

COMP 2411 User Guide

Group 14

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Environment configuration

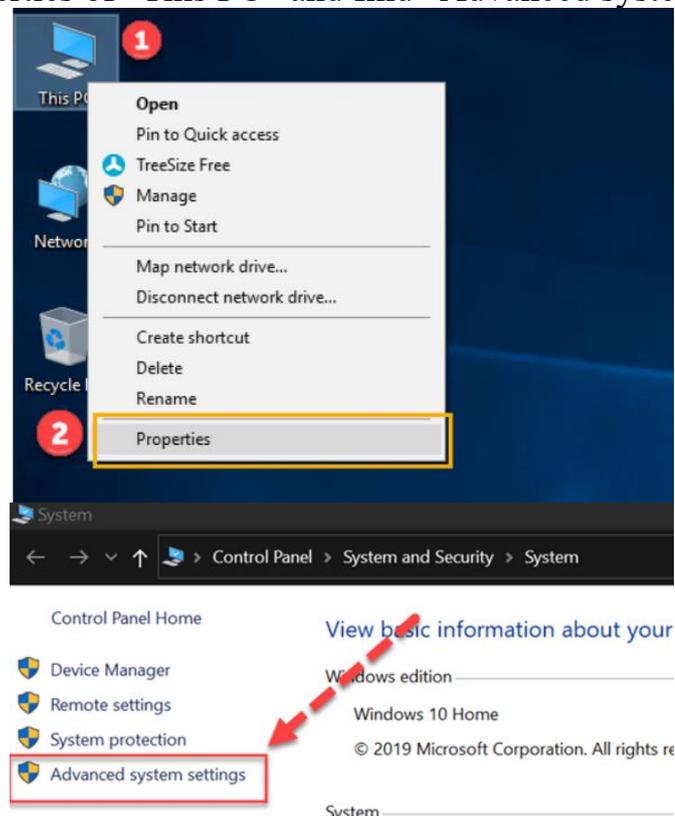
To use our application, you need to install OpenJDK 19.0.1 and set it to be the system environment variable.

1. If you are Windows user, you can simply use the provided zip file named “openjdk-19.0.1_windows-x64_bin.zip”. Or you must download OpenJDK 19.0.1 <https://jdk.java.net/19/> in an appropriate version according to your system.

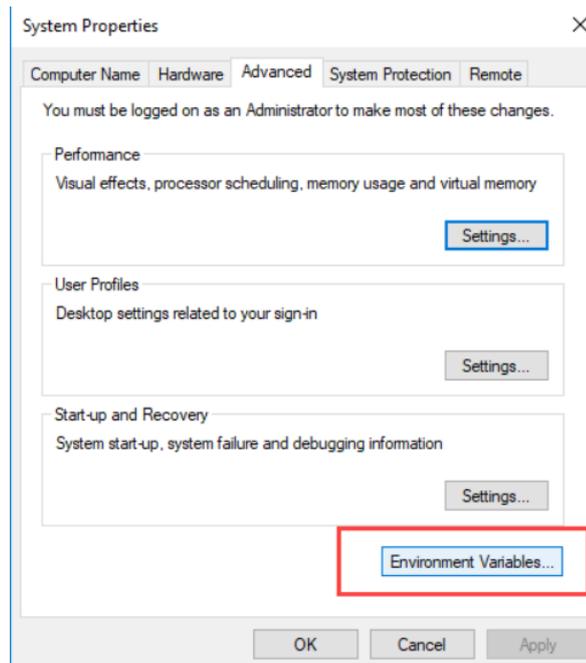
Buils

Linux/AArch64	tar.gz (sha256)	194660832 bytes
Linux/x64	tar.gz (sha256)	195925792
macOS/AArch64	tar.gz (sha256)	190630653
macOS/x64	tar.gz (sha256)	192577932
Windows/x64	zip (sha256)	194441800

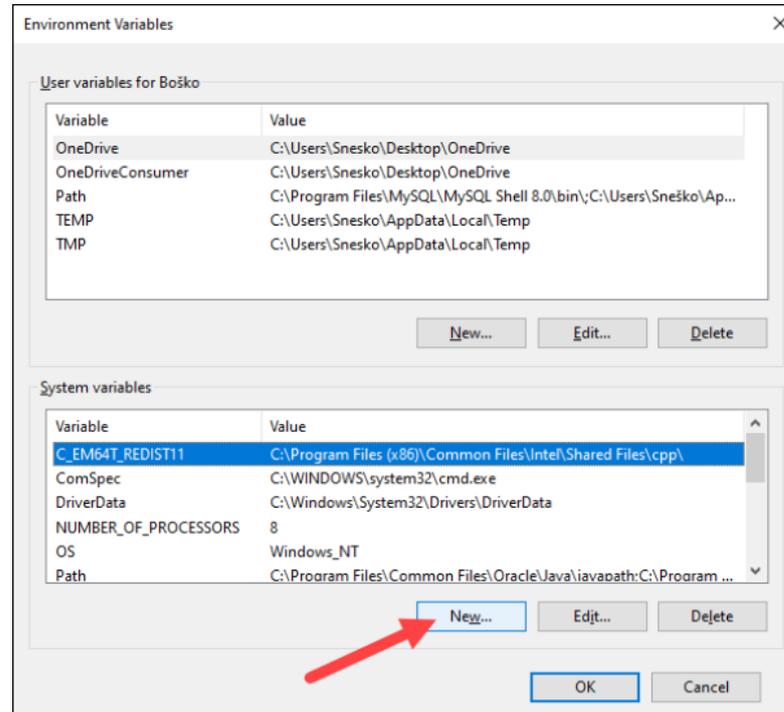
2. Unzip the package to a folder and remember the path.
3. Click properties of “This PC” and find “Advanced system settings”



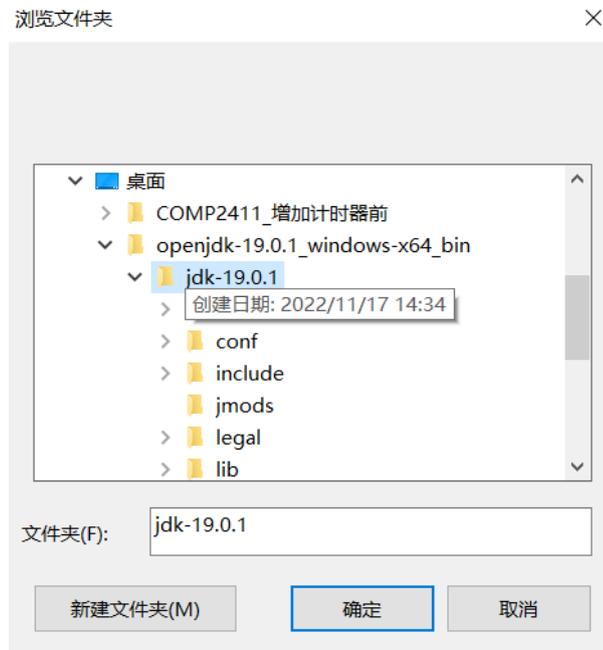
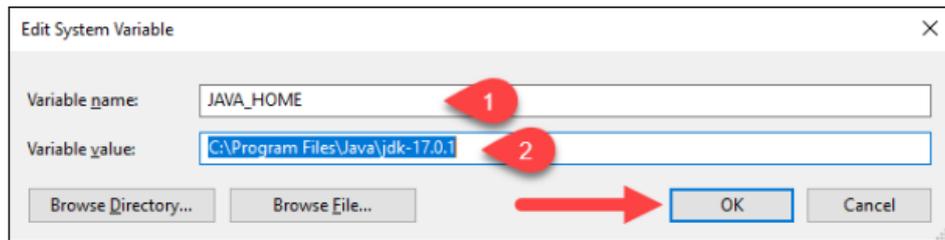
4. Click on “Environment Variables” to set the environment



5. In the Environment Variables window, check whether you have already got a variable “JAVA_HOME” under the **System variables** category. If yes, click it and then click “Edit...”. If not, click the “New...” button to create a new variable.

