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 <u>https://jdk.java.net/19/</u> in an appropriate version according to your system.

Builds

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

System Propertie	5				>
Computer Name	Hardware	Advanced	System Protection	Remote	
You must be log	ged on as a	ın Administrat	or to make most of th	nese changes	
Performance Visual effects	, processor s	cheduling, m	emory usage and virt	ual memory	
User Profiles				Settings	
Desktop settir	ngs related to	o your sign-in		Settings	
Start-up and F	Recovery				
System start-u	ıp, system fa	ilure and deb	ugging information		
				Settings	
			Environme	ent Variables	
		ОК	Cancel	Apply	/

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.

Variable	Value
OneDrive	C:\Users\Snesko\Desktop\OneDrive
OneDriveConsumer	C:\Users\Snesko\Desktop\OneDrive
Path	C:\Program Files\MySQL\MySQL Shell 8.0\bin\;C:\Users\Sneško\Ap
TEMP	C:\Users\Snesko\AppData\Local\Temp
TMP	C:\Users\Snesko\AppData\Local\Temp
	New Edit Delete
stem variables	New Edit Delete
stem variables Variable	New Edit Delete
stem variables Variable C <u>EM64T_REDIST11</u>	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\
stem variables Variable C_EM64T_REDIST11 ComSpec	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\ C:\WINDOWS\system32\cmd.exe
stem variables Variable C_EM64T_REDIST11 ComSpec DriverData	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\ C:\WINDOWS\system32\Crind.exe C:\Windows\System32\Crivers\DriverData
stem variables Variable C_EM64T_REDIST11 ComSpec DriverData NUMBER_OF_PROCESSORS OS	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\ C:\WINDOWS\system32\cmd.exe C:\Windows\System32\cmd.exe C:\Windows\System32\Crivers\DriverData 8 %indows NT 10
stem variables Variable C_EM64T_REDIST11 ComSpec DriverData NUMBER_OF_PROCESSORS OS Death	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\ C:\WINDOWS\system32\Cmd.exe C:\WINDOWS\system32\Drivers\DriverData 8 Windows_NT C:\Drogram Files(Common Files)Drogram Files)Drogram Files(Drogram Files)Drogram Files)Drogram Files(Drogram Files)Drogram Files)Drogram Files(Drogram Files)Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(Drogram Files)Drogram Files(Drogram Files(
stem variables Variable C_EM64T_REDIST11 ComSpec DriverData NUMBER_OF_PROCESSORS OS Path	New Edit Delete Value C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\ C:\WINDOWS\system32\cmd.exe C:\WINDOWS\system32\Drivers\DriverData 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\iavapath:C:\Program

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

Edit System Variable				×
Variable <u>n</u> ame:	JAVA_HOME	1		
Variable <u>v</u> alue:	C:\Program Files\Java\jdk-17.0.1	2		
Browse Directory	Browse <u>F</u> ile	_	ОК	Cancel

V 	īn	^
	 COMP2411 増加计时器前	
~	openidk-19.0.1 windows-x64 bin	
	> 创建日期: 2022/11/17 14:34	
	> 📙 conf	
	> 📕 include	
	jmods	
	> 📙 legal	
	> lib	~

(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.

—————————————————————————————————————	_ I ×	ł
变量名(N):	JAVA_HOME	
变量值(V):	D:\Desktop\openjdk-19.0.1_windows-x64_bin\jdk-19.0.1	
浏览目录(D)	浏览文件(F) 确定 取消	

