

iDesign Team CXY Written Report

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Basic Prototype: <http://students.washington.edu/yutingm/idesign/>

Library system is important to college student. Based on our interviews, the inconsistency of rich book resources in library and the limited knowledge of what can be read bothers student a lot. Moreover, most of our interviewees expressed their difficulties in figuring out the location of books and research materials. Thus, based on the problems we found, our team decided to develop a library mobile application to assist students figure out the location of books, get recommendations of the books they may be interested in, and communicate their ideas of certain book. And our target users are the students in University of Michigan with different backgrounds.

What we achieved:

Use Tags to search for books:

The most important feature of our application is its connection with academic information of students. Based on the login function, our application design can grab the UMID of student, which let the application further grab their academic information, including their majors, courses, required text books and so forth. The application turns all of the information into different tags, and based on the diverse tag, the application give corresponding recommendations to users. And all of the tag information will be saved in *My tags section*. Users can also add or delete their tags based on their own requirements.

For example, a student registers for SI 664 (Database Application Design) course, which the required textbook is *Learning PHP, MySQL, JavaScript, and CSS*. Inside the library system, this book has three tags: “database”, “web development”, “PHP”. So these three tags will automatically add to this user’s account, and this student can use these tags to search for similar books if want to do more research.

Users can either choose all the tags they have, or choose some of the tags, to search for the relate book. Now, there is no need for users to spend hours and hours sitting before the computer to think out key words for book searching, simply go to my tags section, and hit “search” button to find books that match current tags, or choose other tags. This is a much more easy and efficient way to search for books.

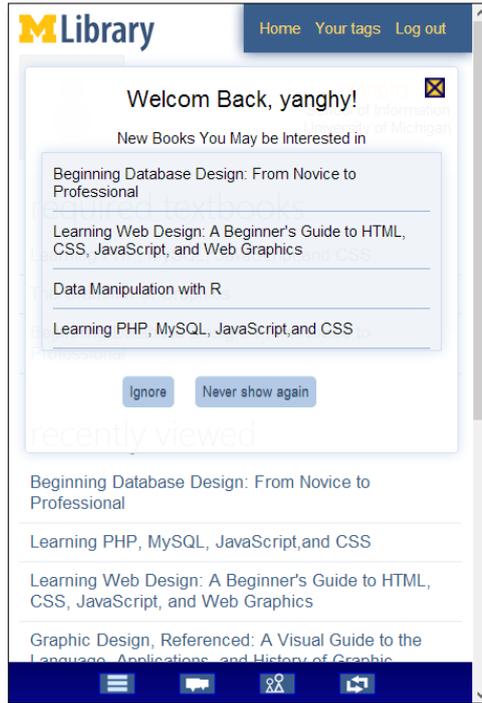


Figure 1. Pop out window on home page

After logging in, the system automatically pops up a window with recommended textbooks based on current user's tags. And users can either choose to ignore this window for one day, or choose to prohibit it to show again forever.

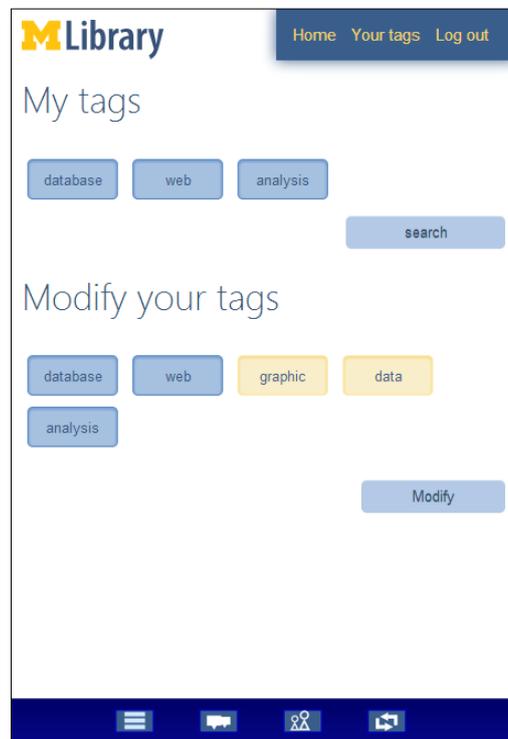


Figure 2. My Tags Section

The system turns textbooks information into different tags based on which, it uses searching and cataloging technologies to give recommendations to users, which is shown in Figure2. Also, every tag button is clickable. Users can click certain tags together to search for books related with those tags. In this page, users can modify their tags, adding or deleting.

Locate books by Details: After users find out the book they want. The system marks the book in the library map including the details of library name, floor and shelves. The most convenient part of the application is that, when users enter the library, they can use the navigation feature to find the exact location of the book with detailed route to get it.



