

Project name: Z Class Swap

Project members

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Vision

- Goal: Our web application will be used by UW students to facilitate exchanging of course resources and contact information.
- Target audience: UW students.
- Application Purpose:
 - Provide a notification-based service for exchanging course resources (textbooks, clickers, lab manuals, etc.).
- Competitors
 - Facebook:
 - “Free & For Sale” and “UW Textbook Exchange” currently help in facilitating the exchange of course materials. Students can post items that they wish to sell, and those that are interested can contact the seller. Each of these pages have thousands of members, which greatly increases the chances of finding potential buyers for a posted item. However, several issues arise for visitors of these pages that are hoping to buy a particular item:
 - They have to manually scroll through many posts to check if it exists on the page.
 - If a desired item has been found then the student must then check all of the comments associated with the post to determine if the item has been sold, and even then the comments might not indicate if the item has been sold in which case the seller has to be contacted.
 - UWTools
 - UWTools has the most similar product which is searching for courses, ISBNs, or course names and finding contact information from students. It produces a list of students with the book and contact information. This method does not have push based notifications, meaning that users have to check and recheck the search frequently for updates. Additionally, there's no way to find out how many people have contacted the books to understand how available they are, or to put in a request for a book.
 - Amazon

- An online marketplace like Amazon can be seen as an alternative means of selling course materials. However, using our web application is beneficial because:
 - It allow for a greater ease in buying/selling materials because students can meet on campus to exchange goods rather than going through potential hassle and delay involved in buying/selling online.
 - Many courses require students to buy custom materials (reading packets, custom UW textbooks, lab manuals, etc.) such materials may not be suitable to be sold on Amazon when the only interested buyers are students at the UW.

Software Architecture

- Product Architecture
 - Presentation Tier: interact with users, show users' information they need and transmit users' information to the processing tier. This is the front end which will consist of a single message board with filters that allow users to look at only posts which they are interested in.
 - Processing Tier: transmits data between presentation tier and data tier. This is the back end of the product which will consist of scripts to handle/respond to user interaction.
 - Data Tier: databases (user information, board posts, etc.) that can be queried for information.
- Implementation of Functionality
 - This application will be built into a website with UI compatible with both computers and smart phones.
 - Front end: build by Javascript, HTML, CSS with JQuery and JQueryUI, and Twitter Bootstrap packages.
 - Back end scripts utilize PHP.
 - Managing user information database.
 - Querying and filtering the database of posts.
 - Notifying users when a post has been added that matches certain tags they're interested in (ex: Dept=CSE, Course=142, Item=Textbook).
 - Database: we plan to use MYSQL, since most PHP servers have a MYSQL database.

Challenges and Risks

- Unfamiliarity with developing websites/web scripting.
 - Many online resources are available to learn about web programming.
- Attracting a user database that is sizable enough that our website is worth using.
 - We can spread awareness about our site online.
- Creating a tag base system that is generalized and yet also somewhat specific so that users are not spammed with notifications about posts they are not interested in.

- Create categories of important tags which can narrow down the scope of posts that users are interested in.