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

variable	Value			
OneDrive	C:\Users\Sneško\Desktop\OneDrive			
OneDriveConsumer	C:\Users\Sneško\Desktop\OneDrive			
Path	C:\Program Files\MySQL\MySQL Shell 8.0\bin\;C:\Users\Sneško\Ap			
TEMP	C:\Users\Sneško\AppData\Local\Temp			
TMP C:\Users\Sneško\AppData\Local\Temp				
	New Edit Delete	1		
stem variables	New Edit Delete			
stem variables Variable	New Edit Delete			
stem variables Variable NUMBER_OF_PROCESSORS	New Edit Delete			
stem variables Variable NUMBER_OF_PROCESSORS OS	New Edit Delete			
stem variables Variable NUMBER_OF_PROCESSORS OS Path	New Edit Delete Value 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\javapath;C:\Program			
stem variables Variable NUMBER_OF_PROCESSORS OS Path PATHEXT	New Edit Delete Value 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\javapath;C:\Program .COM; EXE; BAT;.CMD;.VBS;.VBE;JS; JSE;.WSF;.WSH;.MSC			
stem variables Variable NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTURE	New Edit Delete Value 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\javapath;C:\Program .COM; EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC AMD64			
stem variables Variable NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTURE PROCESSOR_IDENTIFIER PROCESSOR_IDENTIFIER	New Edit Delete Value 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\javapathyC:\Program .COM; EXE; BAT; CMD; VBS; VBE; JS; JSE; WSF; WSH; MSC AMD64 AMD64 Family 23 Model 8 Stepping 2, AuthenticAMD			
stem variables Variable NUMBER_OF_PROCESSORS OS Path PATHEXT PROCESSOR_ARCHITECTURE PROCESSOR_IDENTIFIER	New Edit Delete Value 8 Windows_NT C:\Program Files\Common Files\Oracle\Java\javapath;C:\Program .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC AMD64 AMD64 AMD64 Family 23 Model 8 Stepping 2. AuthenticAMD			

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".

Edit environment variable	×
C:\Program Files\Common Files\Oracle\Java\javapath	New
C:\Program Files (x86)\Common Files\Intel\Shared Files\cpp\bin\Inte	
C:\Windows\system32	Edit
C:\Windows	
C:\Windows\System32\Wbem	<u>B</u> rowse
C:\Windows\System32\WindowsPowerShell\v1.0\	
C:\Windows\System32\OpenSSH\	<u>D</u> elete
C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common	
C:\WINDOWS\system32	
C:\WINDOWS	Move <u>U</u> p
C:\WINDOWS\System32\Wbem	
C:\WINDOWS\System32\WindowsPowerShell\v1.0\	Move D <u>o</u> wn
C:\WINDOWS\System32\OpenSSH\	
C:\Program Files\NVIDIA Corporation\NVIDIA NvDLISR	
C:\Program Files (x86)\dotnet\	Edit <u>t</u> ext
C:\Program Files\PostgreSQL\12\bin	

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. (c) Microsoft Corporation。	0. 19043. 2251] 保留所有权利。	
C:\Users\lenovo>java -versi openjdk version "19.0.1" 20 OpenJDK Runtime Environment	on 122-10-18 5 (build 19.0.1+10-21)	
OpenJDK 64-Bit Server VM (b	uild 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 Account: 20076279d Password: vkzabmqa Password: ienatxzt

🛃 Oracle_Login	_	
Connect to You	r Oracle S	erver
Oracle Account:		
Password:		
Log	j in	

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.

🛃 Welcome to	o the Library Management System	_		\times
Libr	ary Management	Sys	sten	
	User ID:			
	Password:			
User Login	New User		Admin I	ogin

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

Welcome to	the Library Managen	nent System —		Welcome to the Lik		
Li	ibrary Ma	anagement Syste	em	Libra	Invalid account or password! Please try again!	em
					确定	
	User ID):			User ID: 1234567	
	渖	總 ×				
	_	The account cannot be empty!				
	Pass	确定			Password:	
User Login		New User	Admin Login	User Login	New User	Admin Login

Initial User account	Password↔
147	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.

🛃 New User		-		\times	🛃 New User		- 0	\times
User ID <u>571532</u>	474					571532474		
Nick Name 23						23		
Password						••		
Password Confirm						••		
Email	消息	×				571532 消息	×	
	i Your Email cannot be empty!		-			- 1	The two passwords you entered were inconsistent	-

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

🛃 New User		_	\times
User ID	571532474		
Nick Name	23		
Password			
Password Confirm			
Email	571532474@q 消息	×	
	(i)	Successfully create user: 571532474	
	Su	Successionly create user. or 1002474	
		确定	

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 dropdown 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.