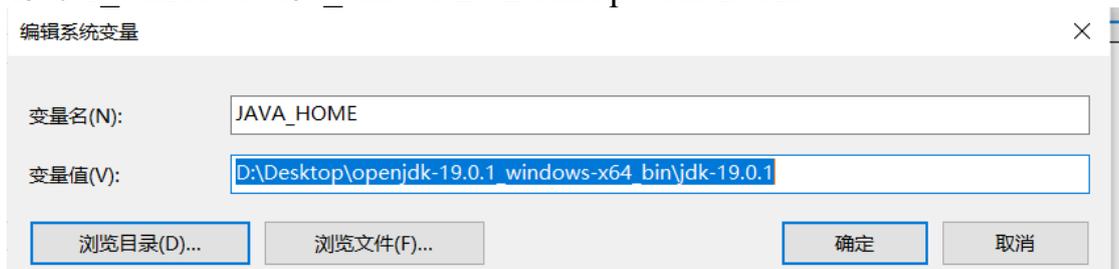


6. Fill in the variable name as “JAVA_HOME”, then click “Browse Directory” to locate your OpenJDK 19.

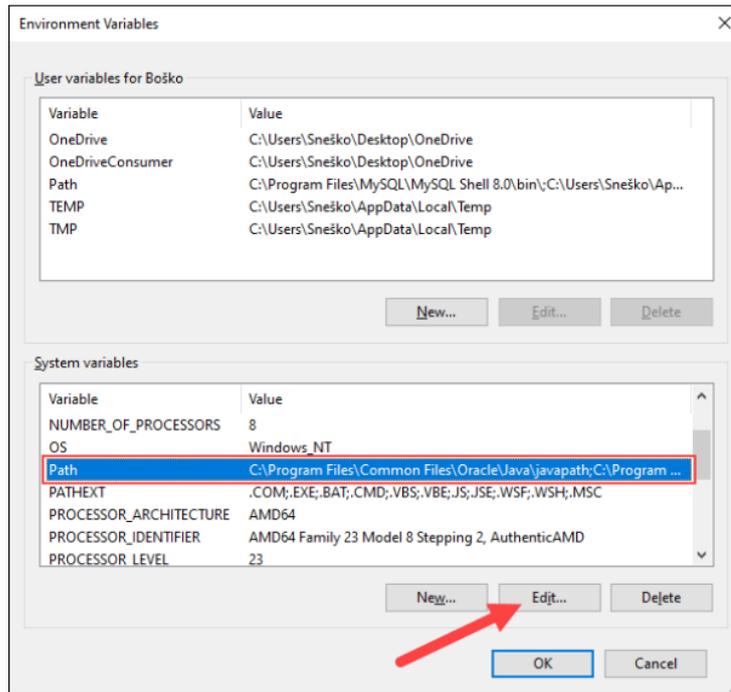


(Attention: Don't stop at the folder "openjdk-19.0.1_windows-x64_bin", , choose the child folder "jdk-19.0.1")

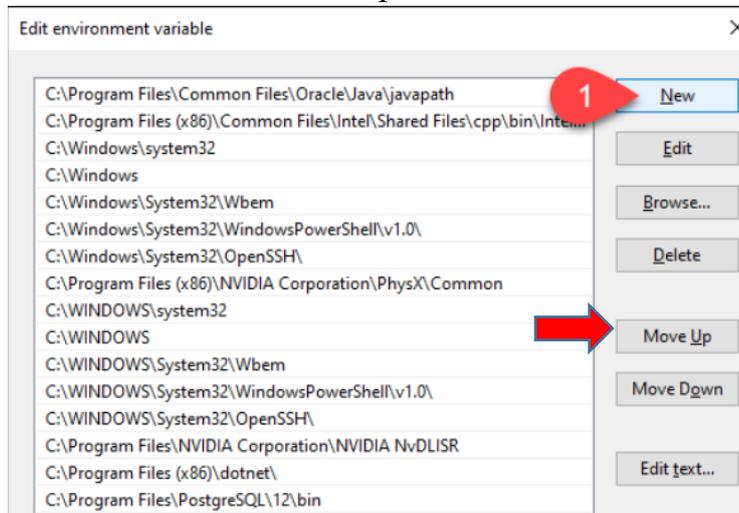
The following picture shows the correct path if I unzip the "openjdk-19.0.1_windows-x64_bin" to D:/Desktop/. Click Ok.



7. Under the System variables category, select the Path variable and click Edit:



8. Add a new variable by clicking the “New” button, input `%JAVA_HOME%\bin`. Then click “Move up” to move the created variable to the top. Click “Ok”.



9. Finally, open the command prompt and input “java -version”, if the following messages are displayed, you successfully installed the OpenJDK 19.0.1.

```

命令提示符
Microsoft Windows [版本 10.0.19043.2251]
(c) Microsoft Corporation。保留所有权利。

C:\Users\lenovo>java -version
openjdk version "19.0.1" 2022-10-18
OpenJDK Runtime Environment (build 19.0.1+10-21)
OpenJDK 64-Bit Server VM (build 19.0.1+10-21, mixed mode, sharing)

```

Run the Library management application

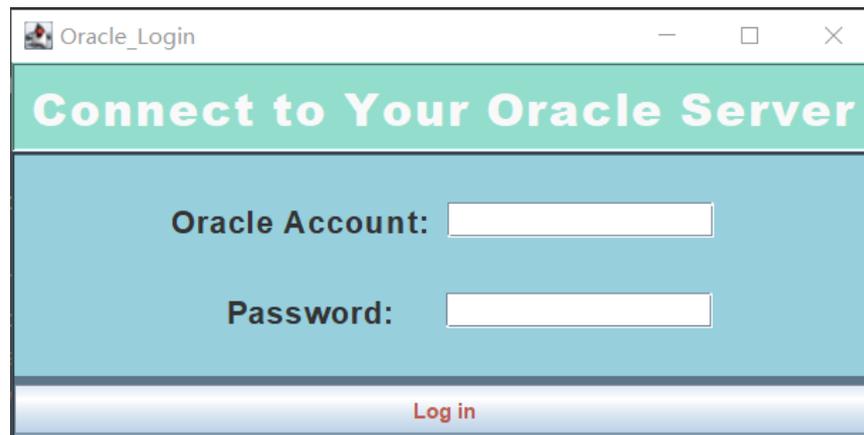
1. Locate your jar file and type “java -jar Liabrary System_G14.jar”.

```
D:\Desktop>java -jar Library_G14.jar
```

