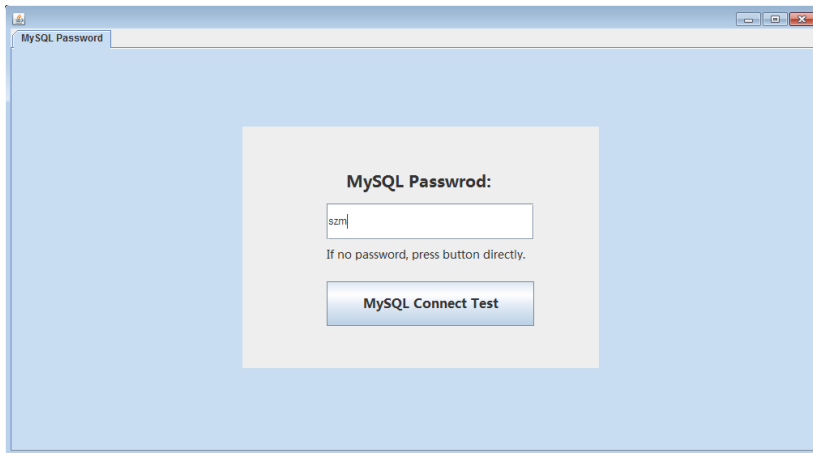


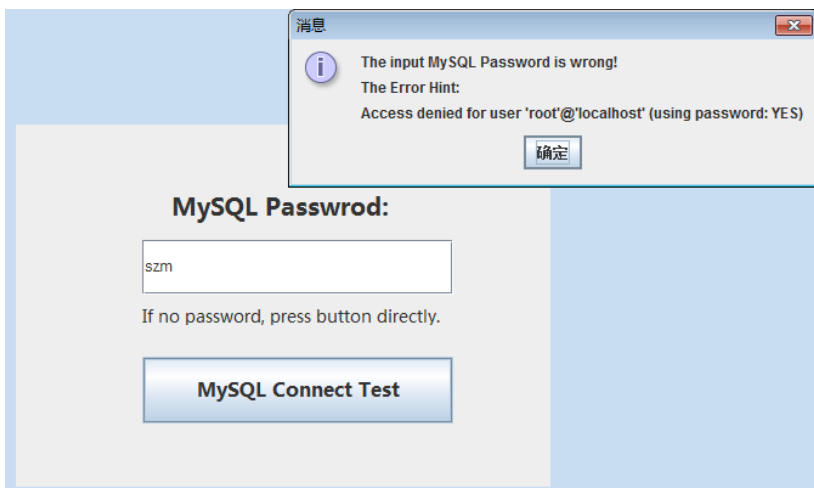
GUI Guide of Library Management System

1. Connect MySQL

(1) The first time you use this software, you need to input your MySQL's Password to connect.



(2) Input is wrong, then pop up warning



(3) If you input your password correctly, it will pop up a successfully hint message box. If there is no password in your MySQL, you directly press the button. Then it will jump to the main page of the software.



2. Book Search

(1) It supports substring matching, e.g. if you input a word “Novel” in Book Title field, it will search all books whose title contains “Novel”, and the key work is not case-sensitive.

The screenshot shows a web application with a top navigation bar containing tabs: "Book Search", "Checking OUT / IN Books", "Borrower Management", and "Fines". The "Book Search" tab is active. Below the tabs, there are input fields for "Book Title", "ISBN", and "Author". The "Book Title" field contains the text "novel". To the right of these fields is a blue button labeled "Book Search". Below the search fields, it says "Search Result Number: 4879". A table displays the search results with the following columns: "Isbn", "Title", "Author_name", "Branch_id", "Branch_name", "no_of_copi...", and "availability". The table lists 24 results, including books by Richard Bruce Wright, Marilyn Bowering, Carol Shields, Dee Brown, Sophy Burnham, Stephanie Laurens, and Milan Kundera.