🛃 Search Book				- 0
All				Search Back
Book Name	Publisher	Author	Category	Available Copies
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	4
984	Thacker and Warburg	George Orwell	anti-utopia	3
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1
Jlysses	Sylvia Beach	James Joyce	novel	1
olita	Olympia Press	Vladimir Nabokov	legendary drama	3
The Three-Body Problem	Chongging Press	Liu Cixin	Science fiction	0
olita	Shanghai Translation Press	Vladimir Nabokov	legendary drama	2
he Sun Also Rises	Charles Scribner Sons	Ernest Hemingway	novel	2
he Sun Also Rises	Jonathan Kapp	Ernest Hemingway	novel	0
o 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
10044	la purut a	1. 12.1.0	0 0 010 C T	·

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

🛃 Search Book				-		\times
Author 💌 Liu				Search	Back	¢
Book Name	Publisher	Author	Category	Availab	le Copies	
The Three-Body Problem	Chongqing Press	Liu Cixin	Science fiction	0		
Village Teacher	Xin Hua Press	Liu Cixin	Science fiction	0		
	Borrow	Reserve	Desire			

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)

🛃 Search Book				- 0	×
All				Search Bac	:k
Book Name	Publisher	Author	Category	Available Copies	
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1	-
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	4	
1984	Thacker and Warburg	George Orwell	anti-utopia	3	
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1	
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 Scrihner Sons	Emest Heminoway	novel	2	
The Sun Also Rises 消息			X	0	_
To the Lighthouse			mist	1	
The Heart Is a Lonely H	Successfully homeway a he	aki Diasaa satum it in ana m	a mélal	2	
The Heart Is a Lonely H	Successfully borrow a bo	ok: Please return it in one m	onth:	2	
AI 2041			uting & Information	n Tec 0	-
	确.	定	unsire		

🛃 Search Book					_		×
All					Search	n Back	
Book Name	Publisher	Author		Category	Availa	able Copies	
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love		1		-
The Great Gatsby	Charles Scribner Sons	Fitzgerald	trage	dy	4		
1984	Thacker and Warburg	George Orwell	anti-u	topia	2		
An American Tragedy	Horace Liveright	Theodore Dreiser	novel		1		
Ulysses	Sylvia Beach	James Joyce	novel		1		
Lolita	Olympia Press	Vladimir Nabokov	legen	dary drama	3		
The Three-Body Problem	Chongqing Press	Liu Cixin	Scien	ce fiction	0		=
Lolita	Shanghai Translation Press	Vladimir Nabokov	legen	dary drama	2		
The Sun Also Rises	Charles Scribner Sons	Ernest Hemingway	novel	1	2		
The Sun Also Rises 消息			\times		0		
To the Lighthouse				nist	1		
The Heart Is a Lonely H		- Id Discos harmonia is in the			2		
The Heart Is a Lonely H	Successfully reserve a bo	bok! Please borrow it in thre	e day:		2		
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	Dorrov	Reserve	De	isire			

🛃 Search Book					×
All				Search Back	
Book Name	Publisher	Author	Category	Available Copies	
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1	-
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	3	
1984	Thacker and Warburg	George Orwell	anti-utopia	2	
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1	
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	Ernect Hemingway	novel	2	
The Sun Also Rises	Jona 消息	×	novel	0	
To the Lighthouse	Hoga		Modernist	1	
The Heart Is a Lonely Hunter	Hous (denine a bandd	novel	2	
The Heart Is a Lonely Hunter	Sylvi Successfully	desire a book!	novel	2	
AI 2041	Crov		Computing & Information Tec	0	-
	· · · · · · · · · · · · · · · · · · ·	с Keserve	Desire		

(Demonstrations on the failing cases:) 1. If you try to borrow or reserve a book which **has no** available copies.

All				Search Back
Book Name	Publisher	Author	Category	Available Copies
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	3
1984	Thacker and Warburg	George Orwell	anti-utopia	2
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1
Jlysses	Sylvia Beach	James Joyce	novel	1
olita	Olympia Press	Vladimir Nabokov	legendary drama	3
The Three-Body Problem	Chongqing Press	Liu Cixin	Science fiction	0
olita	Shanghai Translation Press	Vladimir Nabokov	legendary drama	2
The Sun Also Rises	Charles Scribner Sone	Ernect Hemingway	novel	2
The Sun Also Rises	Jona 消息	×	novel	0
Fo the Lighthouse	Hoga		Modernist	1
The Heart Is a Lonely Hunter	Houg (1) This has here	and another the second second	novel	2
The Heart Is a Lonely Hunter	Sylvi U This book has	s no available copies!	novel	2
¥ 2041	Crov	_	Computing & Information Tec.	0
	确	定		
	Borrow	Keserve	Desire	