2. Input your oracle account and password to login to the Oracle Database. In case you cannot login to your account, you can try the following oracle accounts:

Account: 20084595d Password: vkzabmqa

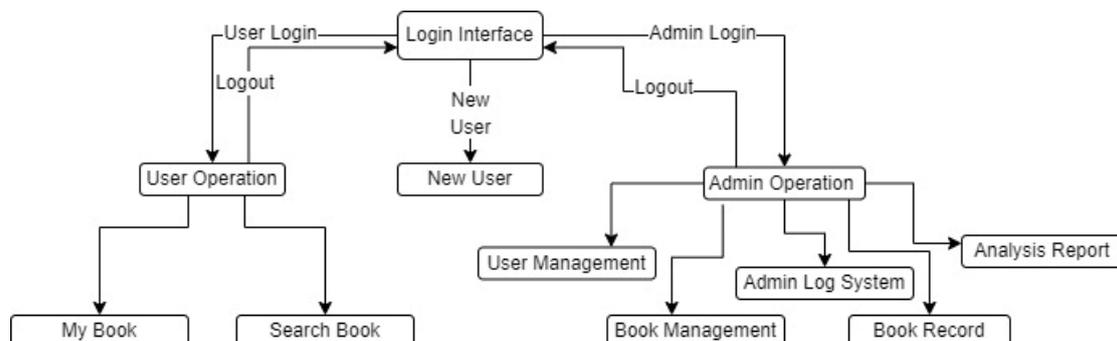
Account: 20076279d Password: ienatxzt



Important Note: To make it easier for you to test, every time you login to the oracle server, the original tables will be dropped, and new tables will be created with some initial records automatically. Hence, you don't need to run any test data file, simply do whatever you want through our interface. During your testing, it is recommended that you should not quit the application to reserve your operation records.

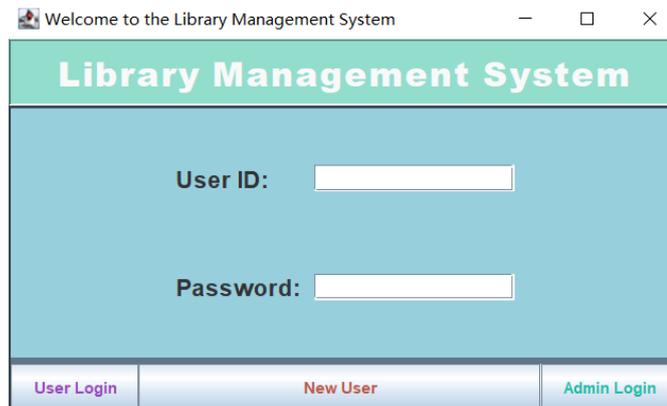
Application user manual

The Interface overview:

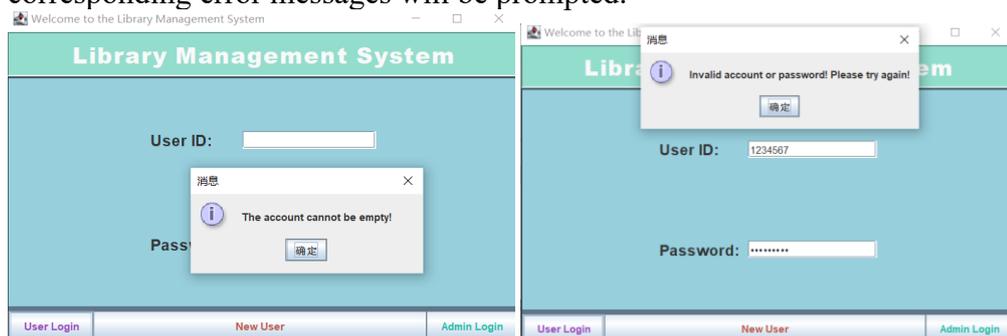


1. Login Interface

This is the initial interface of our application. You can input user ID and password and then press “User Login” or “Admin Login” to jump to the corresponding interface. You can also directly press the “New User” button to jump to the “New User” interface.



If the user leaves the input field empty or input wrong ID and password pair, the corresponding error messages will be prompted.



Initial User account	Password
1	1
2	2
Testing1	2
Testing2	2
Testing3	2
5	5
4	4

Initial Admin account	Password
admin	123

2. New User Interface

You can create a new user in this interface. You are strongly recommended to use your real email address so that you can receive reminder emails in the following test procedure.

Blank values are not allowed for any field, the two passwords must be exactly the same, otherwise, an error message will be prompted.

Once successfully created a new user, the following message will be prompted. You can click “Back” button to return to the “Login Interface”.

3. User Operation Interface

After a user successfully logs in, he can see the following interface with his nickname displayed. He can click the two buttons below to enter the corresponding sub-interface (“My Book” and “Search Book”) or click the “Logout” button to return to the “Login Interface”.



Search Book sub-interface:

This is the interface for a user to search book by the selected Item in the drop-down list on the top left corner. If a user didn't input anything in the search bar, all the books will be displayed as the following picture shows. The two red circles illustrate that our system meets the requirements that there may be more than one copy of each book, and a book may be published by different publishers.

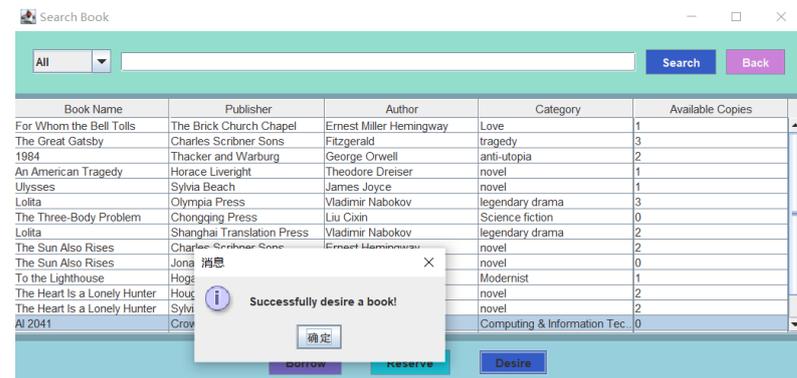
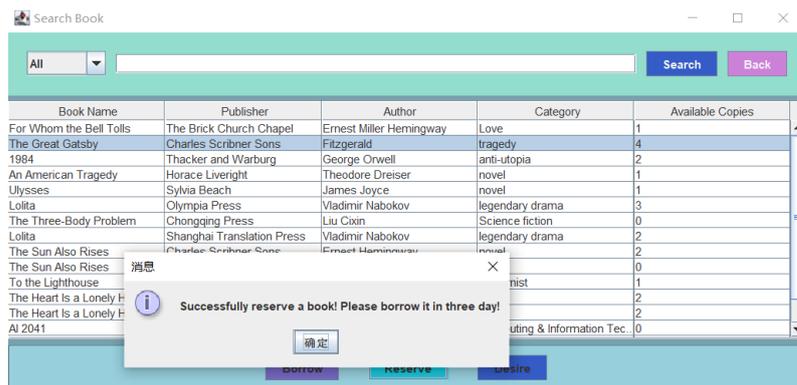
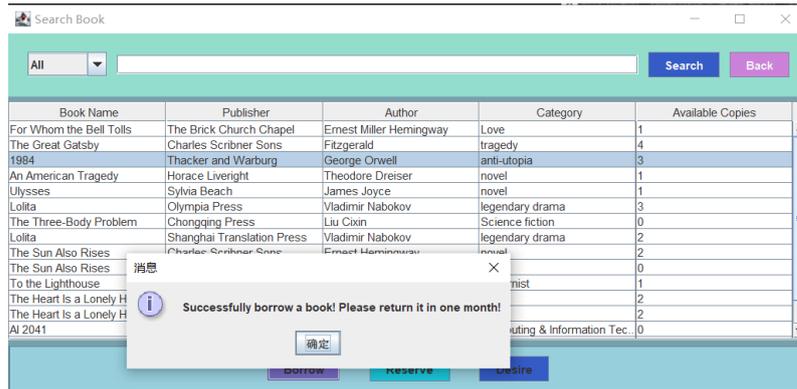


Another example of listing all books written by an author whose name contains "Liu".



