

CSC309 Project Proposal

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1 Purpose

During the quarantine, the essential businesses have to stay open. Due to social distancing policies made by the government, many stores limit the number of customers, meaning many people have to wait around in lines which increases the risk of infection. We propose a web app where users can register themselves under their preferred shop's customer queue rather than having to wait in line. Using this web app, they can wait for their turn preferably away from the shop.

2 Features

Here is a list of proposed features that the web app will implement:

1. The web app will keep track of following user profiles data:
 - User location
 - User's favorite stores
 - Store search history
 - Store queueing history
 - Confirmation time (how long before user go-time do they receive confirmation)
2. The web app will keep track of following admin/superuser profiles data:
 - Store name, location, and opening hours
 - Customer limit (how many people are allowed in the store at once)
 - Customer shopping time limit (how long can people stay in store for)
 - Number of people in line of the queue

3. The web app will allow users to search for stores they want to shop in using several methods (if implementable, the search result will update live when the user starts typing). See more details in the user interaction section.
4. The web app will have a queue-in feature. See more details in the user interaction section.
5. The web app will have a store queue confirmation feature. See more details in the user interaction section.
6. The web app will have a standard authentication feature for admins and normal users.
7. The web app will also feature a news tab (time permitting) to inform shoppers of the current situations.
8. The web app might use external store data (such as addresses and maps) to enhance user search operations and admin registration process.
9. The web app will use given admin profile data to determine inform the customer about the store as well as to determine the recommended time for the queue.

3 User Interactions

Here is a list of proposed **user interactions** that the web app will implement:

1. Users are required to sign-up in order to use the website. Upon first login, users are required to provide information listed in features section.
2. Users can update their user profile data at will.
3. Users need to queue in for their desired store, in which a time will be given to the user on the day in which the user should go shopping based on the number of people in line of the queue for the store.
4. Users can queue in ahead of the time to save themselves wait time in case the queue gets long.
5. Users can see all their current queues and past queues from a dashboard. From there, user can cancel, or modify the queue (modify data like time and date).
6. Users need to confirm their spot in the queue before going. Users who don't confirm will be removed from the queue to help speed up the queue and enhance other user's wait time.

