

Quick Start:

Description:

database host application that interfaces with a backend SQL database implementing a Library Management System

Programming Language(s) and Frameworks:

a web programming framework Django (Python) and I use the MySQL Database as my database;

Functional Requirements:

- 1) Home Page

Library Management System Version 1.0

Search book and check out
Check in
create new borrowers
Update Fine
Show Fine and make payment

There are 5 functions to use in this system.

- 2) Book Search and Availability

Enter the ISBN, title, and or Author(s)

We'll never share your message with anyone else.

Then you hit submit to search for the books you want. For example, let us search for Author “wright” .

Title	ISBN	Author	Availability	Checkout
Clara Callan: A Novel	0002005018	Richard Bruce Wright	False	CheckOut
Always Daddy's Girl: Understanding Your Father's Impact On Who You Are	0830714014	H. Norman Wright	False	CheckOut
The Real Mother Goose	0590225170	Blanche Fisher Wright , Blanche Fish Wright	False	CheckOut
Poison Apples (Worldwide Library Mysteries)	0373263953	Nancy Wright	False	CheckOut
Spy Catcher: The Candid Autobiography Of A Senior Intelligence Officer	0670820555	Peter Wright	True	CheckOut
Amsterdam: Amsterdam And The Hague (Art In Focus)	0821222341	Christopher Wright	False	CheckOut
Going Native	0385313861	Stephen Wright	True	CheckOut
The Glasswrights' Journeyman	0451458842	Mindy L. Klasky	False	CheckOut
THE TWENTIETH CENTURY COLLECTION: Eight Extraordinary One-Act Plays By Playwright	0595259677	Cheryl Ann Costa	False	CheckOut
Wildblossom	0345381718	Cynthia Wright	False	CheckOut
The Dollhouse Murders	0590434616	Betty Ren Wright	True	CheckOut
Far From The Madding Crowd (Signet Classics)	0451523601	Thomas Hardy , James Wright	True	CheckOut
Find The Piglet (Find It Board Books)	0860207161	Stephen Cartwright	True	CheckOut

Here is the information we want, the title,ISBN, Author and the Availability(True means it is in Library, False means not). As the Checkout Link is for Librarian to check out the book at the same row.

3) Book Loans

a)Let us check out the book at the ,here comes to the page for us to check out.

You are checking out for Book **Find The Piglet (Find It Board Books)**

Please enter your Card ID.

34

Submit

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1、 Let say we enter the card_id 34, which didn't violate any rule (has card_id 34, and card_id haven't borrowed any book yet.)

Edward,Ford has borrowed **Find The Piglet (Find It Board Books)**

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2、 If we enter some card_id not exist now, we can't check out the book. Let us use card_id 2008. We get a prompt saying that you are not yet a borrower.

Library Management System Version 1.0

- You can't borrower the book because you are not yet a borrower

Search book and check out
Check in
create new borrowers
Update Fine
Show Fine and make payment

3. If we enter some card_id which have already borrowed 3 book, we can't check out the book. Let us use card_id 3. We get a prompt saying that you have already borrowed 3 books.

Library Management System Version 1.0

- You can't borrower the book because you already borrow 3 books

Search book and check out
Check in
create new borrowers
Update Fine
Show Fine and make payment

b) Checkin function need to search for any of BOOKS.book_id, BORROWER.card_no, and/or any substring of BORROWER name, then it show all the Loan that haven't been returned yet according to the word you search.

BOOKS.book_id, BORROWER.card_no, and/or any substring of BORROWER name

BOOKS.book_id, BORROWER.card_no, and/or any substring of BORROWER name

We'll never share your message with anyone else.

☐ BOOKS.book_id ☒ BORROWER.card_no ☐ BORROWER name

Submit

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Book_LOANid	DateOut	DueDate	Card_id	BOOK_ID	Checkin
24	Feb. 25, 2019, 5:44 p.m.	March 11, 2019, 6:44 p.m.	3	1661	<input type="checkbox"/>
20	Feb. 25, 2019, 3:15 p.m.	March 11, 2019, 4:15 p.m.	5	4	<input type="checkbox"/>
21	Feb. 25, 2019, 4:36 p.m.	March 11, 2019, 5:36 p.m.	10	2	<input type="checkbox"/>
32	Feb. 28, 2019, 10:37 p.m.	March 14, 2019, 11:37 p.m.	13	16114	<input checked="" type="checkbox"/>
33	Feb. 28, 2019, 10:59 p.m.	March 14, 2019, 11:59 p.m.	23	18410	<input type="checkbox"/>
34	Feb. 28, 2019, 11:04 p.m.	March 15, 2019, 12:04 a.m.	23	984	<input checked="" type="checkbox"/>
35	Feb. 28, 2019, 11:07 p.m.	March 15, 2019, 12:07 a.m.	23	6075	<input checked="" type="checkbox"/>
28	Feb. 28, 2019, 10:31 p.m.	March 14, 2019, 11:31 p.m.	25	6541	<input type="checkbox"/>
22	Feb. 25, 2019, 5:40 p.m.	March 11, 2019, 6:40 p.m.	28	7	<input type="checkbox"/>
29	Feb. 28, 2019, 10:32 p.m.	March 14, 2019, 11:32 p.m.	33	9132	<input type="checkbox"/>
30	Feb. 28, 2019, 10:33 p.m.	March 14, 2019, 11:33 p.m.	33	168	<input type="checkbox"/>
37	Feb. 28, 2019, 11:22 p.m.	March 15, 2019, 12:22 a.m.	34	10798	<input type="checkbox"/>
12	Feb. 23, 2019, 9:35 a.m.	March 9, 2019, 9:35 a.m.	38	22264	<input type="checkbox"/>
36	Feb. 28, 2019, 11:09 p.m.	March 15, 2019, 12:09 a.m.	123	22907	<input type="checkbox"/>

Submit

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Then you can select the data you want to check in, we can make multiple choice at the same time.

4) Borrower Management

We should enter the information for create a new Borrower.

Create new Borrower

Write your 9 digits SSN like **976-95-2914**

SSN

Write your name like : FirstName,LastName **Yi,Zheng**

FirstName,LastName

Write your Address like: **3 Magdeline Terrace,Plano,TX**

Address

Write your phone like : **(469)-213-2549**

Phone

Create new Borrower

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- 1) We should enter all fields or the System will say that you didn't enter some part of the information.

You haven't enter all fields

- 2) We should enter the SSN that haven't been used. Or it will show

Your SSN has been used, try another one

5) Fines

a we use a button to update the Fine everyday. That means we should click this button in order to update the fine (Using `timezone.now()`)

b) show all fine and make payment:

I designed two ways to show the fine:

- 1、 Grouped by every Card_id. And show how much it should pay for each Card_id.
- 2、 Show every record one by one (every Loan_id)

Show Fine for each Card_id

FINE AMOUNT NOT PAY YET	Card_ID	Borrower Name	Make payment
3.25	7	Deborah, Lawrence	<button>Pay</button>

Show all Fines one by one

FINE AMOUNT	Card_id	Borrower Name	Loan_id	Make payment
3.25	7	Deborah, Lawrence	17	<button>Pay</button>

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If you succeed in making payment, it will show:

Succeed in making payment