

User Specification

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1. Introduction

The purpose of compiling this utility specification is to fully describe the functions that the software can implement and its operating environment so that the user can understand the scope and usage of this software and provide the necessary information for the maintenance and updating of the system.

1.1. System Introduction

The establishment of school library management resources information standards, the formation of a unified school full management library.

The end user of the software is a library admin, personnel, financial staff, and all other employees. These users all have basic levels of computer usage, at least one input method, and do not have to do much basic instructional work in use. Through the use of this system software, it can help the leaders, administrators and personnel of enterprises to conveniently understand or evaluate the employee files, attendance and appraisals, etc., and realize the operation of inputting, modifying and querying the employee information so that the entire library management more scientific, orderly and standardized.

Software maintenance staff is mainly for routine maintenance of the database, such as data backup and recovery, as well as the system hardware and software operating environment maintenance. As a result, maintenance personnel are required to have a high level of education and technical expertise, be familiar with the Windows operating system and computer hardware configuration, acquire basic database knowledge, and recognize software development and visual programming.

1.2. Aim

Improve the business management function of library management system, and establish the process engine and role management mechanism: to achieve the purpose of reducing costs, improving efficiency, utilizing talents rationally and improving library user service mode.

2. Software installation and operating environment

This section describes many of the issues which need to be addressed or resolved before attempting to devise a complete design solution.

2.1. Installation and run

Run:

(1) After downloading and extracting the file, such as extract to D: \ LMS_1.0, click on the setup.exe and start to the install.

(2) Deploy the database:

In Windows, the establishment of ODBC data source: Start - Control Panel - Administrative Tools - Data Sources (ODBC) - System DSN - Add - select SQL server\ Click Finish - input the admin's id and password- select the database

(3) Copy the database file to the MySQL-Data content

(4) The initial user name and password are listed:

Root 241256

(5) Run the system and you can see the GUI interface

Debug method:

The functional integrity of the various parts of the system is tested through the testers and the users of the actual application and the database concurrency is tested by the software Tellium tool set.[1]

2.2. *Run environment*

Hardware configuration (At least)

Processor: Pentium III 630MHz

RAM: 128 MB

Hard Disk: 20GB

Monitor: At least 15" Color monitor

Key Board: 122 Keys

Software Configuration (At least)

Operating System: Windows NT/Win 98/ Win XP or more

Language: Java 2 Runtime Environment

Database: MySQL server 5.7

2.3. *Interface*

User Interface: Users of this software generally operate through the terminal, enter the main interface and select the corresponding menu to enter the corresponding functional interface;

Software Interface: Windows 9X / NT / 2000 / XP / 2003 operating system, Microsoft Office Excel office applications;

Data Interface: MySQL Server database system.

3. Design Part

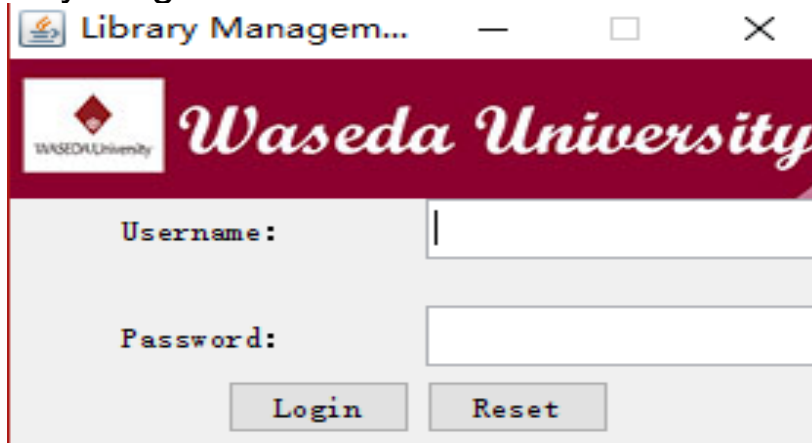
3.1. *Login and main interface*

After running the exe file, you can see the interface as the picture shows. Input the admin and password and you can get into the system.