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

🛃 Search Book				- 🗆	\times
All				Search Back	
Book Name	Publisher	Author	Category	Available Copies	
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1	-
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	3	
1984	Thacker and Warburg	George Orwell	anti-utopia	2	
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1	
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	Emect Hemingway	novel	2	
The Sun Also Rises 消息			×	0	
To the Lighthouse			mist	1	
The Heart Is a Lonely H	This back has evailable a	onical Vau can directly have		2	
The Heart Is a Lonely H	This book has available c	opies: rou can directly borro	W Iti	2	
AI 2041			uting & Information Tec.	. 0	-
	确:	定			
	Dorrov	keserve	Jesire		

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

Bedreir Book				
All				Search Back
Book Name	Publisher	Author	Category	Available Copies
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love	1
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	3
1984	Thacker and Warburg	George Orwell	anti-utopia	2
An American Tragedy	Horace Liveright	Theodore Dreiser	novel	1
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	Emect Heminoway	novel	2
The Sun Also Rises	Jona 消息	×	novel	0
To the Lighthouse	Hoga		Modernist	1
The Heart Is a Lonely Hunter	Houg This book has	been desired	novel	2
The Heart Is a Lonely Hunter	Sylvi Sylvi	s been desired:	novel	2
AI 2041	Crov	-	Computing & Information Tec	0
	确; Borrow	定 Keserve	Desire	<u>.</u>

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.

🛃 Search Book					_		\times
All					Search	Back	
Book Name	Publisher	Author		Category	Available	Copies	
For Whom the Bell Tolls	The Brick Church Chapel	Ernest Miller Hemingway	Love		1		-
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy		2		
1984	Thacker and Warburg	George Orwell	anti-utopia		2		
An American Tragedy	Horace Liveright	Theodore Dreiser	novel		1		
Jlysses	Sylvia Beach	James Joyce	novel		1		
_olita	Olympia Press	Vladimir Nabokov	legendary of	Irama	3		
The Three-Body Problem	Chongqing Press	Liu Cixin	Science fic	tion	0		-
_olita	Shanghai Translation Press	Vladimir Nabokov	legendary of	Irama	2		
The Sun Also Rises	Charles Scribner Sons	Ernect Heminoway	novel		2		
The Sun Also Ris 消息			×		0		
To the Lighthouse					1		
The Heart Is a Lor	Search Book All Book Name Publisher Author Whom the Bell Tolls The Brick Church Chapel Ernest Miller Hemingway Love Great Gatsby Charles Scribner Sons Fitzgeräld Tracker and Warburg George Orwell annendam Tragedy Horace Liveright Thracker and Warburg Sees Synd Beach James Joyce In Book Name Olympia Press Liu Ckin Stand Bo Rise Charles Scribner Sone Ernest Haminowav Poster Stand Bo Rise Charles Scribner Sone Ernest Haminowav Poster You cannot keep or reserve more than three books at the same ti Oth Oth Oth Oth		ama timal		2		
The Heart Is a Lor	rou cannot keep of reserve in	ore than three books at the s	ame ume:		2		-
N 2041				& Information Tec	0		
	确 Dorrow	定 Keserve	Desire				

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.

My Borrowing					- 🗆 X
		Borrowings	ervings Desiring	gs	
Book Name	Publisher	Author	Category	Borrow time	Expected Return time
1984	Thacker and Warburg	George Orwell	anti-utopia	2022-11-18 15:24:22	2022-12-18 15:24:22
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tragedy	2022-11-18 15:32:21	2022-12-18 15:32:21
		Return Book	Back		

🛃 My Borrowing					- 🗆 ×
		Borrowings	ervings Desirin	gs	
Book Name	Publisher	Author	Category	Borrow time	Expected Return time
1984	Thacker and Warburg	George Orwell	anti-utopia	2022-11-18 15:46:40	2022-12-18 15:46:40
The Great Gatsby	Charles Scribner Sons	Fitzgerald	tranedy	2022-11-18 15:46:44	2022-12-18 15:46:44
		消息	×		
		return a book!			
		Return Dook	Daux		

