

COMP3001 2012/13 Group Coursework Assignment

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1 Prototype Functionality

The system created was a prototype of a text book selling system for use by university students. The intent is that students, when finishing a module, can put their module text book on the website so that they can sell it to students who will be starting this module after them.

Here is a list of all features implemented in the prototype:

- sell books;
- buy books;
- search books;
- basket system;
- PayPal checkout;
- messaging system;
- registering users;
- book templates (for selling books that are already known to the system);
- predictive search.

2 Tools and Techniques

The tools used during the development process were the following:

- Editors:
 - Vim;
 - Notepad+;
 - Sublime Text.
- Source Control:
 - Git.
- Testing:
 - Google App Engine Local Launcher;
 - Google App Engine Runner*.

The programming techniques used during the development process were the following:

- web page templates.

*The Google App Engine Runner is a system which updates the App Engine when there is a push to the Git repository. Each branch has its own link to what the final website will look like as the branch currently exists, as well as access to standard out and standard error from the associated Google App Engine instance.

3 Statistics

3.1 Lines of Code Breakdown

| Language | Files | Blank | Comments | Code |
|------------|-------|-------|----------|------|
| Python | 37 | 268 | 410 | 1633 |
| HTML | 32 | 102 | 1 | 667 |
| CSS | 2 | 49 | 7 | 246 |
| JavaScript | 3 | 2 | 5 | 25 |
| YAML | 1 | 0 | 0 | 17 |
| Make | 1 | 1 | 0 | 5 |
| Total | 76 | 423 | 420 | 2593 |

4 Design and Implementation

The basic website design was inspired by the appearance of the many popular websites that exist for the selling of books. Wireframes were created for what the main pages would be, along with connections illustrating how these pages were to be connected.

The back end is the Google App Engine Data Store which stores all of the information; Python classes are used as the interface through which the front end interacts with the data store and templates are used to isolate the database and the HTML.

PayPal has been used as the checkout system. However, as this is a prototype system the developer PayPal system was used as opposed to the live one. For testing purposes this can be accessed at “<https://developer.paypal.com>” with the user name “comp3001@lists.cmalton.me.uk” and password “Comp3001!”. Having logged in it will then be possible to checkout using the following details on Payal: user name “comp30_1357661759_per@lists.cmalton.me.uk” with password “357661743”. Ignore all quotation marks.

The design which was originally devised was based around the concept of tailoring the system for use in a university environment; it would have been built such that books could be assigned to relevant courses/universities to help users of the system to find books which are appropriate to the courses they are studying at the university they are attending. Unfortunately we had to drop these features due to time constraints.

The following list contains all of the technologies and how they were used:

- Google App Engine Data Store keeps track of users, books, messages between users and sessions;
- Python interfaces are used to interact with the data store for the purposes of retrieving and adding information;
- templates are used to decouple the database system and the HTML formatting;
- JavaScript is used for predictive search, logging in and listing books;
- client side validation for forms is performed by HTML5.

5 Critical Evaluation

While the basic functionality has been implemented, some of the advanced concepts which were in the initial plan had to be cut due to time constraints. Hence, the final prototype does not fully reflect the intent at the start of the project.