BookXchange

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**Problem Statement:**

We intend to build a web-based application for user to be able to post books for sale as well as browse books for sale to purchase them. Within this website, users will be able to search for certain books based on a class they are taking at a specific university as well as simply searching by ISBN number.

**Background Information:**

When purchasing books for college, it is not always clear what book you need. Some schools provide you with a direct link to the book will need for each class, but not every school. Our website will help fill in these gaps. Users will be able to login and search for their classes based on their school to find books that are for sale for that class. The books for sale are entirely user sold so not every book will be available, but users can set a “watching” tag on any book and if someone else posts it, the user watching that book will get a notification email. This website can be used for more than only buying books for class though. Many people also simply buy old textbooks because they are interested in a subject. When purchasing a book, you will not have to provide a school as long as you are not trying to search by a class. Our targeted user base is students that are looking for a cheaper way to buy books for their classes as well as anyone who is interested in learning more about any subject from a scholarly text.

**Environment:**

For this project we intend to build our bookXchange application on Django alongside various Python modules as needed. We chose Django because of its straightforward model-view-controller paradigm and Python environment. The database will be MySQL and will live on the application server. VyprVPN will be used to host the application, or another private server depending on funds. A web address will also be created to point to our server.

**Functional Requirements:**

|  |  |  |
| --- | --- | --- |
| Backlog ID | Functional Requirements | Hours |
| 1 | As a user, I would like to have a website GUI to browse books for sale | 8 |
| 2 | As a user, I would like to be able to view each book on its own page with information and a picture of the book | 5 |
| 3 | As a user, I would like to be able to create an account that stores my information | 5 |
| 4 | As a user, I would like to be able to log into my account | 3 |
| 5 | As a user, I would like to be able to post books for sale | 3 |
| 6 | As a user, I would like to be able to view a list of books for sale | 3 |
| 7 | As a user, I would like to be able to purchase books from the cart | 5 |

**Non-Functional Requirements:**

|  |  |  |
| --- | --- | --- |
| Backlog ID | Non-Functional Requirements | Hours |
| 8 | As a user, I would like to have a confirmation email for my purchases | 5 |
| 9 | As an admin, I would like to be able to pull book information using the ISBN number | 5 |
| 10 | As a user, I would like to be able to search for a book by ISBN number | 3 |
| 11 | As a user, I would like to be able to search for a book by subject | 3 |
| 12 | As a user, I would like to be able to sort the list of books by different fields | 3 |
| 13 | As a user, I would like to be able to recover my password if I forget it | 3 |
| 14 | As a user, I would like to be able to add multiple items to my cart to purchase all at once | 5 |
| 15 | As a user, I would like to be able to clear items from my cart | 5 |
| 16 | As a user, I would like to be able edit my account settings | 3 |
| 17 | As a user, I would like to be able to email other users about the product they are selling | 3 |

**Non-Functional Requirements Priority:**

Response Time: High, nobody likes a laggy website

Scalability: Moderate, databases take quite a lot to become slow

Usability: High, website and UI need to be clear and non confusing

Availability: High, website needs to be available and not crash often

Performance: Moderate, similar to response time, no one likes to wait on a website

**Use Cases:**

Requirement 1 Visit Main Site

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |

Requirement 2 View Individual Book Page:

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username and password | 4. Display main page |
| 5. Select book to view | 6. Display book page with information |

Requirement 3 Create an Account

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Click create an account | 4. Display create account page |
| 5. Enter in a username  6. Enter in a password  7. Confirm password | 8. Display confirmation  9. Return to login page |

Requirement 3 Create an account with already in use username or non-matching passwords

Related Use Case: Create an Account

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Click create an account | 4. Display create account page |
| 5. Enter in a username  6. Enter in a password  7. Confirm password | 8. Display error message |
| 9. Re-enter username / password | 10. Display confirmation  11. Return to login page |

Requirement 4 Log In

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Redirect to Google Login |
| 3. Enter username and password | 4. Return user to our site |

Requirement 4 Attempt to log in with incorrect username and password

Related Use Case: Log In

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username and password | 4. Display incorrect username or password dialog |
| 5. Click ok | 6. Dialog disappears and display blank login page |

Requirement 5 Post books for sale

Related Use Case:

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username / password | 4. Display main page |
| 5. Click on account button | 6. Display account page |
| 7. Add ISBN to account for sale | 8. Add seller’s instance to marketplace |

Requirement 6 View a List of Books for Sale

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username / password | 4. Display main page(which shows random books) |

Requirement 7 Purchase items from the cart

|  |  |
| --- | --- |
| User | System |
| 1. Click purchase button from cart | 2. Display payment options |
| 3. Enter payment method | 4. Display purchase confirmation page |

Requirement 8 EMail Confirmation for Purchase

|  |  |
| --- | --- |
| User | System |
| 1. Click purchase button from cart | 2. Display payment options |
| 3. Enter payment method | 4. Display purchase confirmation page and send email |

Requirement 9 Check out cart

Related Use Case: Email Confirmation

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username / password | 4. Display marketplace |
| 5. Add book(s) into cart  6. Click on show cart  7. Click on purchase button | 8. Display Payment Options |
| 9. Enter payment method | 10. Display purchase confirmation page |

Requirement 10 Search by ISBN

Related Use Case: Search by subject

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Open search dialogue | 4. Display search page |
| 5. Enter in a valid ISBN number | 6. Go to book page with corresponding ISBN (ISBNs are unique, so should not show search results) |

Requirement 11 Search by subject

Related User Case: Search by ISBN

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Open search dialogue | 4. Display search page |
| 5. Enter in a valid subject | 6. Display all books of that subject |

Requirement 12 Sort books by various fields

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Click sort drop down and select sort field | 4. Display books in the sorted order of the chosen field |

Requirement 13 Recover forgotten password

(there is a lot of stuff that could go wrong here like incorrect email, incorrect code, etc)

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Click forgot password | 4. Display enter email address dialog |
| 5. Enter email address | 6. Send password recovery email with code  7. Display enter code dialog |
| 8. Enter in code given in email address | 9. Display change password page |
| 10. Enter new password  11. Confirm new password | 12. Display confirmation of page  13. Display login Page |

Requirement 14 Add book(s) to cart

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username / password | 4. Display marketplace |
| 5. Add book(s) into cart | 6. Show cart containing the added books |

Requirement 15 Remove book(s) from cart

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Enter username / password | 4. Display marketplace |
| 5. Add book(s) into cart  6. Click on show cart | 7. Displays cart containing the added books |
| 8. Click on remove item | 9. Displays updated cart |

Requirement 16 Edit account settings

|  |  |
| --- | --- |
| User | System |
| 1. Enter in Site URL | 2. Display login/main page |
| 3. Click on account button | 4. Display account page |
| 5. Click edit account button | 6. Account fields become editable |

Requirement 17 Email other users

|  |  |
| --- | --- |
| User | System |
| 1. Enter site URL | 2. Display login/main page |
| 3. Log in with existing username and password | 4. Display marketplace |
| 5. Go to view another user | 6. Display user information, email viewable |
| 7. Click on user email | 8. Email dialogue opens |