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

🛃 My Reserving					-		×
		Borrowings	arvings Desiring	js			
Book Name	Publisher	Author	Category	Reserve time	Expecte	d Pick-up	o time
Lolita	Olympia Press	Vladimir Nabokov	legendary drama	2022-11-18 15:43:17	2022-11-21	15:43:17	7
	F	PickUp Cancel F	Reservation Ba	ck			
🛃 My Reserving					_		×
	E	Borrowings	rvings Desiring	s			
Book Name	Publisher	Author	Category	Reserve time	Expected	Pick-up	time
		消息	×				
		i Successfully be	orrow your reserved book t in one month!				
	Р	ic 🕴	角定				

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

wiy besining				– 🗆 ×
	Borrowing	s Reservings	Desirings	
Book Name	Publisher	Author	Category	Available
The Three-Body Problem	Chongqing Press	Liu Cixin	Science fiction	NO
AI 2041	Crown Publishing Group	Lee, Kai-Fu	Computing & Information Technol	NO
		Cancel Desiring Bac	:k	
My Desiring	Borrowing	gs Reservings	Desirings	- 0 X
My Desiring	Borrowing	Reservings	Desirings	- C X
My Desiring Book Name The Three-Body Problem	Borrowing Publisher Chonqaina Press	Reservings	Desirings Category Science fiction	- C ×
Book Name The Three-Body Problem Al 2041	Publisher Chongqing Press Crown Publishing Group	Author	Category Science finformation Technology	Available

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.

AdminOperation		_		×
Welcome, admin	Logout			
User Management Admin Log System Book Management	Book Record	Analysis Re	port	

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).

		消息			×
🛓 UserManageme	ent	1	The useraccou	nt is now d	eactivated!
User ID:	Testing1		确;	Ł	
Activate	Deactivate	В	ack		
le Welcome to the Lik	orary Managemen	t System			\times
Library	y Manag	jem	ent Sy	stem	
U	ser ID:	esting1			
消息				×	
i Your ac	count has been de	activated	Ask an administra	ator for help!	
		确定			
User Login	Nev	v User		Admin Lo	ogin
		[
		消息			×
🛓 UserManagemer	nt -		The user acco	ount is now	activated!
User ID:	Testing1		确知	È	
Activate	Deactivate	В	ack		

(Demonstrations on the failing cases:)

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

消息		×
і т	ne user id can not l	be empty!
	确定	
luserManagem	ient	- 🗆 X
User ID:		
Activate	Deactivate	Back

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

消息		×
	o records are found!	
	确定	
🛓 UserManagem	ent —	
User ID:	888	
Activate	Deactivate	Back

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.



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.

🛓 BookManage	ment	_		×
Book ID	030			
Book Name				
Publisher				
Author				
Category				
outegory				
				_
Get Book	Delete Add Updat	e	Back	
🛓 BookManagem	ent –		×	
慮 BookManagem	ent —		×	
BookManagem	ent —		×	
l BookManagem Book ID Book Name	ent – 030 Lolita		×	
l BookManagem Book ID Book Name Publisher	ent – 030 Lolita Shanghai Translation Press		×	
Book ID Book ID Book Name Publisher Author	ent — 030 Lolita Shanghai Translation Press Vladimir Nabokov		×	
Book ID Book ID Book Name Publisher Author Category	ent – 030 Lolita Shanghai Translation Press Vladimir Nabokov legendary drama		×	
BookManagem Book ID Book Name Publisher Author Category	ent — 030 Lolita Shanghai Translation Press Vladimir Nabokov legendary drama		×	
Book ID Book ID Book Name Publisher Author Category	ent – 030 Lolita Shanghai Translation Press Vladimir Nabokov legendary drama Delete Add Update	Back	×	

(Demonstrations on the failing cases:) If you have entered a non-existent book ID.

🛓 BookManagen	nent	—		\times
Book ID	8888]
Book Name	(2000)	×		
Publisher				
Author	No Book found!			
Category	确定			
Get Book	Delete Add Upo	late	Back	