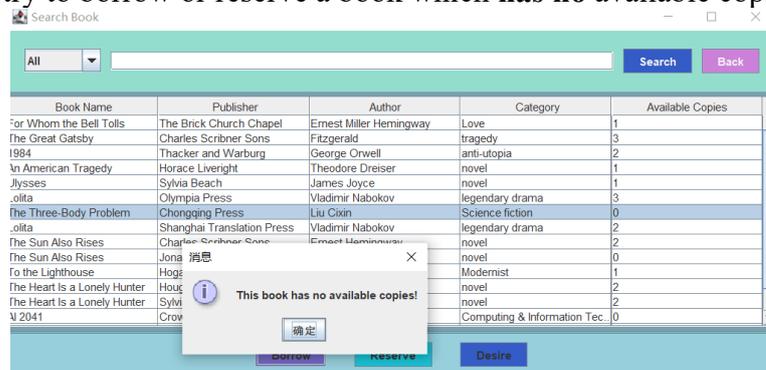
If a book has "Available Copies", a user can borrow or reserve it by first selecting the book in the table and then clicking the corresponding buttons. If a book currently has NO "Available Copies", a user can only desire it so that when it becomes available, the user will receive a notification by email.

(Demonstrations on the successful cases)

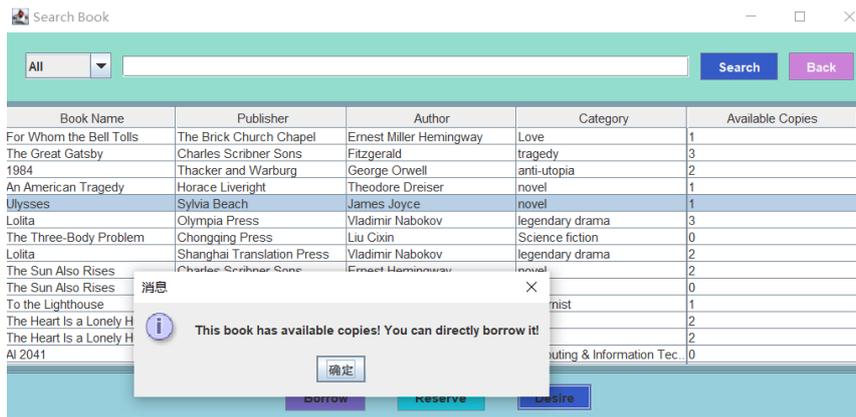


(Demonstrations on the failing cases:)

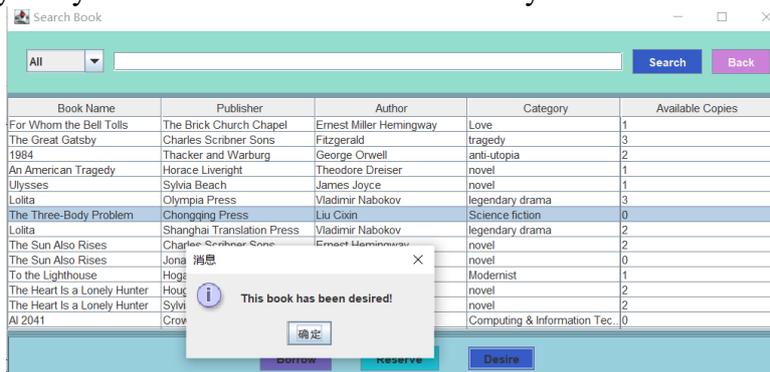
1. If you try to borrow or reserve a book which **has no** available copies.



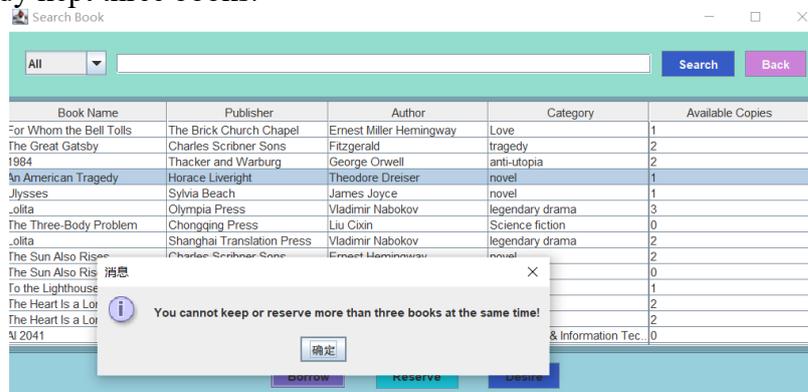
2. If you try to desire a book which **has** available copies.



3. If you try to desire a book which has already been desired.



4. In our system, a user can only keep (borrow and reserve) three books at the same time, hence if a user will not be allowed to borrow or reserve a book if he has ready kept three books.

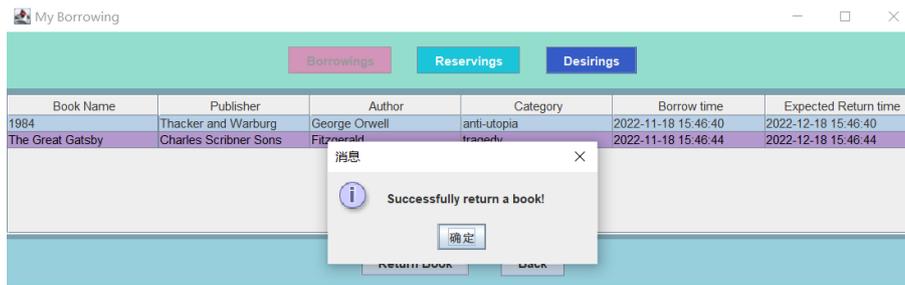


My Book sub-interface:

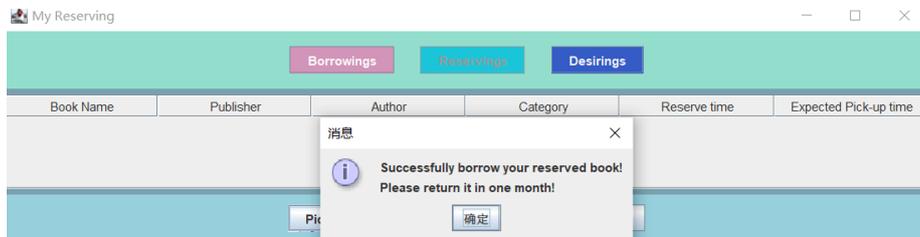
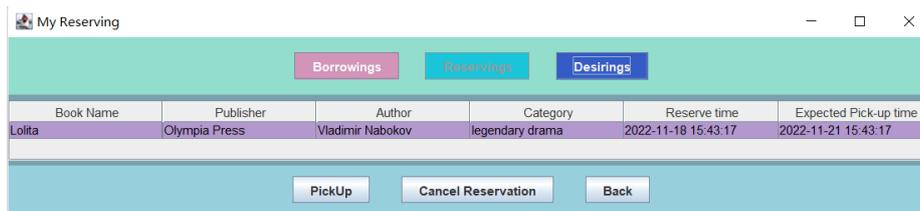
After some operations in the “Search Book Interface”, you can view your borrowings, reservations and desiring books in “My Book Interface”. You can click the three upper buttons to display the corresponding records.