Isbn	Title	Author_name	Branch_id	Branch_name	no_of_copi...	availability
0002005018	Clara Callan: A Novel	Richard Bruce Wright	1	Oak Lawn	1	1
0002005018	Clara Callan: A Novel	Richard Bruce Wright	2	Lakewood	1	1
0002005018	Clara Callan: A Novel	Richard Bruce Wright	5	Audelia Road	1	1
0002243776	Visible Worlds: A Novel	Marilyn Bowering	1	Oak Lawn	1	1
0002243776	Visible Worlds: A Novel	Marilyn Bowering	2	Lakewood	1	1
0002243776	Visible Worlds: A Novel	Marilyn Bowering	3	Grauwylar Park	1	1
0007154615	Unless: A Novel	Carol Shields	3	Grauwylar Park	1	1
0007154615	Unless: A Novel	Carol Shields	5	Audelia Road	1	1
0030442818	Creek Mary's Blood: A Novel	Dee Brown	3	Grauwylar Park	1	1
0030442818	Creek Mary's Blood: A Novel	Dee Brown	4	Highland Hills	1	1
0030442818	Creek Mary's Blood: A Novel	Dee Brown	5	Audelia Road	1	1
0060000791	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	1	Oak Lawn	1	1
0060000791	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	5	Audelia Road	1	1
0060000805	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	1	Oak Lawn	1	1
0060000805	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	2	Lakewood	1	1
0060000805	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	3	Grauwylar Park	1	1
0060000805	The Treasure Of Montsegur: A Novel Of The Cathars	Sophy Burnham	4	Highland Hills	1	1
0060002050	On A Wicked Dawn (Cynster Novels)	Stephanie Laurens	1	Oak Lawn	1	1
0060002050	On A Wicked Dawn (Cynster Novels)	Stephanie Laurens	4	Highland Hills	1	1
0060002050	On A Wicked Dawn (Cynster Novels)	Stephanie Laurens	5	Audelia Road	1	1
0060002093	Ignorance: A Novel	Milan Kundera	1	Oak Lawn	1	1
0060002093	Ignorance: A Novel	Milan Kundera	3	Grauwylar Park	1	1
0060002093	Ignorance: A Novel	Milan Kundera	4	Highland Hills	1	1

(2) If you input a ISBN, it will return this book's information.

The screenshot shows the same web application as the first screenshot, but with the "ISBN" field filled with "0002005018". The "Book Search" button is still present. Below the search fields, it says "Search Result Number: 3". A table displays the search results with the following columns: "Isbn", "Title", "Author_name", "Branch_id", "Branch_name", "no_of_copies", and "availability". The table lists 3 results, all for the book "Clara Callan: A Novel" by Richard Bruce Wright, located at different branches: Oak Lawn, Lakewood, and Audelia Road.

Isbn	Title	Author_name	Branch_id	Branch_name	no_of_copies	availability
0002005018	Clara Callan: A Novel	Richard Bruce Wright	1	Oak Lawn	1	1
0002005018	Clara Callan: A Novel	Richard Bruce Wright	2	Lakewood	1	1
0002005018	Clara Callan: A Novel	Richard Bruce Wright	5	Audelia Road	1	1

(3) If you input Author's part or whole name, it contains the books' information which contain the input name.

The screenshot shows a web application window titled 'Book Search'. It has a navigation bar with tabs: 'Book Search', 'Checking OUT / IN Books', 'Borrower Management', and 'Fines'. The 'Book Search' tab is active. Below the navigation bar, there are input fields for 'Book Title', 'ISBN', and 'Author'. The 'Author' field contains the text 'Richard Wright'. To the right of these fields is a blue button labeled 'Book Search'. Below the search fields, it says 'Search Result Number: 10'. A table displays the search results with the following columns: 'Isbn', 'Title', 'Author_name', 'Branch_id', 'Branch_name', 'no_of_co...', and 'availability'.

