NC BookStack

A UMass Lowell Used Text Book Application

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PROJECT GOAL

The goal of this project it to provide an application that allows UMass Lowell (UML) students to buy, sell or trade used textbooks with each other.

MAJOR FEATURES/CAPABILITIES

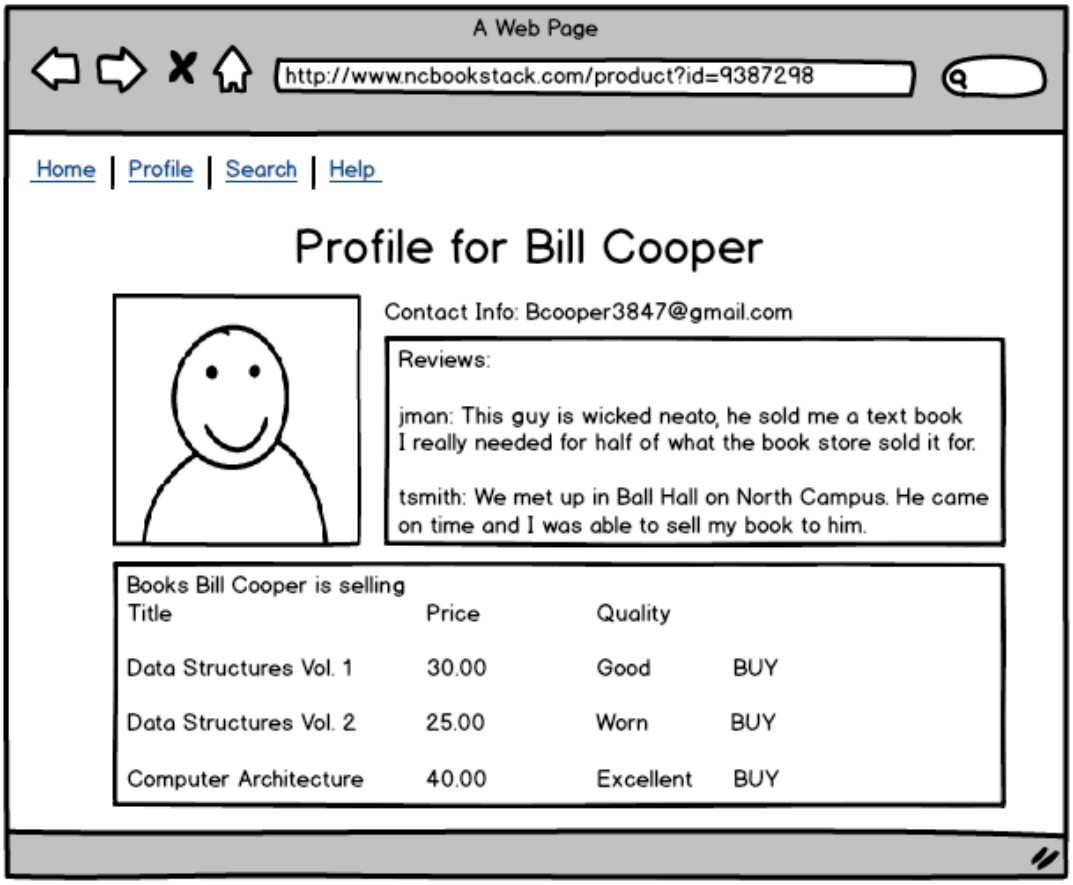
Our application will have three main capabilities. The first will be to allow users to search for textbooks that are being used at the University of Massachusetts Lowell. The second is to allow each user to create a list of textbooks that they are willing to sell or trade; along with a list of textbooks that they are looking to buy. The third is to give users the power to make contact with each other to set up a meeting to trade or purchase textbooks from one another.

These capabilities would be facilitated by several features. Users will be able to register a personal account where they will create a username and password. After the account is created the user will be able to sign in and build a profile.