The initial admin and password are listed as three:

Root 1234

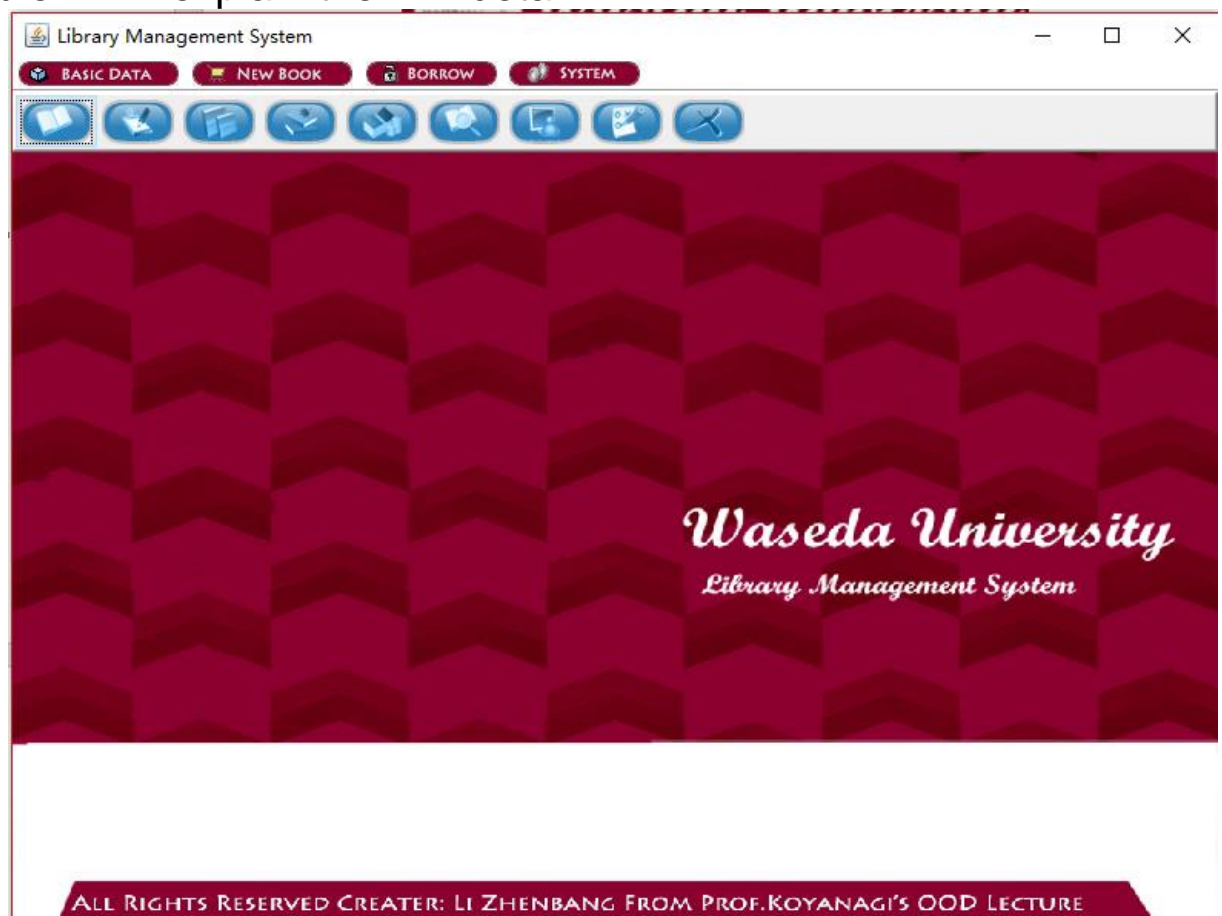
Lishinho 2345
Koyanagi 3456



The screenshot shows a login window titled "Library Managem...". It features the Waseda University logo and name in a maroon header. Below the header, there are two input fields: "Username:" and "Password:". At the bottom of the form, there are two buttons: "Login" and "Reset".

The main Management UI is :

In this scenery, you can see the main management system has 4 modules as Basic data, new book, borrow and the system module. I will explain them in detail.