1. In the “Borrowings”, you can return a borrowed book by first selecting the book and then clicking the “Return Book” button.

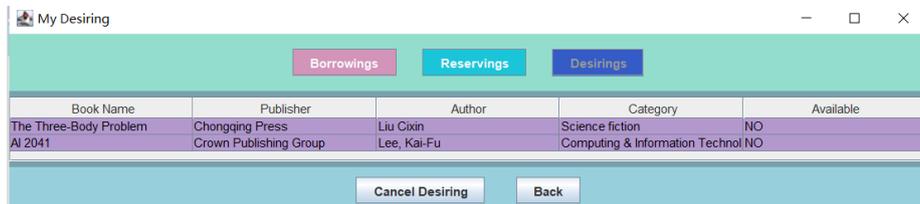




2. In the “Reservings”, you can Pick up (borrow) a reserved book. You can also cancel the reservations.



3. In the “Desirings”, you can cancel a desired book.



4. Admin Operation Interface

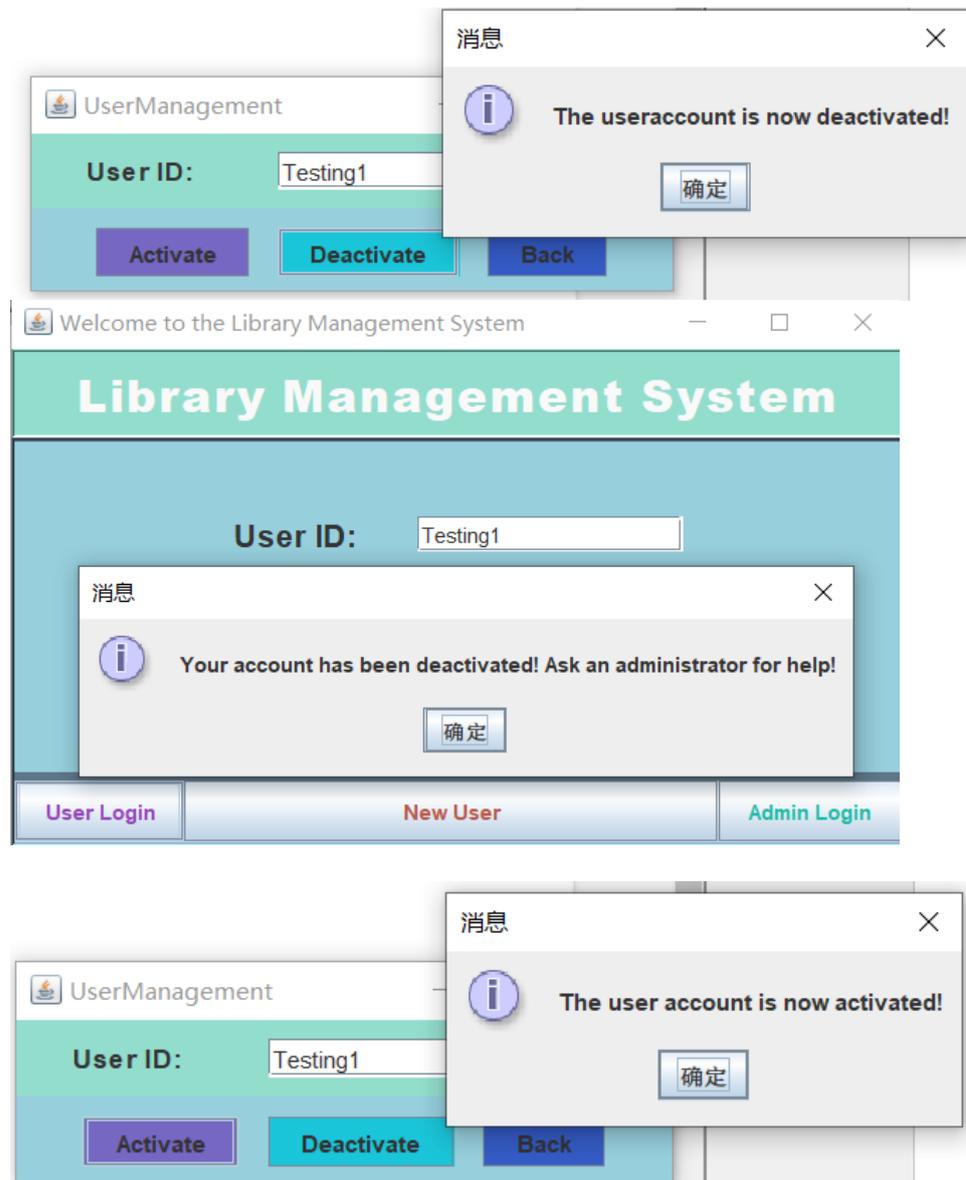
(The Initial admin account is (user ID) “admin”, (Password) “123”)

When successfully logged in, the following interface will be displayed, and the administrator can select the following five functions to operate.



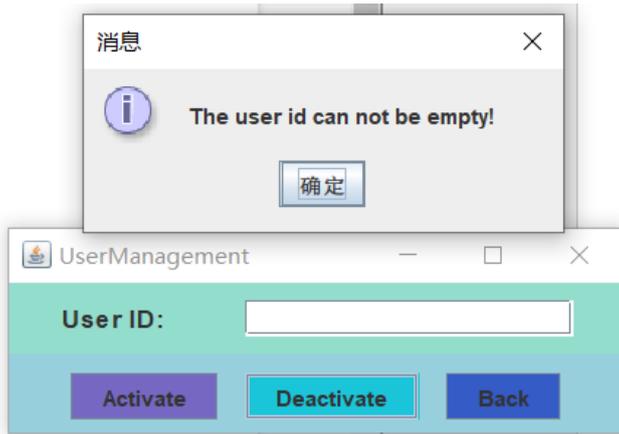
User management sub-interface

When you enter the user ID, you can choose to deactivate him, or the administrator can help reactivate the account that was deactivated (overdue for borrowing a book).

