### **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:**

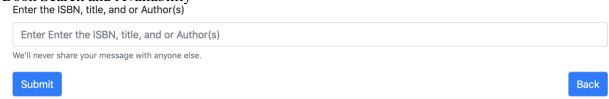
1) Home Page

# Library Management System Version 1.0



### There are 5 functions to use in this system.

### 2) Book Search and Availability



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.



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)

Back

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



3. If we enter some card\_id which have already borrowered 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



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	
Submit	Back

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	
20	Feb. 25, 2019, 3:15 p.m.	March 11, 2019, 4:15 p.m.	5	4	
21	Feb. 25, 2019, 4:36 p.m.	March 11, 2019, 5:36 p.m.	10	2	
32	Feb. 28, 2019, 10:37 p.m.	March 14, 2019, 11:37 p.m.	13	16114	
33	Feb. 28, 2019, 10:59 p.m.	March 14, 2019, 11:59 p.m.	23	18410	
34	Feb. 28, 2019, 11:04 p.m.	March 15, 2019, 12:04 a.m.	23	984	
35	Feb. 28, 2019, 11:07 p.m.	March 15, 2019, 12:07 a.m.	23	6075	
28	Feb. 28, 2019, 10:31 p.m.	March 14, 2019, 11:31 p.m.	25	6541	
22	Feb. 25, 2019, 5:40 p.m.	March 11, 2019, 6:40 p.m.	28	7	
29	Feb. 28, 2019, 10:32 p.m.	March 14, 2019, 11:32 p.m.	33	9132	
30	Feb. 28, 2019, 10:33 p.m.	March 14, 2019, 11:33 p.m.	33	168	
37	Feb. 28, 2019, 11:22 p.m.	March 15, 2019, 12:22 a.m.	34	10798	
12	Feb. 23, 2019, 9:35 a.m.	March 9, 2019, 9:35 a.m.	38	22264	
36	Feb. 28, 2019, 11:09 p.m.	March 15, 2019, 12:09 a.m.	123	22907	
Submit					Back

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



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

We should enter the SSN that haven't been used. Or it will show Your SSN has been used, try another one

#### 5) Fines

3.25

a we use a botton 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 ench Card\_id

FINE AMOUNT NOT F	PAY YET	Card_ID	Borrower Name	Make payment	
3.25		7	Deborah,Lawrence	Pay	
Show all Fines one by one					
FINE AMOUNT	Card_id	Borrower Name	Loan_id	Make payment	

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Pay

Deborah, Lawrence



If you succeed in making payment, it will show:

# Succeed in making payment