Figure 3. The location and navigation page

The system marks the book in the library map including the specific location details (building, floor, shelves and where in shelf). Furthermore, when users enter the library, they can use the navigation feature to find the exact location of the book with detailed route to get it.

Share opinions with others

All books have a place for students or faculties to comment on. The comments can be from all the students and faculties. Student can express their ideas about books, whether they are helpful for a course, or how interesting the novels are. In an easy way, users can click the star ranking bar from five stars to zero stars. The final star ranking is an average value from all users.

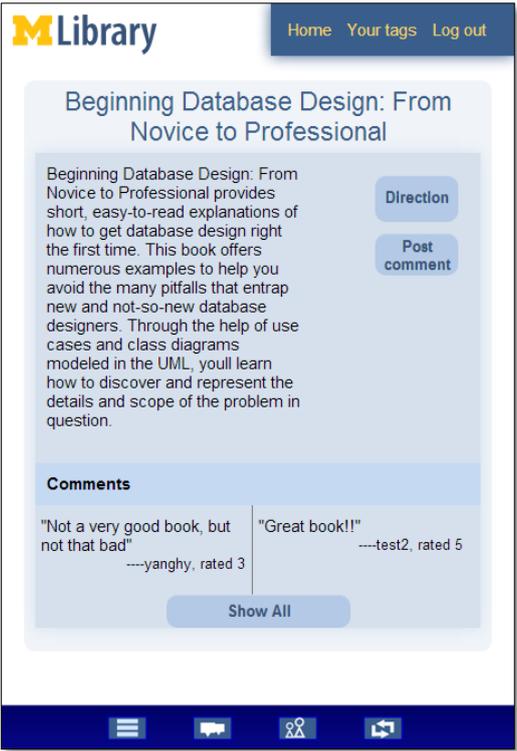


Figure 4. The textbook information page

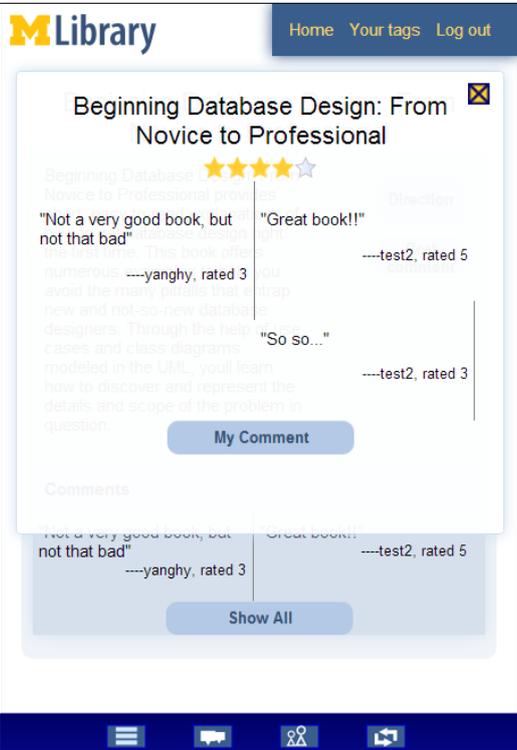


Figure 5. Comments and the star ranking of a book

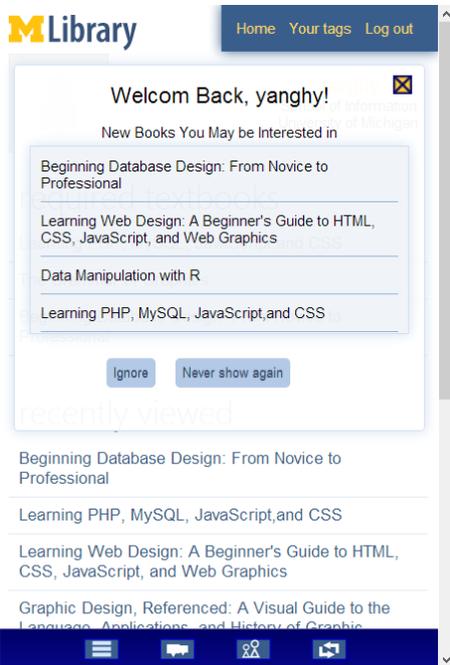
Our system solves the problem of finding books and research materials for students which not only benefits college students but also reduce librarians' workload in answering navigation questions. Based on our SI 501 project interviews in the Halle Library in Eastern Michigan University, we found that majority of questions in the information desk and reference desk are about navigation. For example, where can I find this book? How can I get to the map room? The book location and navigation feature in our system exactly solve this kind of problems. Furthermore, the recommendation feature in our system also helps to reduce the workload of librarians as users can find out books and research materials by the tag system themselves. At least, librarians needn't to answer basic research questions. This provides the library much more time to focus on higher level research questions to better help patrons.