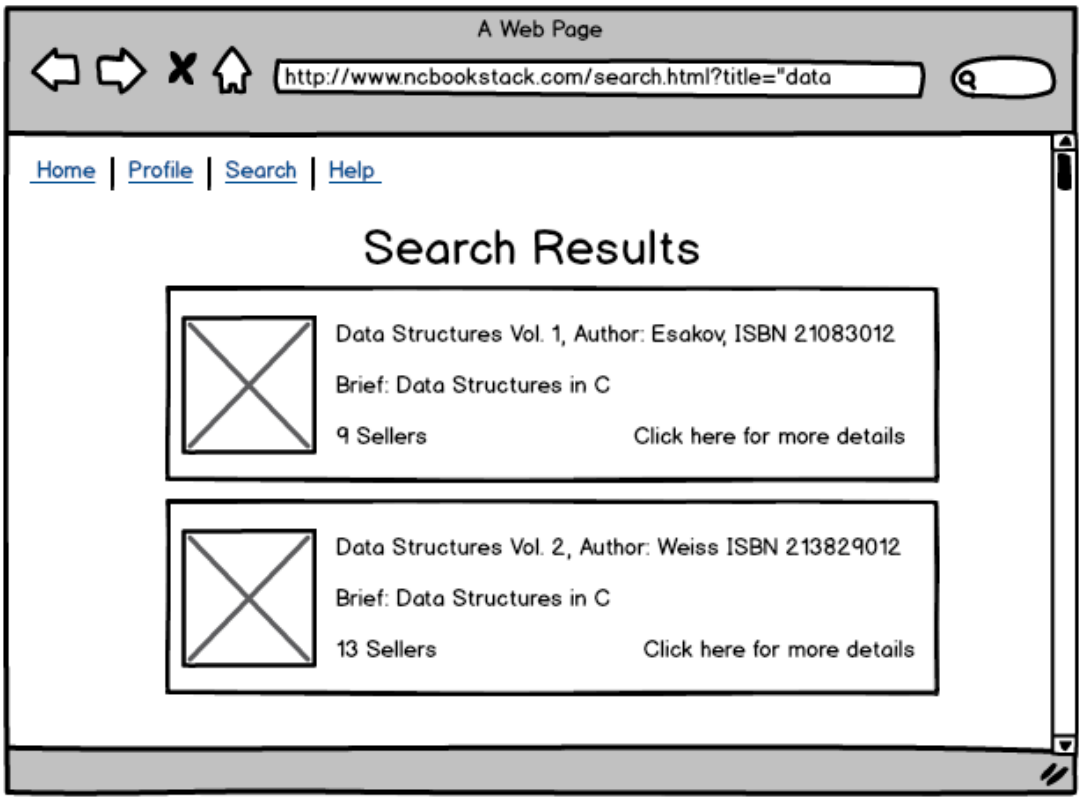
The main components of this profile will be two lists. The first list is a list of textbooks the user is interested in acquiring. The second list is a list of textbooks that the user is interested in selling or trading for. This account will allow for the updating of personal information and current books they have/are looking for.

