

Merchant

Team 4 - Product Backlog

Domenic Conversa, Chirayu Garg, Drew Keirn, Aakarshit Pandey

Problem Statement:

There exist platforms for buying and selling goods via the internet such as Craigslist and Facebook Marketplace. A recurring issue with these platforms is the safety of the parties involved due to the nature of meeting a stranger with potentially ulterior motives. With Merchant, we will remove the element of suspicion by requiring a university email when signing up for the service. This will allow for a closed-network of students from a particular university to buy and sell goods from each other in order to create a safe exchange for both parties. While we will not host the actual transaction itself, Merchant will provide a platform for connecting buyers and sellers looking to trade.

Background Info:

Audience

Safety is a main concern for platforms in which sellers and buyers meet up in-person due to the nature of the interaction. Our audience is college students. Merchant appeals to college students from various universities because it includes closed user networks for their respective schools.

Similar Platforms

Facebook Marketplace, Craigslist, and eBay are the most utilized platforms for users to trade their used goods. With the exception of Facebook groups, these platforms are open to anybody to trade with each other. Our point of difference is that we will close the network off to students that attend the same university as a safety feature. We would accomplish this by verifying that the users are students by verifying them using their university email addresses. Merchant also implements a map of campus to display safe places to meet such as the Emergency Telephone System poles.

Limitations

The main limitation with these services is the fear of meeting up with strangers. With Merchant, we plan to alleviate this limitation through the suggested safe meetup locations on a user's campus, along with the assurance that they are interacting with a verified student. Another limitation with other services is the scope of the goods, products, and services that users sell. Since Merchant is strictly focused on college students, the products bought and sold on the app will be within a more refined scope, thus catering more directly to users' needs and wants.

Functional Requirements:

1. As a developer, I would like to set GitHub repositories so that we have proper version control.
2. As a developer, I would like to remove users flagged excessively as spam so that the other users are safe from spam.
3. As a developer, I would like to view and access the database.
4. As a developer, I would like to make changes to the source code and create pull requests.
5. As a developer, I would like to have well-documented code so that it is easy to understand.
6. As a developer, I would like to have a reliable cloud service so that there is effective communication between the back and the front end.
7. As a user, I would like to be able to register for a Merchant account with my university email so that I have my user profile and other users are also students.
8. As a user, I should be able to verify my user account with a link/OTP sent to my email.
9. As a user, I would like to view and sign or unsign user agreement policies.
10. As a user, I would like to be able to log in to my Merchant account.
11. As a user, I would like to make my user profile in the app with a distinct username.
12. As a user, I would like to be able to reset and/or recover my password.
13. As a user, I would like to be able to update my account settings.
14. As a user, I would like to be able to delete my account so I can no longer participate in the service if I don't want.
15. As a user, I would like to navigate through the app with ease.
16. As a user, I would like to view items for sale so that I can find an item that I want to buy.
17. As a user, I would like to post items for sale so that I can sell an item that I want to sell.
18. As a user, I would like to upload pictures from my photos or take a picture using my phone camera so that I can showcase the product I want to sell.
19. As a user, I would like to be able to express an interest in buying items for sale.
20. As a user, I would like to sort items for sale by price, location, and type so that it is easier for me to search for the item I want to buy.
21. As a user, I would like to be able to search for a specific seller or a specific product so that it is easier for me to look for specific items that I want to buy.
22. As a user, I would like to be able to search for users so that I can interact with a user that I want to buy from.
23. As a user, I would like to chat with a potential seller/ buyer without having to share personal information so that my privacy is secure.

24. If time allows, I would like to have the option to share my location during the time of transaction so that meeting up is easy.
25. As a user, I would like to be able to choose a location for transaction so that transaction can take place at a specific place.
26. As a user, I would like to view a map for safe locations for transaction so that transaction happens at a safe place.
27. As a user, I would like to report other users, fake users or spam so that they are accountable.
28. As a user, I would like to rate and review other users so that they are accountable.
29. As a user, I would like to view my purchase history.
30. As a user, I would like to view my selling history so that I can keep a track of things that I sold in the past.
31. As a user, I would like to view items that I am selling currently.
32. As a user, I would like to be able to remove an item that I put for sale so that buyers no longer ask to purchase an item that I no longer want to sell.
33. As a user, I would like to be able to update details about the product I am selling so that buyers have the most accurate information.
34. If time allows, I would like to make a wish list of the items I want to buy.
35. If time allows, I would like to get notifications about the items on my wish list.
36. If time allows, I would like to follow other users.
37. If time allows, I would like to get notifications if the user I follow post items.
38. If time allows, I would like to post items for bidding.
39. If time allows, I would like to be able to bid for items available for bidding.
40. If time allows, I would like to be able to block other users.

Non-Functional Requirements:

Architecture and Performance

We plan to make an iOS app and hence the frontend would be written in Swift. The backend would be written in NodeJS and frontend would fetch data using APIs. Having a different frontend and backend would help us divide the work better and would allow us to expand the App to other platforms with ease. We would like a user to be able to post a new item and have it available in other users' feeds in less than 1 minute. Also, we would like users to be able to contact potential sellers in less than 30 seconds.

Security

Security is an important aspect of Merchant since we are dealing with users buying and selling goods. It is important that a user's account is secure so that user activities are not open to the public and that their account information remains private. To handle this aspect, we will be using various NodeJS encryption frameworks like bcrypt and passport to ensure that sensitive information like passwords is well-encrypted. We will be using JWT tokens for session management. Also, most of the back-end routes will be protected, i.e., they shall work only with valid access tokens generated upon authentication.

Usability

The user interface should be intuitive enough to navigate without a tutorial. There are many aspects to Merchant, so it is crucial that the app's interface and experience is user-friendly. In order to help users be able to buy goods, the main focus of the app will be a feed of available items for sale. Additionally, we will have an easy way to navigate using tabs to the interface for posting an item for sale. We also will make the app adaptable to all screen sizes.

Hosting/Deployment

Since the backend and frontend of the App are completely different, they can be hosted and updated separately. The backend can be deployed on cloud hosting services like AWS or Azure. The frontend can be published on the app store, from where it can be downloaded on any user's phone.

Scalability

While the first version of Merchant will be developed to only be compatible with Purdue University students, the app will be designed to be scalable to other colleges and universities. Additionally, if needed, our database will be able to handle an increase in the number of users. For example, if we need more server space then we can buy it from our provider.