

Library Management System User Documentation

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1. Introduction

Welcome to the Library Management System User Documentation. This document provides an overview of the library management system, its features, and how to use it effectively. The system is designed to manage books, authors, and patrons, facilitating book borrowing and returning processes.

2. Application Overview

The Library Management System is a software application that enables librarians to efficiently manage their library's resources. It provides the following features:

Book Management

Adding new books to the library.

Editing existing book information.

Deleting books from the library.

Each book includes details such as title, author, ISBN, publisher, and the number of available copies.

Author Management

Adding new authors to the system.

Editing existing author information.

Deleting authors from the system.

Each author includes details like name, date of birth, and a list of books they have written.

Patron Management

Adding new patrons to the system.

Editing existing patron information.

Deleting patrons from the system.

Each patron includes attributes such as name, address, phone number, and a list of borrowed books.

Book Borrowing

Patrons can search for books by title, author, or ISBN.

Borrow a specific number of copies of a book.

The system displays a message if a book is currently checked out.

Book Returning

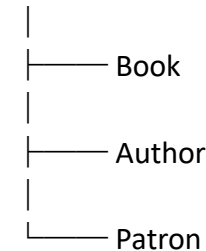
Patrons can return books they have borrowed.

3. Class Diagram

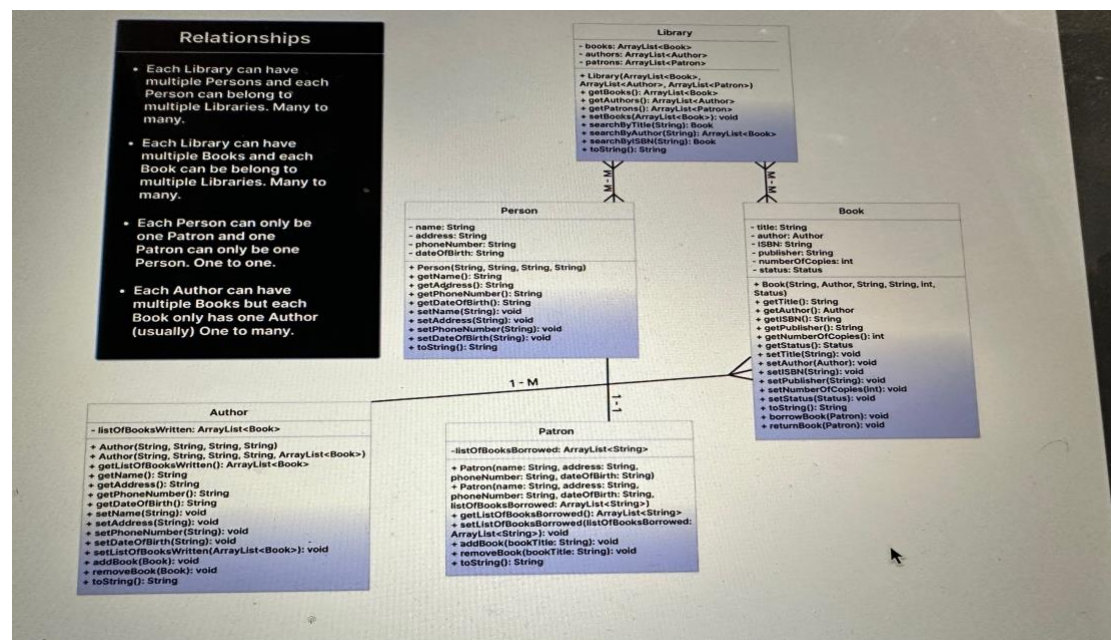
Below is a simplified class diagram of the key classes in the library management system:

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Library



This diagram represents the relationships between the classes. The Library class manages Book, Author, and Patron instances, allowing for interactions between them.



4. How to Start and Access the Application

To start and access the Library Management System, follow these steps:

Ensure you have the Java Runtime Environment (JRE) installed on your computer.

Download the application files provided in the .rar archive.

Extract the files to a directory of your choice.

Open a command prompt or terminal and navigate to the directory where the files are located.

Compile the Java classes using the javac command. For example:

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```
javac Library.java
```

Run the application by executing the main class (e.g., Demo.java) with the java command:

Copy code

```
java Demo
```

The application should start, and you can interact with it through the command line.

5. Working with the Application

The application offers various functionalities as described in the "Application Overview" section. You can use commands to perform actions such as adding books, managing authors and patrons, searching for books, borrowing books, and returning books.

Detailed instructions on using these features can be provided upon request, or you can refer to the source code and the Demo.java class for an example of how to interact with the system.

6. Conclusion

The Library Management System is designed to simplify the management of library resources, making it easier for librarians and patrons to access and borrow books. If you have any questions or encounter any issues, please refer to the user documentation or reach out to the application's support team for assistance.

Thank you for using the Library Management System!