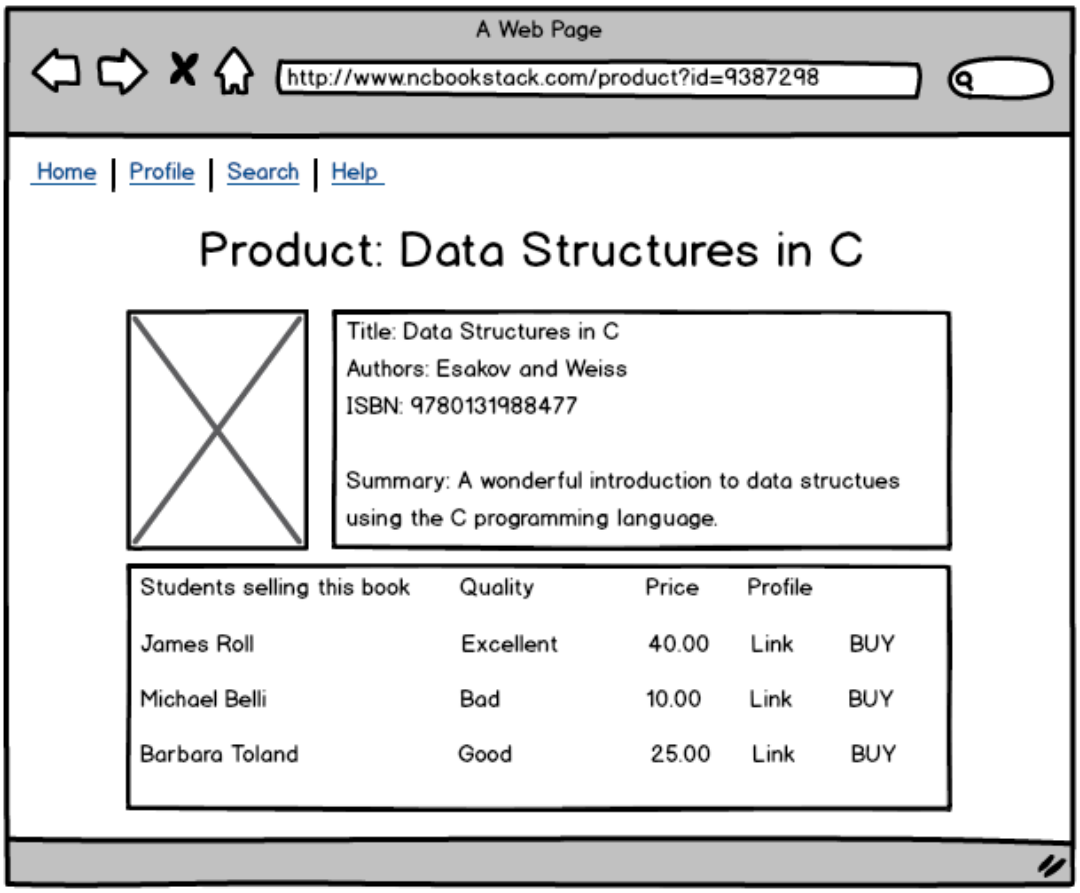
Once this is done, the user will be prompted for any extra information, such as desired textbook quality or selling price. After all this, the user will confirm that the information is correct and we will add their information to an appropriate list.

Users will be able to contact other users with offers for textbooks. From there the user can agree to a meeting point along with a date and time for the transaction. Users will also be able to post reviews about other users. This score will be displayed to anyone viewing the profile.



Users will be able to search for textbooks being offered by other users by class or name. If the book is found in our database, details of the textbook will be displayed along with a list of users who are currently selling the book. If the book is not found, a message will be displayed that the textbook is not in our database or that no user is currently selling it.





Some other features we hope to implement are a pricing tool and Google maps tool. The pricing tool will suggest a price on each side of the transaction based on book quality, edition and whether it's a trade or just a purchase. The maps tool will give the user a display of suggested meeting spots. We also hope to integrate an Amazon tool. Though it is a far off goal, the Amazon tool will allow the user to search for a textbook on Amazon if it isn't being sold on our application.

SOFTWARE COMPONENTS

We will be using the jQuery theme roller[1] to help with generating CSS files to format the appearance of the application. We will be using an automatically generated theme as a basis for the look of our application and editing the generated CSS files as we see fit. This will help in quickly making the application look nice.

We will be using MySQL to store information about books and user profiles. We will be creating JavaScript and PHP code based off of past assignments in GUI Programming I. This code will communicate between the front end and the database. The code that we will be using has been tested and allows for us to transmit and receive any data to and from the database using the JSON file format.

We will be using MySQL search queries with PHP to allow users to search for books using various criteria. This will allow users to type in partial information such as a word in the title of a book and receive a list of possible matches. We will be using the MySQL dev manual[2] and example sources[3] to base our search code off of. This feature has been tested and will be easy to integrate into the final application.

We will be using the jQuery UI auto-complete feature[4] in conjunction with the search functionality. This will allow a user to see a dynamic list of possible book matches as they type in any information.

We will be storing user account information in a database. We are looking at storing user sign in information locally on cookies so that the user can stay logged in while moving to different web pages in the application.