3.2. Basic Data

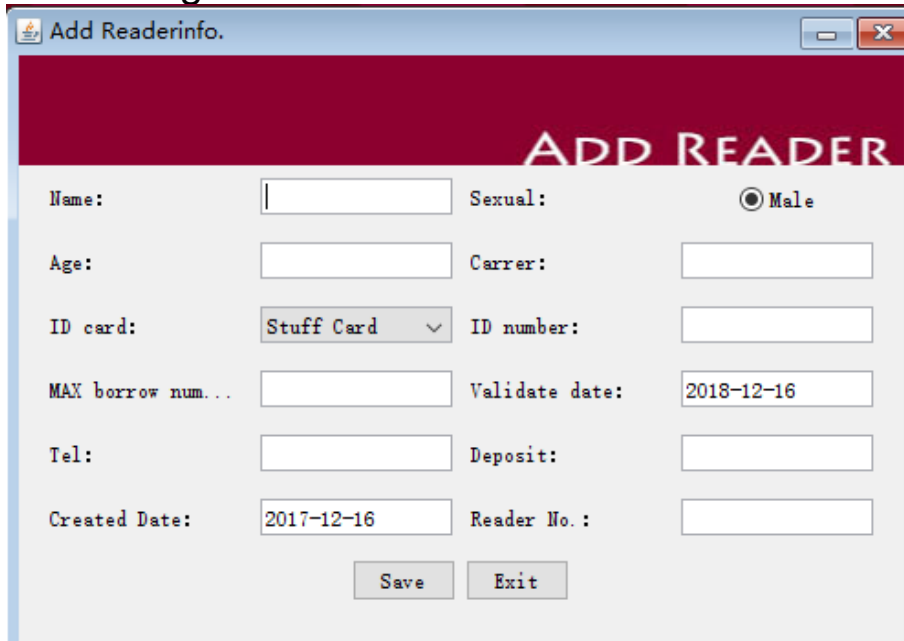
Basic data module is used for the admin to manage the book and reader.

As the first function of the library management system, it has three functions as Reader management, Booktype management and bookinfo management and exit choice. And I will introduce each function and its ability.

In the Basic data module, each function has two sub-functions as add and modify to satisfy the admin with managing the library system.

When you click the Reader management-add reader, you can see an interface like the words below.

Reader management



Booktype management

BookType function is used to add and modify the book type for the admin of the library. If you click the Basic Data-Booktype management-add booktype/Modify and del booktype

BookType No.	BookType Name	Usable Days	Fine
1	CS	30	20
2	News	3	30

BTID:	<input type="text" value="2"/>	BTName:	<input type="text" value="News"/>	Use-Days:	<input type="text" value="3"/>
Dine:	<input type="text" value="30"/>				

Bookinfo management

Bookinfo function is used to add and modify the book information for the admin of the library. If you click the Basic Data-Booktype management-add bookinfo/Modify and del bookinfo.

Modify the bookinfo.

MODIFY BOOKINFO.

ISBN	Book Type	Book Name	Author	Translator	Press	Publish ..	Price
11111111...	News	56 degree...	Gray	rabbit	aya	2013-04-24	20.0
005123456...	CS	Sex and love	lishinho	lishinho	**信息出版社	2017-12-09	998.0
123456456...	News	book1	Koyanagi	Koyanagi	**Informatio	2017-12-14	666.0

ISBN: Booktype: Bookname:
 Author: Press: Translator:
 Publish Date: Price:

Exit

You can exit the system from this interface.

3.3. New Book

Order book is the module that you can use to manage the ordering book in the library.

Book Ordering Management

Bookinfo.

ISBN: Book Name:

Booktype: Press:

Book Price:

Order info.

Order Date: Order number:

Operator: Already checked?: ☐ Yes ☒ No

Discount:

Check book

You can check the new book that library order.

3.4. Borrow

This module is used to register the borrowing book for the users. User can fill out some information and finish borrowing the book.

Borrowing book

The screenshot shows a window titled "Book Borrowing Management". It contains several input fields for borrowing information:

- ReaderNo.: 1101121141
- ReaderName: (empty)
- No. of bo...: (empty)
- Deposit: (empty)
- ISBN: (empty)
- Book Name: (empty)
- Book Type: (empty)
- Price: (empty)

Below these fields is a table with the following headers: ISBN, Borrowing Date, Due Date, and Reader Number. The table body is currently empty.

At the bottom of the window, there are two more input fields:

- Current Time: 2017-12-16 10:23:58
- Operator: root

There are also two buttons: "Lend the book" and "Clear All".

Return book

User can use this interface to return the book they have borrowed before.