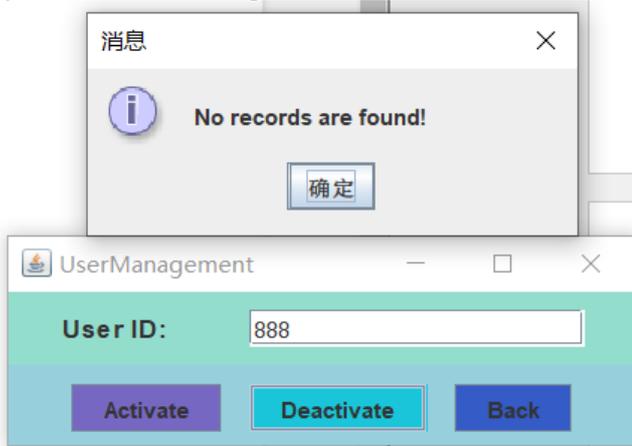


(Demonstrations on the failing cases:)

1. If you click the button without entering any information in the userID.



2. If you enter the wrong ID in the userID box.



Admin Log System sub-interface

In this function, the interface displays all the operations performed by the administrator, recording three pieces of information about the administrator's account, operation, and operation time.

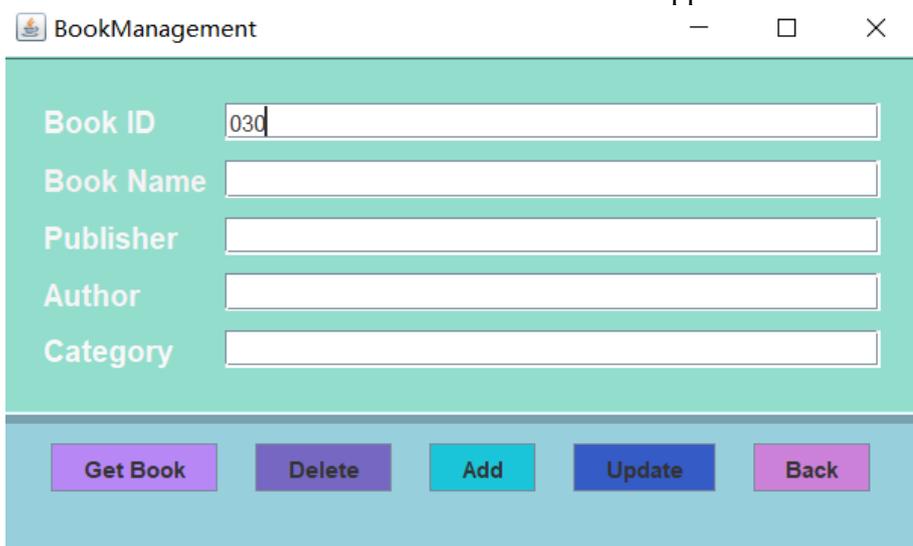
Admin Account	Operation Detail	Operation Time
admin	user Testing1's account has been deactivate	2022-11-19 08:32:30
admin	user Testing1's account has been activate	2022-11-19 08:34:48
admin	user Testing1's account has been deactivate	2022-11-19 08:35:06
admin	Book 050 has been add	2022-11-19 08:38:20

Back

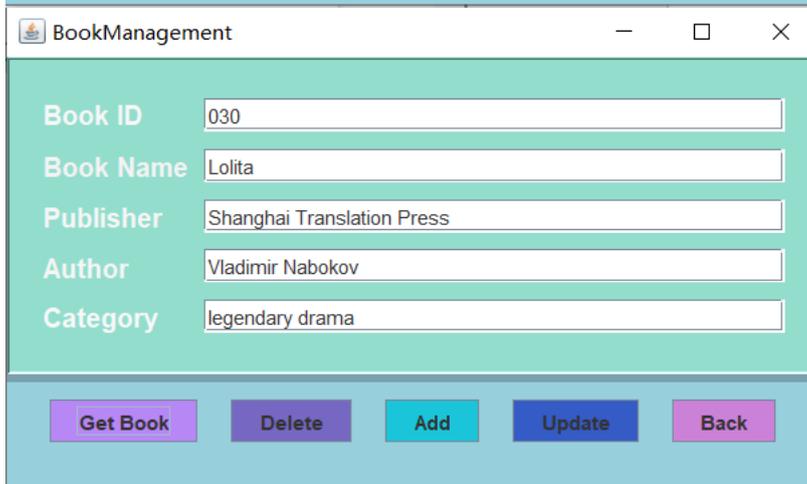
Book Management sub-interface

1. get book

After the administrator enters the BOOKID of a book, click on the "get a book" button and all information related to the book will appear.



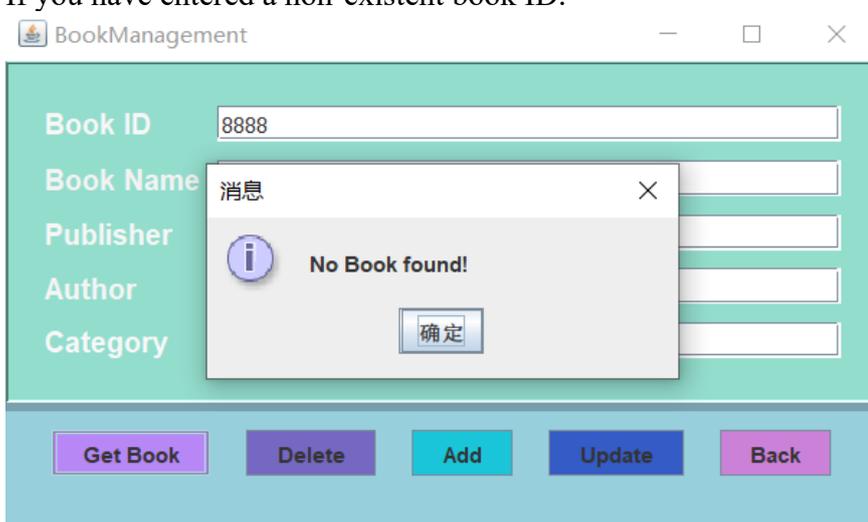
The screenshot shows the 'BookManagement' application window. The 'Book ID' field contains the value '030'. The 'Book Name', 'Publisher', 'Author', and 'Category' fields are empty. The 'Get Book' button is highlighted in purple, indicating it has been clicked. Other buttons include 'Delete', 'Add', 'Update', and 'Back'.



The screenshot shows the 'BookManagement' application window after clicking the 'Get Book' button. The 'Book ID' field contains '030'. The 'Book Name' field contains 'Lolita', the 'Publisher' field contains 'Shanghai Translation Press', the 'Author' field contains 'Vladimir Nabokov', and the 'Category' field contains 'legendary drama'. The 'Get Book' button is now greyed out, and the 'Update' button is highlighted in blue.

(Demonstrations on the failing cases:)

If you have entered a non-existent book ID.



The screenshot shows the 'BookManagement' application window with the 'Book ID' field containing '8888'. A modal dialog box is displayed in the foreground with the title '消息' (Message) and the text 'No Book found!'. The dialog box has an information icon and a '确定' (OK) button. The 'Book ID' field is highlighted in purple, and the 'Get Book' button is highlighted in purple.

2. Delete / Add / Update

Administrators can input book information to delete/add/update book record information.

The image shows three screenshots of a web application interface for book management.

The first screenshot shows the 'BookManagement' window with the following form fields:

- Book ID: 050
- Book Name: new tset
- Publisher: unknown
- Author: unkonwn
- Category: unknown

Buttons at the bottom include 'Get Book', 'Delete', 'Add', 'Update', and 'Back'. The 'Add' button is highlighted in cyan.