2. Delete / Add / Update Administrators can input book information to delete/add/update book record information.

🛓 BookManageme	ent	_			
Book ID Book Name Publisher Author Category	050 new tset unknown unkonwn unknown				
Get Book	Delete	Update	Back		
🛓 BookManagem	ent	_	- 🗆 ×		
Book ID Book Name Publisher Author Category	050 消息 unk unk unknown	nas been add succes 确定	× sfully!		
Get Book	Delete	ld Update	Back		1
Search Book				- D	×
Book Name	Publisher	Author	Category	Available Copies	
Ulysses Lolita The Three-Body Problem Lolita The Sun Also Rises	Sylvia Beach Olympia Press Chongqing Press Shanghai Translation Press Charles Scribner Sons	James Joyce Vladimir Nabokov Liu Cixin Vladimir Nabokov Ernest Hemingway	novel legendary drama Science fiction legendary drama novel	1 3 0 2 2	
Ihe Sun Also Rises To the Lighthouse The Heart Is a Lonely Hunter The Heart Is a Lonely Hunter Al 2041 Village Teacher	Jonathan Kapp Hogarth Press Houghton Mifflin Sylvia Beach Crown Publishing Group Xin Hua Press	Ernest Hemingway Virginia Woolf Carson McCullers Carson McCullers Lee, Kai-Fu Liu Cixin	novel Modernist novel Computing & Information Tech Science fiction	0 1 2 2 2 0 0	
Brave New World new tset	Chatto & Windus unknown	Aldous Huxley unkonwn	Science Fiction unknown	1	-
	Born	ow Reserve	Desire		

(Demonstrations on the failing cases:) If you do not enter a book ID.

🛓 BookManagem	ent — 🗆	×
Book ID Book Name Publisher	消息 × ① ① ① The book id can not be empty!	
Author Category	确定	
Get Book	Delete Add Update Back	

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.)

🚵 Borrow and Retu	ırn Record					_		ı ×	
Keyword						search		Dack	
Book	AUTHOR	CATEGORY	PUBLISHER	User	Status	BorrowTime	Retu	rnTime	
									1
	- De se d								
Borrow and Retu	Irn Kecord						-		ς
Keyword 030						Sea	rch		
Deals	AUTUOD	CATEGORY	DUDUOUED	l la sa	Otatua	Demon Time		a the second time of	
BOOK	AUTHOR		PUBLISHER Shanghai Translation	User Tecting1	Status	BorrowTime	R	.eturn 1 ime	
Luina		legendary uranna	Shariyinar Harisialion	resungr	Bollowed	2022-11-13 18:36:03			_
🛓 Borrow and Retu	urn Record						-		×
There								Death	
Keyword Inree						Sea	ircn	Васк	
Book	AUTHOR	CATEGORY	PUBLISHER	User	Status	BorrowTime	F	ReturnTime	
The Three-Body Probl.	Liu Cixin	Science fiction	Chongqing Press	Testing2	Borrowed	2022-11-16 19:58:03			
The Three-Body Probl.	Liu Cixin	Science fiction	Chongqing Press	Testing2	Borrowed	2022-11-17 19:58:03			
The Three-Body Probl.		Science fiction	Chongqing Press	Testing3	Borrowed	2022-11-18 19:58:03	_		_

(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.

🛓 Borrow and Retu	urn Record						- 🗆 ×
Keyword 99999						Sea	rch Back
Book	AUTHOR	CATEGORY	PUBLISHER	User	Status	BorrowTime	ReturnTime
			消息 i No records a	× re found! 定]		

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")

(de)	Analysis Report		- 🗆 X
	Popular Book	Generate Report	Back
	Popular Book		
	Popular Publisher	BOOKNAME	Borrows, desires and reserves
-	Popular Category		·
	Popular Author		

🛓 Analysis Report			_		\times
Popular Category	Generate Report			Back	
Ranking	Hottest category	E	Borrows, desi	res and res	serves
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]



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!





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!

H huhai@ 收件人 1)hantek.com HAO, Jiadong [Student]				$(\stackrel{\leftarrow}{\rightarrow} (\stackrel{\leftarrow}{\rightarrow}) \rightarrow) $	••• 16:08
开始使用全部答复:	What is this about?	What is this?	Please cancel.	()反馈		
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 relogin.

🛃 We	lcome to	the Library Management System —		\times	
	_ibr	ary Management Sys	sten	1	
	消息			×	
:	Your account has been deactivated! Ask an administrator for help! 确定				
				1	
User Login New User Adr				_ogin	

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!

H huhai@ha 收件人 HA	antek.com O, Jiadong [Student]	$() () \rightarrow)$	16:28
开始使用全部答复: Р	lease cancel. I'll pick it up. Where is it? () 反馈		

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