Isbn	Title	Author_name	Branch_id	Branch_name	no_of_co...	availability
0060812494	Native Son: And How Bigger Was Born	Richard Wright	1	Oak Lawn	1	1
0060812494	Native Son: And How Bigger Was Born	Richard Wright	2	Lakewood	1	1
0060812494	Native Son: And How Bigger Was Born	Richard Wright	3	Grauwylar Park	1	1
0060812494	Native Son: And How Bigger Was Born	Richard Wright	4	Highland Hills	1	1
0060812494	Native Son: And How Bigger Was Born	Richard Wright	5	Audelia Road	1	1
0060812508	Black Boy (American Hunger : A Record Of Childhood And Youth)	Richard Wright	1	Oak Lawn	1	1
0060812508	Black Boy (American Hunger : A Record Of Childhood And Youth)	Richard Wright	2	Lakewood	1	1
0060812508	Black Boy (American Hunger : A Record Of Childhood And Youth)	Richard Wright	3	Grauwylar Park	1	1
0060812508	Black Boy (American Hunger : A Record Of Childhood And Youth)	Richard Wright	4	Highland Hills	1	1
0060812508	Black Boy (American Hunger : A Record Of Childhood And Youth)	Richard Wright	5	Audelia Road	1	1

3. Checking Out/In Books

The whole GUI of this page like following:

The screenshot shows a web application window titled 'Checking OUT / IN Books'. It has a navigation bar with tabs: 'Book Search', 'Checking OUT / IN Books', 'Borrower Management', and 'Fines'. The 'Checking OUT / IN Books' tab is active. The window is divided into two main sections. On the left, there is a box containing input fields for 'ISBN', 'Branch ID', and 'Card No.', with a blue button labeled 'Checking Out' below them. On the right, there is a larger box containing input fields for 'Book ISBN', 'Card No.', and 'Borrower', with a blue button labeled 'Search' and another blue button labeled 'Checking In' to the right of the 'Card No.' field. Below the input fields on the right is a large empty rectangular area.

3.1 Checking Out Books

(1) You input information, if checking out correctly, it will pop up a successful message.

The screenshot shows a 'Checking Out' form with the following fields: ISBN (0312979096), Branch ID (2), and Card No. (ID000158). A blue 'Checking Out' button is at the bottom. A modal message box is displayed in the center, stating 'Checking Out this book successfully!!!' with a '确定' (Confirm) button. In the background, a table of book availability is visible.

Book ID	ISBN	Branch ID	Availability
6	0060812508	1	1
7	1562927736	5	1
8	0935710019	1	1
9	0525936327	4	1
10	0141006633	5	1
11	0792218345	5	1

(2) If there are no more book copies available at the input Library Branch, then the checkout should fail and return a useful error message.

The screenshot shows the 'Checking Out' form with the same fields as before. A modal message box is displayed, stating 'There are no more book copies available at this library_branch!' with a '确定' (Confirm) button. The background table shows the availability of books across different branches.

Book ID	ISBN	Branch ID	Availability	Branch Name
6	0060812508	1	ID000360	2015-06
7	1562927736	5	ID000619	2015-06
8	0935710019	1	ID000602	2015-06
9	0525936327	4	ID000646	2015-06
10	0141006633	5	ID000831	2015-06
11	0792218345	5	ID000821	2015-06

(3) Each BORROWER is permitted a maximum of 3 BOOK_LOANS, if you exceed this limit, it will pop up a hint message.

The screenshot shows the 'Checking Out' form with ISBN (0525936327), Branch ID (4), and Card No. (ID000158). A modal message box is displayed, stating 'Each BORROWER is permitted a maximum of 3 BOOK_LOANS!' with a '确定' (Confirm) button. The background table shows the availability of books across different branches.

Book ID	ISBN	Branch ID	Availability	Branch Name
6	0060812508	1	ID000360	2015-06
7	1562927736	5	ID000619	2015-06
8	0935710019	1	ID000602	2015-06
9	0525936327	4	ID000646	2015-06
10	0141006633	5	ID000831	2015-06
11	0792218345	5	ID000821	2015-06

(4) If a book has been check out, when you search this book on book search page, you will find number of this books' availability has been reduced "1", in following case, the number of books' availability has been zero.