1. jQuery UI Team, jQuery UI Theme Roller, http://jqueryui.com/themeroller/, accessed 02/14/14

2. jQuery Team, jQuery dev manual, https://dev.mysql.com/doc/refman/5.1/en/index.html, accessed 02/12/14

3. Angela Bradley, Creating the Database, http://php.about.com/od/phpwithmysql/ss/php_search.htm, accessed 02/15/14

4. jQuery UI Team, jQuery UI Auto-complete, http://jqueryui.com/autocomplete/, accessed 02/14/14

INTENDED USERS

The main audience of our application will be graduate and undergraduate students on UML North Campus in disciplines such as chemistry, engineering, computer science and physics.

POSSIBLE ISSUES

One issue that we foresee is the finding and implementation of a large stable database. At the moment we have looked into several options and as of right now we have not found anything that quite fits our need. Many of the Amazon APIs required us to create an Amazon Web Services account which would end up costing too much money for us to use. Other options like the Google Books API[5] has a huge library of books, but deals in eBooks not physical books. As of right now we have fallen back to using just a database slice, a small collection of books to use as an example. As the semester goes on we intend to looking into a way of creating a more robust backlog.

Another issue that may arise is the implementation of our user profile system. We are looking to do a lot with this: unique usernames, password protection, user reviews, and updating profiles with new books the user needs/has.

Finally, creating a robust, stable, and consistent search tool may become an issue. We dealt with the implementation of search tools in GUI 1, the tool we have right now is quite basic. We want to implement a more robust search tool using something like Google Custom Search[6], but we would need to build pages for each book first as the Custom Search tool looks at URLs not something like MySQL or JSON.

5. Google Development Team, Google Books API Family, https://developers.google.com/books/, accessed 02/8/14

6. Google Development Team, Custom Search, https://developers.google.com/custom-search/, accessed 02/15/14

PRELIMINARY SCHEDULE

Task	Description	Date	Done By
Book Database Slice	Build a database slice of books for North Campus classes.	Feb. 14	Chris Burbine
Search Tool Frame Work	Create a basic search tool to build off of.	Feb. 15	Chris Burbine
User Profile Database	Storage for user profile data includes name, user name, password, major, and book data (more data will be added as needed).	Feb. 16	Thuan Chau
User Profile Frame Work	Basic user profile options, not connected with the book data and search tool frame work.	Feb. 16	Chris Burbine & Nick Warren
Connected User Profiles	Users will now be able to contact each other and draw information about books in our data base.	Feb. 19	Chris Burbine & Nick Warren
More Robust Search Tool	Upgrade the search function for more accurate searches.	Feb. 21	Nick Warren & Thuan Chau
Alpha Build	Finalize our core features. Test application thoroughly for any issues.	Feb. 24	Everyone
User Reviews	Give users the ability to review other users.	Mar. 11	Chris Burbine & Thuan Chau
Pricing Tool	Create a tool that will inform users on how to proceed with a transaction.	Mar. 18	Chris Burbine & Nick Warren

Meeting Tool	Create a tool using Google Maps to suggest meeting points for trades. All of our suggested locations will be on campus grounds.	Mar. 25	Nick Warren & Thuan Chau
Beta Build	Finalize additional features make sure they do not break what we already have. Test new features thoroughly.	Apr. 2	Everyone
Additional Features	The implementation of robust database APIs, complex search tools, South Campus class books, South/East suggested meeting spots, Amazon purchase option and implementation for other UMass college campuses fall into here.	TBA	TBA
Final Build	Finalize any other additional features. Polish application as much as possible before end of semester.	Apr. 23	Everyone

THE FINAL PRODUCT

We will consider this project to be completed when we have at least finished the user review section. The meeting and pricing tools are not entirely necessary they are simply nice features to have. The meeting and pricing tools will be considered top-tier priority when we have finished the user review section, but can be dropped if we run out of time. As for the South Campus class books, South/East suggested meeting spots, implementation for other UMass college campuses and integration with the Amazon store they are rather far off goals at the moment.