Librarian is able to search a book using any combination of book id, title of the book and author or organization name. After hitting the search button the data will be populated in a table provided in the GUI. The table will contain Book id, Title, Branch id, number of Copies at each Branch and the Number of Available copies at each branch.  
  
**Check Out:**

A librarian is able to issue a book by entering the book id, branch id and the card number of the borrower. The system prompts the librarian if a user has already checked out more than 3 books.

When the book is successfully checked out the book loans table in the database has a new entry will all the necessary details and the check out date as the current date.

**Check In**

To return a book, Librarian will have to enter the Book Id, Cardnumber of the borrowerand the first name and last name of the borrower. After clicking the search button, data will be populated in the table showing all the books borrowed by the user.

To check in a book, librarian will simply have to select a row from a table and click Check In.

**Add User**

Librarian is able to add new user to system by entering the first name, last name, address and the phone number of the user. Card number of the new user is created in the borrowers table in the database.

**Design Decisions and Justifications**

The Library Management System consists of four tabs. Each Tab handles a different Functionality.

The First Tab is used for Book Search. The data is visible in a table provided in the same frame.

The Second Tab is used for Check Out .

The Third Tab is used for Check in, after finding out all the books borrowed by the user, data is populated in the table. Librarian is able to check to check in a book by simply clicking on the table and clicking on check in.

The Fourth tab is used for adding a new user to the system by simply providing all the necessary details.

I have made tabs in the interface as it is easier for the Librarian to use it easily and switch between different tasks effectively. If there are any issues/errors/update while interacting with the interface, a pop up with the relevant information notifies the librarian of the error/update etc.

**Technical Dependencies**

1. Java sdk 1.7

2. Mysql 5.6.16

3.Mysql J connector 5.1.30

4.Pyhton 2.7.6

5.Mysql-pyhton-1.2.4b4

This Project was created in Eclipse Juno using Swings framework and java as a programming language.