The screenshot shows the 'Book Search' form with Book Title, ISBN (0878339175), and Author fields. A 'Book Search' button is on the right. Below the form, the search results are displayed in a table. The 'Search Result Number' is 4.

Isbn	Title	Author_name	Branch_id	Branch_name	no_of_copies	availability
0878339175	A.D.D. On The Job: Making Your A.D.D. Work For You	Lynn Weiss	1	Oak Lawn	1	1
0878339175	A.D.D. On The Job: Making Your A.D.D. Work For You	Lynn Weiss	2	Lakewood	1	1
0878339175	A.D.D. On The Job: Making Your A.D.D. Work For You	Lynn Weiss	3	Grauwylar Park	1	0
0878339175	A.D.D. On The Job: Making Your A.D.D. Work For You	Lynn Weiss	4	Highland Hills	1	1

3.2 Checking In Books

Before checking in books, you can locate BOOK_LOANS tuples by searching on any of book_id, Card_no, and/or any part of BORROWER name. It supports substring matching.

(1) Search by Card_no, it supports substring matching.

Book ISBN

Card No.

Borrower

Search

Checking In

Loan_id	Isbn	Branch_id	Card_no	Date_out	Due_date	Date_in
3	0312979096	2	ID000158	2015-09-24	2015-10-07	2015-10-05
396	2253040940	3	ID000158	2016-01-07	2016-01-20	2016-01-13
676	0312979096	2	ID000158	2016-03-24	2016-04-07	
677	0878339175	3	ID000158	2016-03-25	2016-04-08	
678	0440225299	1	ID000158	2016-03-25	2016-04-08	

(2) Search by any part of BORROWER name

Book ISBN

Card No.

Borrower

Search

Checking In

Loan_id	Isbn	Branch_id	Card_no	Date_out	Due_date	Date_in
4	0878339175	3	ID000558	2015-09-24	2015-10-07	2015-10-03
214	0380975068	4	ID000786	2015-11-19	2015-12-02	2015-11-26
385	0307968219	3	ID000786	2016-01-04	2016-01-17	2016-01-17

(3) Search by Book's ISBN

Book ISBN

Card No.

Borrower

Search

Checking In

Loan_id	Isbn	Branch_id	Card_no	Date_out	Due_date	Date_in
4	0878339175	3	ID000558	2015-09-24	2015-10-07	2015-10-03
677	0878339175	3	ID000158	2016-03-25	2016-04-08	

(4) Select the book, then press the checking in button, if successful, it will pop up a hint.

Book ISBN

Card No.

Borrower

Search **Checking In**

Loan_id	Isbn	Branch_id	Card_no	Date_out	Due_date	Date_in
3	0312979096	2	ID000158	2015-09-24	2015-10-07	2015-10-05
396	2253040940	3	ID000158	2016-01-07	2016-01-20	2016-01-13
676	0312979096	2	ID000158	2016-03-24	2016-04-07	
677	0878339175	3	ID000158	2016-03-25	2016-04-08	
678	0440225299	1	ID000158	2016-03-25	2016-04-08	

消息

Checking In this book successfully!!!

确定

4. Borrower Management

(1) Input the new borrower's information, if successful, it will pop up a hint and borrower's new Card No..

消息

Create Your Account Sucessully! Please note: Your Card No. is ID001006

确定

SSN

Fname

Lname

Street

City

State

Phone (Optional)

Create Account

(2) If a new borrower is attempted with the same SSN, it will pop a useful error message.

消息

SSN is repeated! Borrowers are allowed to possess exactly one library card!

确定

SSN 698886666

Fname XXXXX

Lname XXX

Street Street 112, XXX Road

City Plano

State TX

Phone 4698886666 (Optional)

Create Account

5. Fines

(1) If you press the Update/Refresh FINES button, it will display the result.

