Library Management System: Report

Swetalina Behera

**Table of Contents:**

[**Introduction: Library Management System** 3](#_Toc402734969)

[**User manual for librarians:** 3](#_Toc402734970)

[**Design decisions:** 3](#_Toc402734971)

[**Technical dependencies:** 4](#_Toc402734972)

[**Extra Features:** 4](#_Toc402734973)

[**References:** 4](#_Toc402734974)

# **Introduction: Library Management System**

Library Management system is a Windows Application. The end user for this system are Librarians who can perform following operations:

1. Book Search and Availability
2. Checking Out Books
3. Checking In Books
4. Adding new Borrower
5. Calculate Fine

# **User manual for librarians:**

1. Book Search and Availability:

Search for a book can be done, given any combination of book id, title, and/or Author(s) first name or last name and you need not put the exact values it can be something similar to what you are looking for.

1. Checking Out Books:

It’s mandatory to enter Book id, branch id and borrowers card number. It won’t allow for a check out in following cases:

* Any of the three fields are null
* Any of the provided data is invalid
* The book requested is not available in library branch
* Borrower has already taken 3 books on his / her card.
* Borrower has pending fine to be paid.

If none of the issue exists it allows for book check out and assigns a new loan id.

1. Checking In Books:

User can check for books which are been issued to them using either book id, Card number or borrowers first name or last name.

After getting the result set of all books corresponding to details entered he/she can select one and check-in.

1. Adding new Borrower:

User can add new user it validates if user already exists if not we can add new borrowers it generates new card for newly added user.

1. Calculate Fine:

Fine is calculated in two cases if you check-in book after the due date or due date has already passed and book is not checked in.

# **Design decisions:**

Description of Files:

1. Import data: Used to create Schema and populate the database.
2. Separate classes(Book, Author name): for validating fields while inserting
3. JFrames (Various): Corresponding each functionality we have a jframe so corresponding to each functionality we have one frame.

# **Technical dependencies:**

1. Environment used: NetBeans IDE 7.4
2. MYSQL

# **Extra Features:**

1. Login Feature: For adding book copies the Librarian should have special credentials so before adding a new book it asks for login if its correct only then it allows to enter the book add page.
2. Import Search data to excel: The result set which is returned after search can be imported to a csv file using a button present.
3. Book Add: As in real library we pay purchase more book copies depending on demand of an existing book so we can take the book id and library branch and add to the number of copies available.
4. Fine payment: User can view payments paid in past, total fine on their card and can pay only one fine instead of all fines on their card.

# **References:**

1. https://community.oracle.com
2. http://stackoverflow.com/