BookNet

Team 13 Product Backlog

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Problem Statement:

Many students find themselves buying textbooks and using them for only a single semester. With BookNet, students can trade their old textbooks with their peers in order to obtain the necessary textbooks for their next class. If there are no user books of a certain title left, BookNet also offers a lowest price solution by finding the cheapest and nearest source of the required book. BookNet is unique in that while common retail applications may match a user with a book, BookNet matches users with other users, allowing clients to exchange books in a continuous cycle.

Background Information:

Audience

College students are always looking to save money but they need to buy many different textbooks in order to pass their classes. At the end of the semester, those same students would prefer to receive another book through trading, buying, or selling or may even wish to donate to help other students struggling with book prices rather than only receive a few dollars when selling back to the bookstore. Those students who wish to be more conservational and reuse their old books could also benefit from trading their old course materials for new ones.

Similar Products

There are some existing platforms that allow students to purchase new textbooks and sell old ones between each other such as Student2Student. Regular online book retailers such as Amazon are also great for quick purchases from actual book sellers themselves. Craigslist and Facebook Marketplace also offer a place to sell and buy books. Of course, the traditional option of physical bookstores is always an option. These allow buying and selling of books, but without an option or a priority on students trading relevant textbooks with one another.

Limitations

Book retailers have historically run on the same principle; buy and sell books for a profit. This limits the scope of users drastically. With BookNet, we plan to expand the existing book store template by providing additional services such as chat rooms and user to user connections. And although buying and selling platforms like Student2Student give college students a platform to sell their old textbooks in order to purchase new ones, there is the inconvenience of having money as a medium of exchange. There is always an extra step that could be avoided by simply trading one book for another. We would also like to handle the potential limitations of a book trading platform. There could have been an issue if a student wanted to obtain a book that

nobody else had available. In this case, BookNet will instead direct the student to a trusted retailer with the book available at the lowest price.

Functional Requirements:

1. As a user, I would like to create an account on BookNet
2. As a user, I would like to delete my account
3. As a user, I would like to log in to my account.
4. As a user, I would like to log out of my account
5. As a user, I would like to add to my user profile.
6. As a user, I would like to add a profile picture
7. As a user, I would like to edit a profile picture
8. As a user, I would like to add a bio to my profile
9. As a user, I would like to edit my profile info
10. As a user, I would like to set and change my account password
11. As a user, I would like to input what book(s) I need
12. As a user, I would like to input what book(s) I have available for trade
13. As a user, I would like to search for a book by its title
14. As a user, I would like to search for a book by its author
15. As a user, I would like to search for a book by its ISBN
16. As a user, I would like to distinguish between different versions of a textbook
17. As a user, I would like to see a history of my previous book trades
18. As a user, I would like to see with whom I previously traded
19. As a user, I would like to purchase a book at the cheapest price if trading is not an option
20. As a user, I would like to know where the nearest bookstore with the book I am looking for is located
21. As a user, I would like to donate a book
22. As a user, I would like to sell a book
23. As a user, I would like to be matched with other users that have the book I need
24. As a user, I would like to search for books for sale
25. As a user, I would like to search for books for donation
26. As a user, I would like to direct message other users
27. As a user, I would like to specify trading location
28. As a user, I would like to receive a notification on BookNet's website when a trade is available
29. As a user, I would like to receive an email notification when a trade is available
30. As a user, I would like to accept a trade
31. As a user, I would like to reject a trade
32. As a user, I would like to be able to cancel a trade
33. As a user, I would like to see who my potential trading partners are
34. As a user, I would like to input the condition of the book I am giving away
35. As a user, I would like to be able to rate the condition of the book I received in a trade
36. As a user, I would like to be able to see other users' book condition ratings
37. As a student, I would like to exchange a book that I don't use with a book that I need

38. As a student, I would like to be able to create a study group for one of my classes (if time allows)
39. As a student, I would like to enter study groups with students taking the same classes (if time allows)
40. As a student, I would like to chat with other members of my study group (if time allows)

Non-Functional Requirements:

Performance & Architecture:
For our server-side and front-end we will use NodeJS and ReactJS; one of the main reasons we chose these tools of development is because they are both based on javascript and integrate well with each other. Most IDEs support NodeJS development and plugins, giving us the freedom to choose our platform. NodeJS is one of the most popular server-side technologies used, which makes it easier to find information if needed. It has the power of a full stack javaScript development providing us with many free tools, code sharing and reuse, efficiency and performance.

For the frontend of our application, we will be using ReactJS to make a responsive and attractive site for users to enjoy. React has many benefits on the development side that we aim to take advantage of. Chief among these advantages is code reusability. React uses components that can be copied and placed anywhere, which makes sharing code between developers easier and makes having to redevelop code for similar functions redundant. This is especially important as BookNet incorporates many similar functions such as trading, buying and donating. Another crucial advantage of React is its speed. ReactJS uses a virtual DOM (Document Object Model) system that detects when data changes and the UI needs to be reloaded. This greatly improves speed and will provide a smooth and responsive user experience.

BookNet will be using Google's Firebase for our database of users and their books. Firebase offers many useful functions such as user authentication. It meshes well with our plan to use ReactJS for the client side, and being a fast real-time database enables us to handle logging books from all our users. Firebase is also extremely fast to set up which will be crucial for BookNet's development timetable

Security:
Through the use of Firebase, user information will be encrypted including their passwords, email, and book collection. This will be done through the use of Firebase Authentication. This will also ensure that users can not have multiple accounts tied to one email. All transactions will be done outside of our app through person to person sales, or going through retailers' websites where transaction encryption has already been developed and tested.

Usability:
BookNet's user interface should be easy to navigate through. With our primary users being busy college students, it is important that browsing the site and finding trades or purchases is an efficient process. Users should be able to quickly select whether they want to trade, buy or donate and be directed to the correct interface for each step. If seeking a trade and no copies of the required books are available, users should be immediately given the option to buy the book. BookNet's website itself should also be cleanly formatted and accessible from all different browsers.

Hosting:
For the frontend of BookNet we will be using GitHub's free web page hosting service: GitHub Pages. The advantages of GitHub Pages include the ability to host directly from an existing GitHub repository and, once changes have been made and pushed to GitHub, instant updates reflecting changes to the site. Google's Firebase will be used for our database. Firebase is free for the amount of calls we will be using and offers user authentication and data encryption.