The second screenshot shows the same form with a modal dialog box titled '消息' (Message) in the center. The dialog contains an information icon and the text: 'The book has been add successfully!' (Note the typo 'add'). A '确定' (OK) button is at the bottom of the dialog.

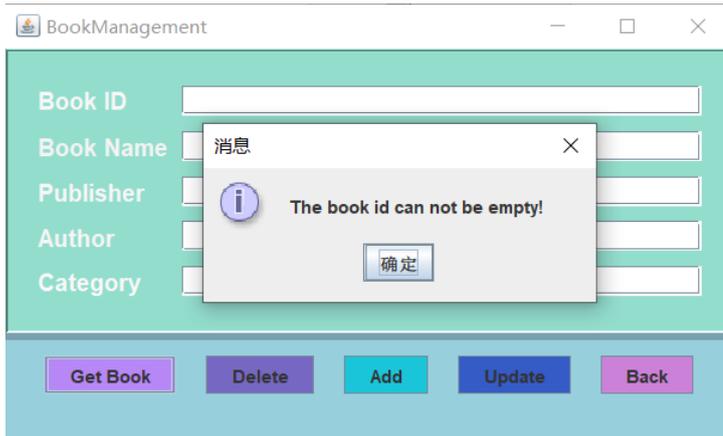
The third screenshot shows the 'Search Book' window. It features a search bar with a dropdown menu set to 'All' and a search button. Below the search bar is a table of books:

Book Name	Publisher	Author	Category	Available Copies
Ulysses	Sylvia Beach	James Joyce	novel	1
Lolita	Olympia Press	Vladimir Nabokov	legendary drama	3
The Three-Body Problem	Chongqing Press	Liu Cixin	Science fiction	0
Lolita	Shanghai Translation Press	Vladimir Nabokov	legendary drama	2
The Sun Also Rises	Charles Scribner Sons	Ernest Hemingway	novel	2
The Sun Also Rises	Jonathan Kapp	Ernest Hemingway	novel	0
To the Lighthouse	Hogarth Press	Virginia Woolf	Modernist	1
The Heart Is a Lonely Hunter	Houghton Mifflin	Carson McCullers	novel	2
The Heart Is a Lonely Hunter	Sylvia Beach	Carson McCullers	novel	2
AI 2041	Crown Publishing Group	Lee, Kai-Fu	Computing & Information Techn.	0
Village Teacher	Xin Hua Press	Liu Cixin	Science fiction	0
Brave New World	Chatto & Windus	Aldous Huxley	Science Fiction	1
new tset	unknown	unkonwn	unknown	1

The last row, 'new tset', is highlighted with a red border. Buttons at the bottom of the search window are 'Borrow', 'Reserve', and 'Desire'.

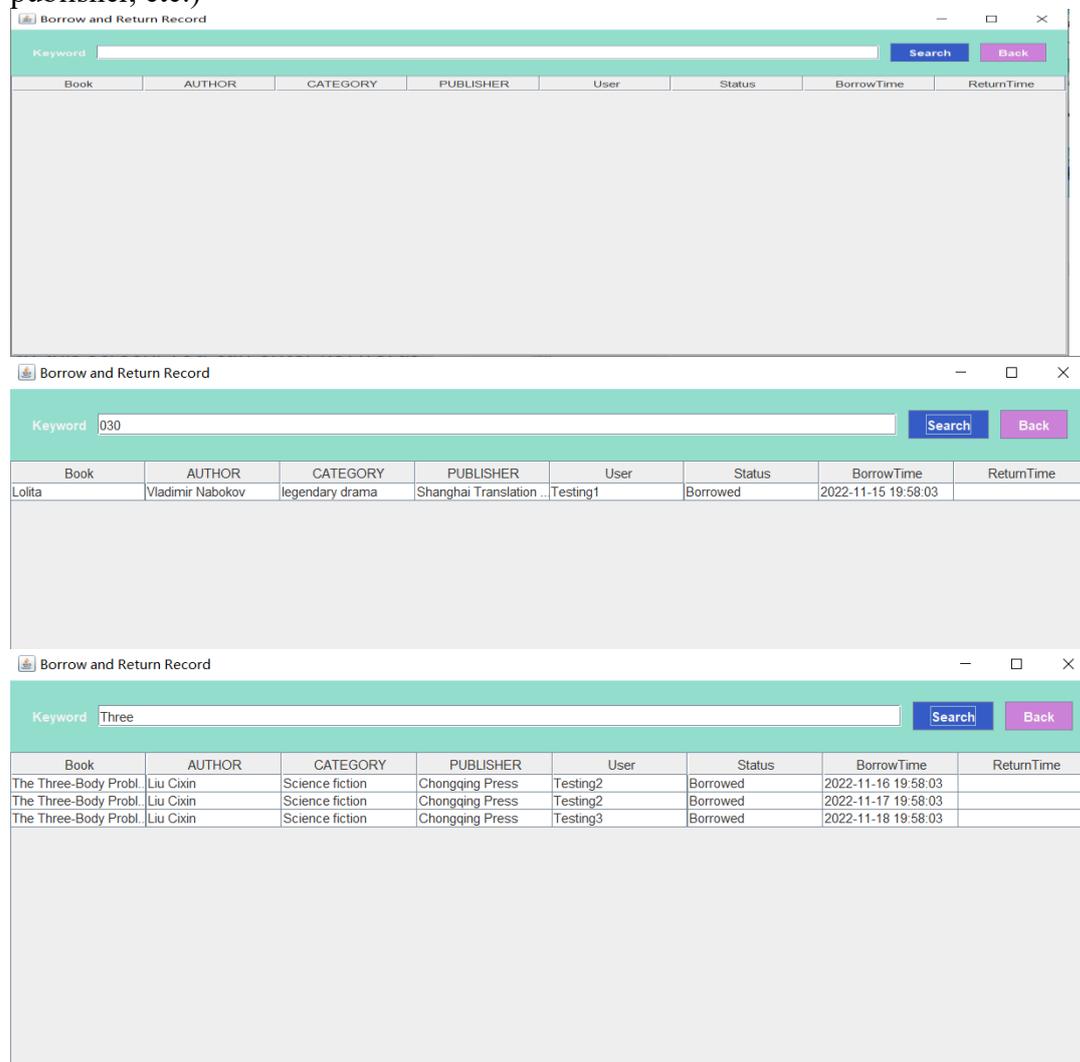
(Demonstrations on the failing cases:)

If you do not enter a book ID.