The most outstanding benefit in our system is that it provides a sufficient and convenient way for students to find and get books. Although we have tried our best to approach the problem, we must acknowledge there are some limitations in our system. Because the University of Michigan login system does not open to student projects, so we actually cannot make it log in using Kerberos and load student class schedule. What we do for our prototype is made a faked log in system and some fake data to illustrate our ideas. Also, due to today's navigation cannot be that precise to provide floor navigation, so we cannot make the navigation functionality for now.

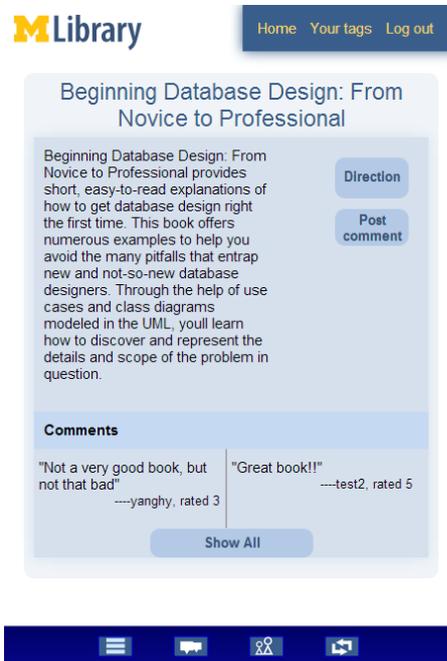
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Appendix: some key sample uses of system

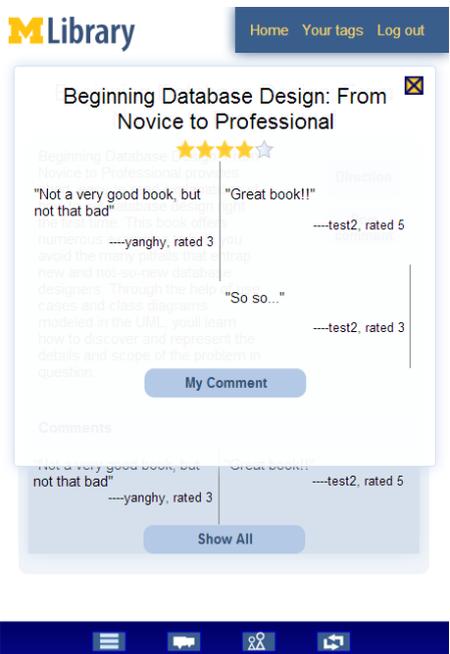
One: find a book, and using navigation to get the book from the library shelf



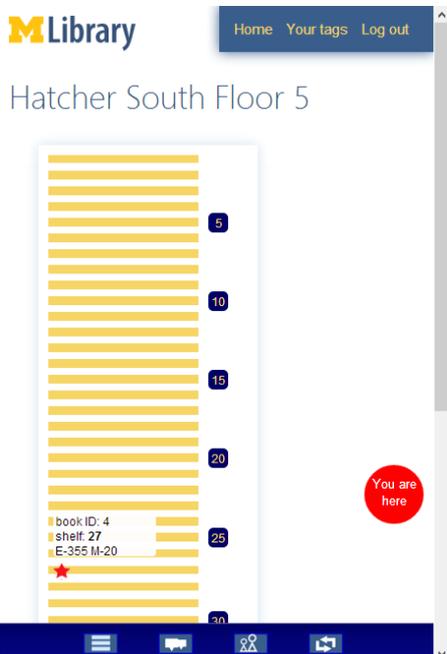
1 – Logged in, click on a recommended book;



2 – “show all” comments



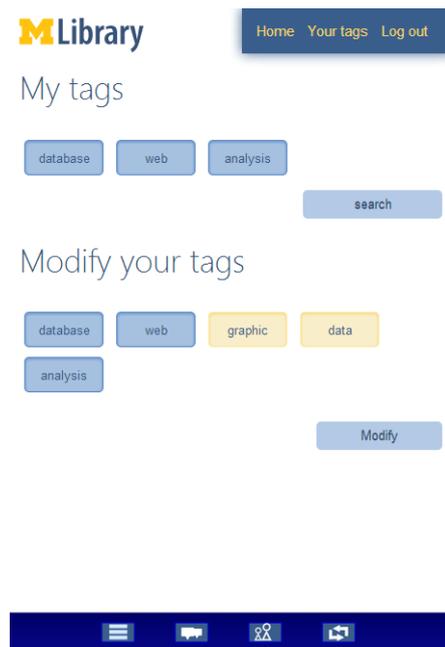
3 – Interested, close popup, and click “direction”



4 – Navigate to borrow this book

(We didn't implement the navigation function in this version of prototype due to limit resource)

Two: doing some research, use tags to find similar books



- 1 – Go to “Your tags” page, modify your tags
- 3 – Repeat the steps to navigate to the book in the library



- 2 – get a list of similar books