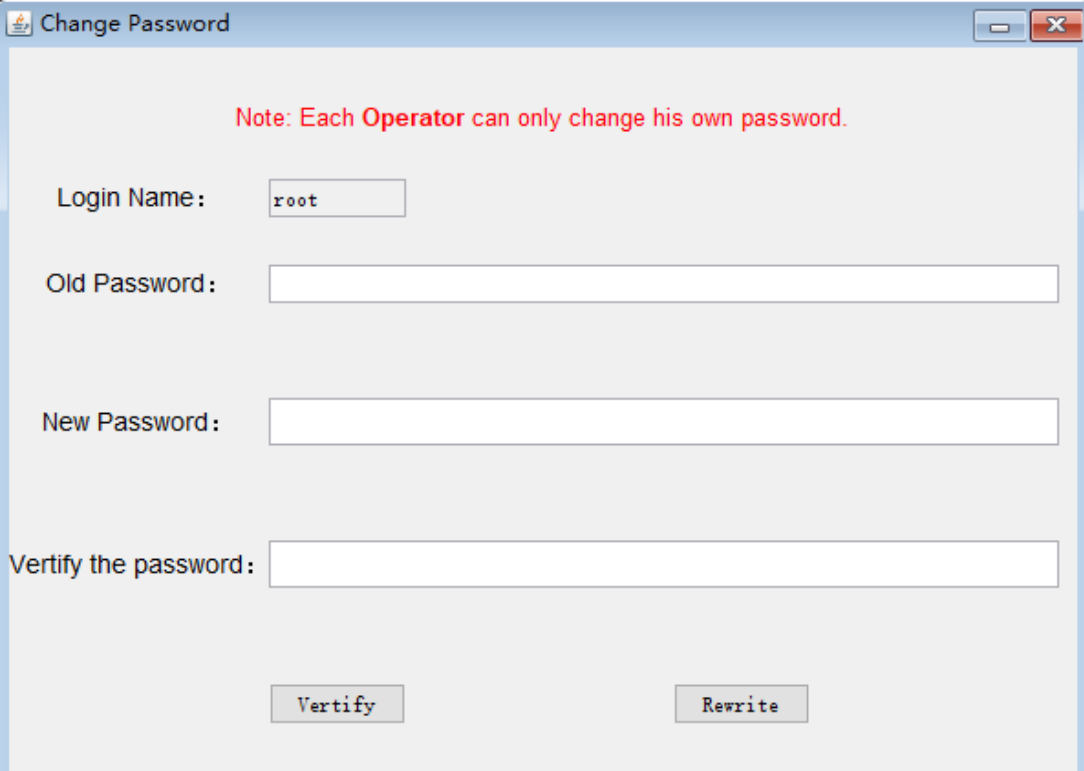
Search Book

User can use this interface research the book they want to read.

3.5. System

This part is used for the admin to manage their own account and check the user account.

Change password



A screenshot of a 'Change Password' dialog box. The title bar says 'Change Password'. Inside, there is a red note: 'Note: Each Operator can only change his own password.' Below the note are four input fields: 'Login Name:' with 'root' entered, 'Old Password:', 'New Password:', and 'Verify the password:'. At the bottom are two buttons: 'Verify' and 'Rewrite'.

Note: Each **Operator** can only change his own password.

Login Name:

Old Password:

New Password:

Verify the password:

As the note said, each operator can only change his own password. So, the admin can only input the old password and use the new password twice to verify and change the password.

User management

Add user

A screenshot of a Windows-style dialog box titled "Add userinfo.". The dialog box has a light blue title bar with standard minimize, maximize, and close buttons. The main area is light gray and contains several form fields arranged vertically. The fields are labeled "Username:", "Sexual:", "Age:", "Created Date:", "Tel:", "ID card:", and "Password:". The "Sexual:" field has two radio buttons, "Male" (which is selected) and "Female". The "Created Date:" field contains the text "2017-12-16". At the bottom of the dialog box, there are two buttons: "Save" and "Cancel".

Modify and delete the user

4. Glossary

LMS – Library management system

HDD - Hard Disc Drive

RAM – Random Access Memory

IE – Microsoft Internet Explorer

Software testing – an investigation conducted to provide stakeholders with information about the quality of the software product or service under test

5. Help and about

Name of development software:

LMS_Library management system

Developer: Li Zhenbang, IPS, Waseda University

User: Library system manager

This project will be used to automate the standardization and

systematic management of all aspects of library admin, book and reader basic information, new book management and borrowing management.

The Library management system can be used in the library of each university company or city, no problem in the testing process, if you find the system fault can contact the administrator to deal with.

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Reference:

[1]Yuetang Deng, Testing database transaction concurrency, department of computer and information science polytechnic university.

[2] Object-Oriented-Analysis-and-Design-with-Applications-3rd-Edition