Backlog

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Problem Statement

Students always want to save money to buy used items and sell items they no longer need. There are websites like Craigslist and ebay that allow people to post or look for items they want to buy or sell. However, due to the fact that everybody can use those websites, frauds inevitably exist and items may need to be shipped across the country, taking weeks for them to arrive. So it will be much more convinient to finish the transaction in campus.

Background Information

(a) Explain background information about the problem, the domain, and targeted users.
There is a huge demand on buying and selling used items on campus. Students want to sell items that they no longer need and also look for used item with good price. Our website will serve a purpose as a trading platform for Purdue students.It can be extended to other university campus in the future.

(b) Mention whether there are any applications or systems that are similar to your planned work.
Some existing similar systems are Facebook groups that sell used items, as well as large formal platform like amazon, ebay, craigslist, and etc.

(c) Discuss the limitations of other solutions and how you address each limitation.
Trading used items is not the main function on those platform, so none of them provide native experience for college students who have demand for used items and concern for trade safety. The problem with Amazon,   eBay, and Craigslist is that shipping takes certain amount of time, usually days. However, it is possible that buyer can get the item in one day by using our website. In addition, users have to use their college email address to create account, so we can verify user identification and deal with fraud easily.

Requirements

Functional Requirements

1. As a user, I would like to have a page to sign up my account with email.
2. As a user, I would like to have a secure log in page with my email and password.
3. As a user, I would like to be able to modify my account information.
4. As a user, I would like to stay at log in stage for a certain of time, even after I close the website.
5. As a user, I would like to have a button to allow me to log out my account.
6. As a user, I would like to find the information of the stuff that people are willing to sell.
7. As a user, I would like to be able to post used stuff.
8. As a user, I would like to be able to modified the used stuff I posted.
9. As a user, I would like to be able to view all the stuff I post.
10. As a user, I would like to be able to delete the post I made.
11. As a user, I would like to be able to sort the used stuff with price.
12. As a user, I would like to check the stock of my posted stuff.
13. As a user, I would like to chat with my buyers to advertise my merchandise, if I am a seller.
14. As a user, I would like to chat with my sellers to bid the price, if I am a buyer.
15. As a user, I would like to search items by price range.
16. As a user, I would like to search items by categories.
17. As a user, I would like to save items to wishlist, so that I can check them later.
18. As a user, I would like to search items by conditions.
19. As a user, I would like to have my order list.
20. As a user, I want to see the rating and comment of buyers.
21. As a user, I would like to rate the buyer after transaction.
22. As a user, I want to see the rating and comment of sellers.
23. As a user, I would like to rate the seller after transaction.
24. As a user, I want buyers know when the item is available for sell.
25. As a developer, I would like to receive user feedback.
26. As a user, I would like to be able to upload my own avatar.
27. As a user, I would like to change my password.
28. As a user, I would like to block user sending spams.
29. As a user, I would like to report bad seller / buyer.
30. As a user, I would like to give some suggestions for future modifies.

Non-functional Requirements

1. Performance: The website should be loaded in a very short time. The action like posting or editing posts should be fast unless there are too many pictures in that post. The chatting should be in realtime and if it get disconnect it would try to reconnect for many times.
2. Security: User's password will be encrypted with bcrypt (with hash and salt) and it will be hide along with some other sensitive information. The user's token will also be encrypted. A user is the only person who can edit his/her own post or personal information.
3. Stability: The website and server should be reliable to some degree. In most of daily use condition, it should not crash.

4. Portability: User should be able to view and use this website from all platform with a browser, including both iOS and Android system.
5. Availability: The website and server should be available in most of time. Even if the server crash in some spcial cases, it will restart immediately.