Card No. :

☐ Filter Out Paid Fines

Update/Refresh FINES Enter Paid Update FINES Record

Card_no	SUM_Fine_Amount	paid
ID000008	0.25	1
ID000041	0.25	0
ID000044	0.25	1
ID000053	0.25	1
ID000055	0.25	1
ID000103	0.25	1
ID000107	0.25	0
ID000116	0.25	1
ID000120	0.25	1
ID000131	0.25	0
ID000134	0.25	0
ID000164	0.25	1
ID000185	0.25	0
ID000196	0.25	0
ID000197	0.25	0
ID000220	0.25	0
ID000224	0.25	0
ID000260	0.25	0
ID000260	0.25	0

Search Result Number: 77

- (2) If you select the checking box, it will filter out previously paid fines, in the following case, the search result number becomes from 77 to 64.

Card No. :

☒ **Filter Out Paid Fines**

Update/Refresh FINES **Enter Paid** **Update FINES Record**

Card_no	SUM_Fine_Amount	paid
ID000041	0.25	0
ID000107	0.25	0
ID000131	0.25	0
ID000134	0.25	0
ID000185	0.25	0
ID000196	0.25	0
ID000197	0.25	0
ID000220	0.25	0
ID000224	0.25	0
ID000260	0.25	0
ID000319	0.25	0
ID000338	0.25	0
ID000343	0.25	0
ID000344	0.25	0
ID000345	0.25	0
ID000360	0.25	0
ID000364	0.25	0
ID000368	0.25	0
ID000375	0.25	0

Search Result Number: 64

- (3) You can also search by card number.

Card No. :

ID000197

☒ **Filter Out Paid Fines**

Update/Refresh FINES **Enter Paid** **Update FINES Record**

Card_no	SUM_Fine_Amount	paid
ID000197	0.25	0

Search Result Number: 1

- (4) Assuming the borrower has paid the fines, you need to select the book in the search result, then press the “Enter Paid” button.

Card No. :

☐ Filter Out Paid Fines

Update/Refresh FINES **Enter Paid** **Update FINES Record**

Card_no	SUM_Fine_Amount	paid
ID000343	0.25	0
ID000344	0.25	0
ID000345		0
ID000360		0
ID000364		0
ID000368		0
ID000375		0
ID000378		0
ID000379		0
ID000404	0.25	0
ID000406	0.25	0
ID000407	0.25	0
ID000415	0.25	0
ID000417	0.25	0
ID000422	0.25	0
ID000428	0.25	0
ID000437	0.25	0
ID000450	0.25	0

消息

Set Paid=1 Successfully!

确定

Search Result Number: 77

- (5) If the book has been paid, namely, “paid =1”, it will pop up a warning message.

Card No. :

☐ Filter Out Paid Fines

Update/Refresh FINES **Enter Paid** **Update FINES Record**

Card_no	SUM_Fine_Amount	paid
ID000120	0.25	1
ID000131	0.25	0
ID000134	0.25	0
ID000164	0.25	1
ID000185	0.25	0
ID000196		0
ID000197		0
ID000220		0
ID000224		0
ID000260		0
ID000319		0
ID000338		0
ID000343	0.25	1
ID000344	0.25	0

消息

This book has been paid!

确定

- (6) You can also press the “Update FINES Record” button to update a FINES record where paid == TRUE. In the following case, you change the SUM_Fine_Amount number from 0.25 to 6.25, if successful, it will pop up a hint. Then you press the “Update/Refresh FINES” button, it will show that the number has been changed.

Card No. :

☐ **Filter Out Paid Fines**


Update/Refresh FINES

Enter Paid

Update FINES Record

Card_no	SUM_Fine_Amount	paid
ID000120	0.25	1
ID000131	0.25	0
ID000134	0.25	0
ID000164	6.25	1
ID000185	0.25	0
ID000196		
ID000197		
ID000220		
ID000224		
ID000260		
ID000319		
ID000338		
ID000343	0.25	1

消息

 **Update FINES Record Successfully!**

确定