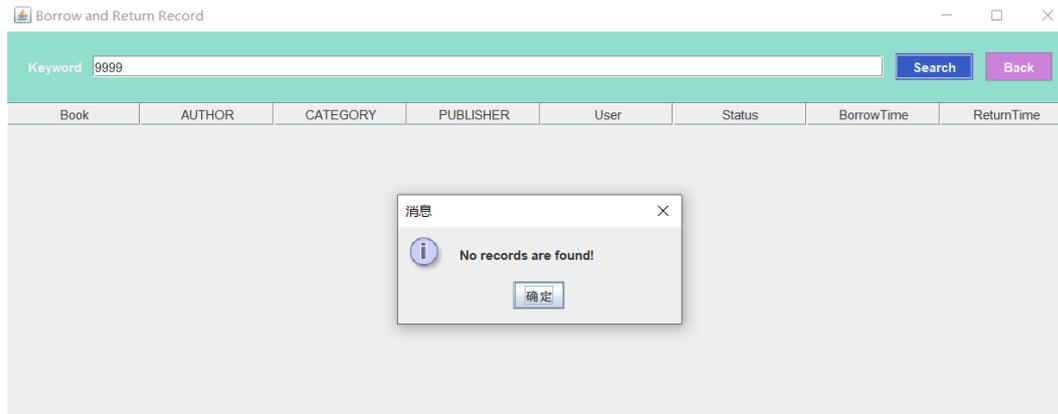
Book Record sub-interface

In this screen, you can enter keywords to find book-related lending information. (The keyword can be anything related to the book, whether it is book id, book name or publisher, etc.)



(Demonstrations on the failing cases:)

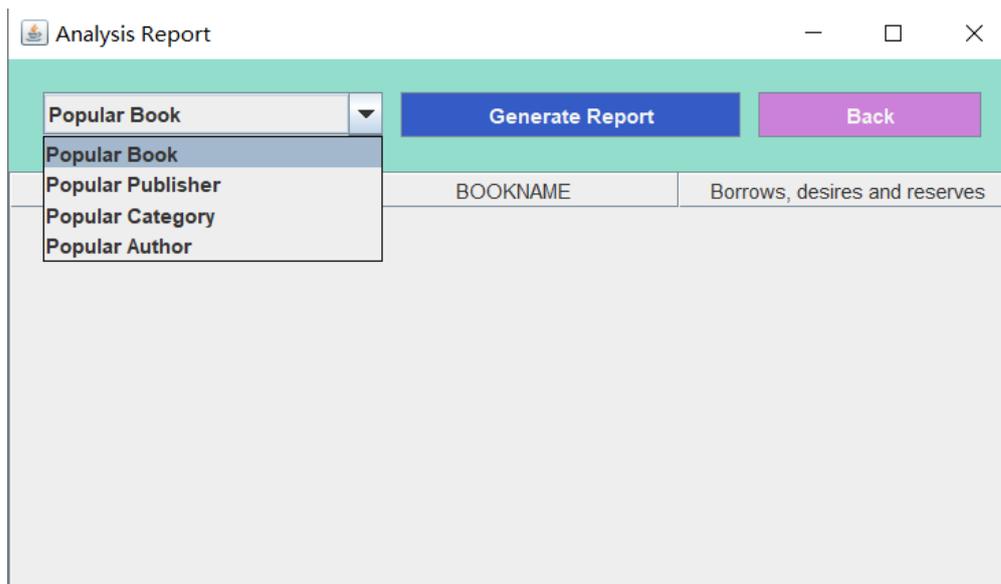
If we enter the wrong keyword (not present in the system), or if the book has never been checked out.



Analysis Report sub-interface

The system offers four different options, and administrators can choose one of them to view. Take "Popular Category" as an example, after clicking "Generate Report", the system will automatically sort and list the number of borrows, reservation and desire records from the highest to the lowest.

(For details, please check the other word document "Samples of Analysis Report")



Ranking	Hottest category	Borrows, desires and reserves
1	Computing & Information Technology	5
2	Science fiction	3
3	legendary drama	1
4	novel	1

5. Email notification mechanism

There are in total four cases where a user will receive a reminder email.

1. If a book a user desired becomes available, the user will receive an email immediately.

One Desired Book Available!



huhai@hantek.com
收件人 HAO, Jiadong [Student]



16:01

The book 'An American Tragedy' you desired is now available, you can borrow it through our system!

BookName: An American Tragedy

Author: Theodore Dreiser

Category: novel

Publisher: Horace Liveright

PAO YUE-KONG LIBRARY

2022-11-18 16:01:01

2. In our design, a user can keep a book for at most 30 days. Hence, an email will be sent to remind the user to return the book one week before the deadline. (Attention: to facilitate your testing, we purposely set the one-week-before reminder email to be sent **one minute after your borrowings**).

Reminder: Return the Book On Time!



huhai@hantek.com
收件人 HAO, Jiadong [Student]



16:07

Hi HAO Jiadong:

Kindly remind you that you should return the book '1984' you have borrowed in one week!

You can keep a book for at most one month. If you fail to return it on time, your account will be deactivate automatically by the library management system.

PAO YUE-KONG LIBRARY

122-11-18 16:6:0

3. If a user fails to return the book on time (in real application: 30 days, in our testing version: 2 minutes), his account will be deactivated, and he will receive a notification email.

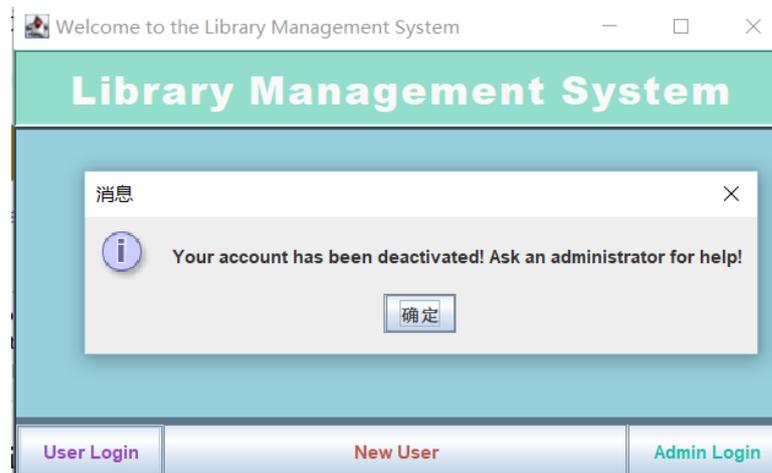
(Attention: to facilitate your testing, we purposely set the 30-day-deactivation-procedure to be **two minutes after your borrowings**).

Reminder: Account Deactivated!



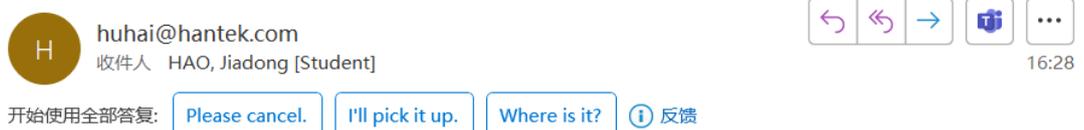
Hi HAO Jiadong:
Sorry to inform you that your account has been deactivated because you failed to return the book on time.
To reactivate your account, contact our administrator!
PAO YUE-KONG LIBRARY
122-11-18 16:7:51

Then if you log out your account, you will find that you are not allowed to re-login.



4. In our design, a user is supposed to pick up his reserved book in three days. Hence, one day before the pick-up deadline, he will receive a notification email. (Attention: to facilitate your testing, we purposely set the reservation reminder email to be sent **one minute after your reservation**).

Reminder: Pick Up the Reserved Book On Time!



Hi HAO Jiadong:
You have reserved the book 'The Great Gatsby' two days ago, the deadline for picking up the book is tomorrow!
Please pick it up on time! Or your reservation will be cancelled automatically!
PAO YUE-KONG LIBRARY
122-11-18 16:27:0