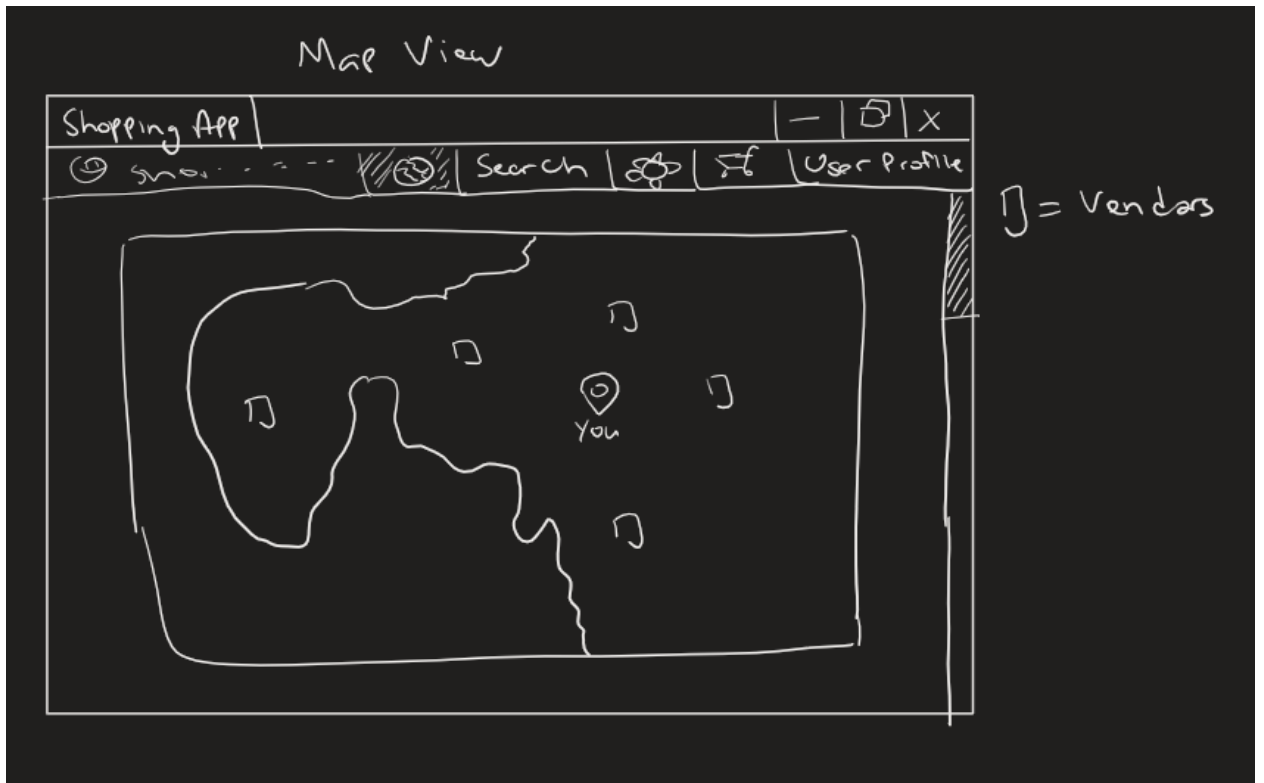
7. Users can search for their desired store using following methods:
 - Search stores using store names.
 - Search stores using store addresses. (possibly pulls external location data)
 - Search nearby stores based on user profile location. (possibly pulls external location data)
8. Once search result appears, users can click on stores to view detailed information about the store such as store location, store hours, etc. They can also add stores to their favorites list. Search results can also be toggled by user to be saved or discarded.
9. Users can access stores without searching by using either previous store search history, previous store access history (user clicked stores), as well as user favorite stores list.
10. Users can set and modified the confirmation time for the customer queue. There will be limits as to how long before the customer shopping time can the customer receive the confirmation. This is to prevent customers who queued up days ago but then decided to not go and don't cancel their queue. This can hold up the queue for other people.

Here is a list of proposed **admin interactions** that the web app will implement:

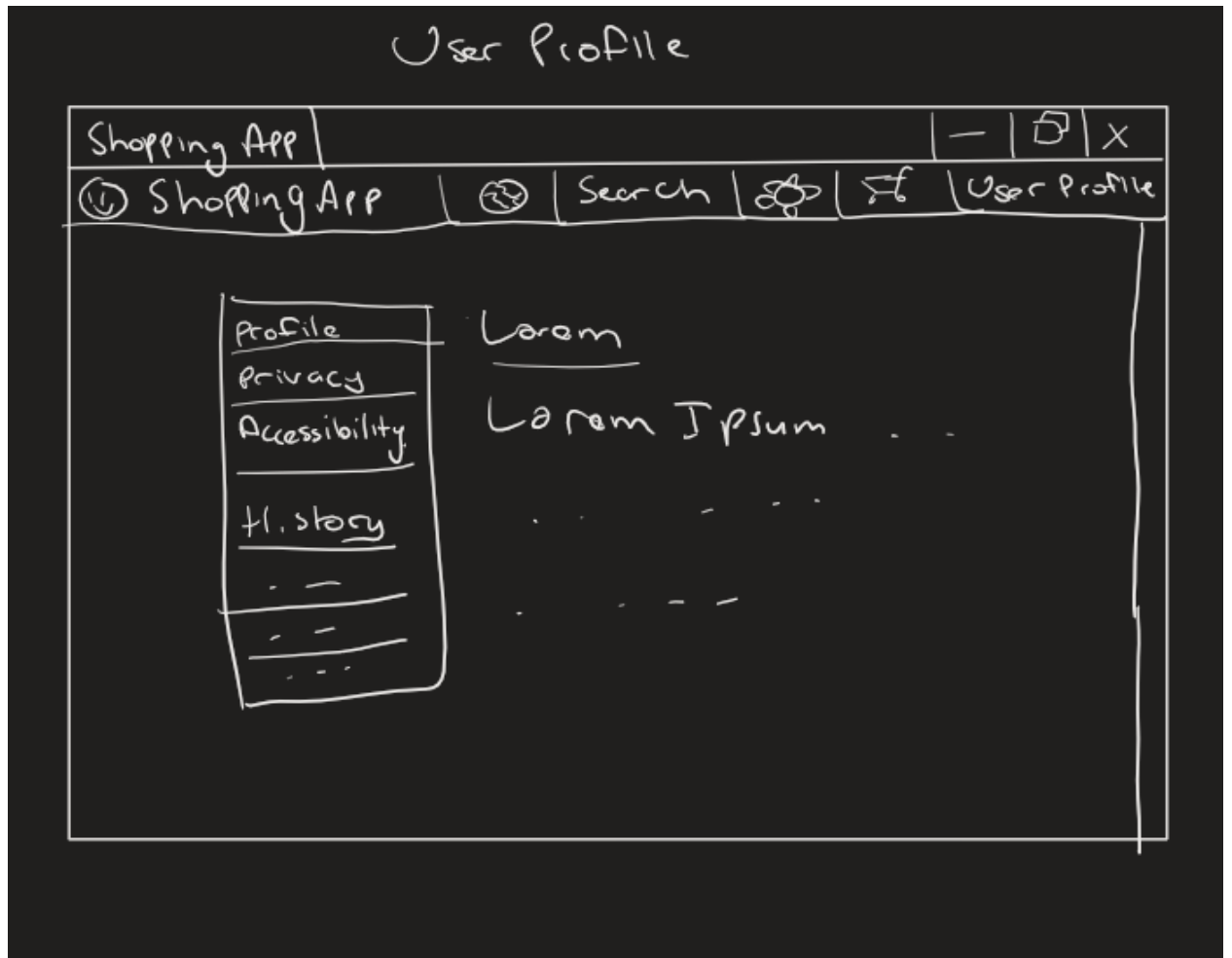
1. Similar to users, admins are required to sign-up in order to use the website. Admins are required select their store from a list of stores obtained from external data upon register, as well as provide necessary admin profile data.
2. Admins can update any admin profile data listed in features section.
3. Admins will be able to add and remove shoppers in the queue
4. Admins will be able to show store related information including working hours.
5. Admins will be able to block shoppers from joining the queue (may relate to time constraints or unruly shoppers)
6. Admins will be able to post announcements for their store in which all customers in their queue can receive notification about the announcement.

4 Views

1. In the map view, we allow the user to see all registered stores near their location. This will allow them to view various store pieces of information (admin profile data), and queue up to go visit their desired store. This is also where the user can search for stores using the methods described in the user interaction section, in which the search results will be displayed on the map.



2. The user/admin profile page, which allows the user/admin to view all of their settings, and change some aspects of their profile and privacy. Note that general users' profile page will look identical to admins' profile page, however, the superusers have more features for managing resources and managing their store needs as described in user interaction and features section.



3. This is the login page for users and admins. The web app will use the login credentials to determine which dashboard the user will be taken to.

Sign in

Shopping App

User

Pass

Login

forget Pass?

Sign up!

4. This is the queue-in/store detail page for our web app. Here the user can choose to queue in for a specific time for the store granted there is capacity. Here the user will also be able to book their time at the store in advance.

Queue in.

Shopping App

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⌵

⌵

⌵ Shopping App ⌵ Search ⌵ User Profile

Vendor Name:

Book For: DD/MM/yy Time: hh:mm

Remaining Capacity For day:

Book:

5. This is the main page of our app that the users will see once logged in. They will be able to see their favourite vendors, as well as stores from their previous queues. (The view meant to say queue history not purchase history)

