

Full Design

Overview

Zelp is a platform that keeps businesses in the Cambridge area accountable for following their COVID safety guidelines. Businesses make their safety policies readily available on Zelp and users verify that the businesses are putting their policies into practice. This community feedback allows the users of this app to feel more safe when visiting a business.

The main purposes of Zelp are :

access to up-to-date safety information

With Zelp businesses can always update their COVID-19 safety policies such as masks and social distancing required. People can look at a business and get a very quick and easy-to-understand overview of how safe a business is to visit. Being able to see all policies and user's safety reviews allows people to make their own judgement calls about whether a business is safe enough for them to visit.

business accountability

Zelp creates a platform for the community to hold businesses accountable for their safety policies. It's important for a business to uphold its safety policies for the safety of the community and everyone visiting the business. For example, if a business has stated that they require masks but a visitor sees that employees are not wearing masks then Zelp is the place to share this information with people in the community.

Conversely, if a visitor notices that a business follows their policies very diligently then they can affirm on Zelp that the business is being safe.

Similarities can be drawn between Zelp and applications such as Yelp and Google Maps but Zelp specifically focuses on COVID safety policies. On other websites this information is a recent addition and is therefore not at the forefront. Zelp is the place for people to go when their main concern is their safety during a pandemic. It's also easy for companies to say that they have COVID safety policies but Zelp's community feedback focuses on whether these businesses are being true to their word. Safety is at the utmost importance and is not muddled behind other reviews which might not be as important to elderly or immunocompromised people.

Conceptual Design

Concepts

User

Purpose: keep track of username, password, posted reviews and favorited businesses

Structure:

username: User -> String

password: User -> String

reviews: User -> Review

Actions:

getReviews(u : User):

result = u.review

getUsername(u : User):

result = u.username

getPassword(u : User):

result = u.password

changeUsername(u : User, n: String):

n not in u.username

u.username = n

changePassword(u : User, p: String):

u.password = p

Business:

Purpose: keep track of description, tags, and ratings

Structure:

name: Business -> String

password: Business -> String

reviews: Business -> Review

badges: Business -> Badge

Actions:

getReviews(b: Business):

result = b.reviews

getBusinessName(b: Business):

result = b.name

getLocation(b : Business):

result = b.location

getPassword(b: Business):

result = u.password

changeBusinessName(b: Business, n: String):

b.name = n

changePassword(b: Business, p: String):

b.password = p

changeLocation(b: Business, f: Float[]):

b.location = f

Operational Principles:

if postReview(u,r); getReviews(b): rs then r in rs

If no postReview(u,r); getReviews(b): rs then r in rs

Review

Purpose: Gives information about a given business to define the business "goodness"

Structure:

business: Review -> one Business

author: Review -> one User

Actions:

postReview(u: User, r: Review):

u.reviews += r

deleteReview(u: User, r: Review):

r in u.reviews

u.reviews -= r

editReview(u: User, old: Review, new: Review):

old in u.reviews

u.reviews -= old

u.reviews += new

Operational Principles:

if postReview(u,r); then r in u.reviews

if no postReview(u,r); then r !in u.reviews

if deleteReview(u,r); then r !in u.reviews

if editReview(u, r1, r2); then (r1 !in u.reviews) and (r2 in u.reviews)

Badge

Purpose : Organize business by categories for filtering

Structure:

type: Badge -> String

FilterByBadge: Badge -> Business

Actions:

addTag(b: Business, t: Tag):

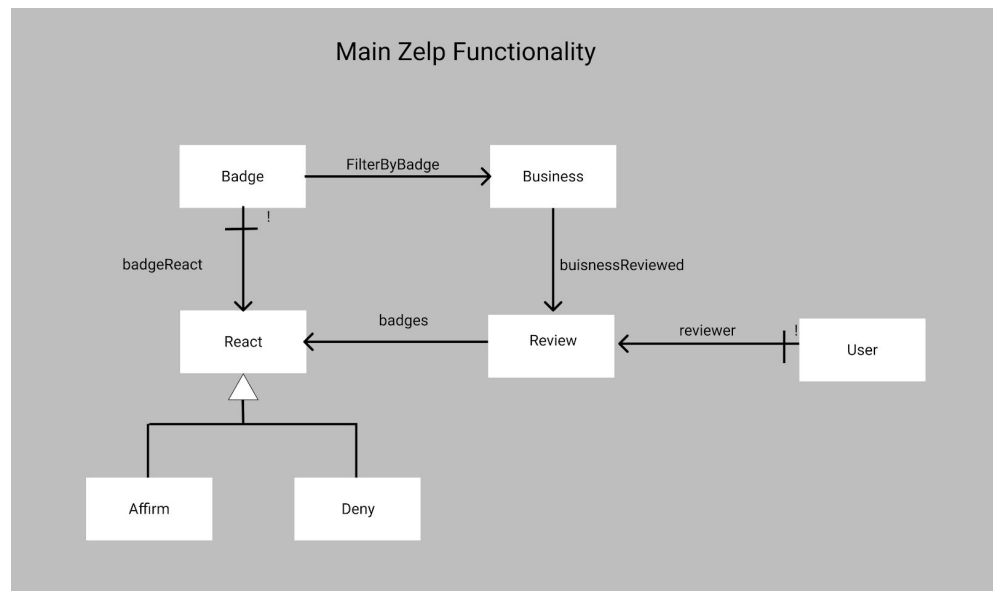
b.tags += t

```
removeTag(b: Business, t: Tag):  
  b.tags -= t
```

Operational Principles:

```
if addTag(b,t); then t in b.tags  
if no addTag(b,t); then t !in b.tags  
if removeTag(b,t); then t not in b.tags
```

Data Model



Wireframes

<https://www.figma.com/proto/5jeRlym6pO1peDgEhZzAzz/Zelp?node-id=18%3A1&scaling=scale-down-width&hide-ui=1>

Design Commentary

Conveying Business Safety Information Visually

In order to make Zelp as effective as possible, a lot of our design decisions are focused on making information very glanceable and easy to understand. Instead of increasing the amount of work that users have to do by reading/clicking/etc., we chose to make this information as visual and intuitive as possible.

Badge Signaling

A lot of visual work will be put into badges so that they can convey the most amount of information with the least amount of user action. One way we plan to do this is by designing icons for each of the badges such that users can easily deduce the policies that a business is adhering to. Another example of badge signaling we plan to provide is our “tiered” badges system, where we will put gold, silver, or bronze rings around a business’ badges to quantify the standard to which they are adhering to safety precautions. These rankings will be determined by the ratio of how many users affirm the badge to the amount of users that deny it. This ranking scheme should be very intuitive to users, and we plan to include tooltips and additional information on a ranking should a user desire to learn more about how it was calculated.

Badge Liking

An alternative that was considered was a counter showing how many users affirm the business’ adherence to the badge (similar to displaying the amount of upvotes on a tweet). However, we came to the conclusion that while this number would indicate some level of consensus amongst the residents in the Cambridge community who have visited that business, it would ultimately disadvantage smaller businesses that don’t get as much traffic as others.

Two Pane Layout

A commonality while navigating through Zelp is the presence of two panes, one displaying business information and the other displaying a map. This decision follows directly from wanting to give users the most information while (a) not being overwhelming and (b) reducing the amount of work they need to get it. By doing this, the application as a whole is much more seamless, and users can decide to focus on either pane of information depending on their interests. We anticipate the left side of the site to be used mainly to learn more information about specific businesses in the area, while the map on the right side of the page will be used to do quick filtering on businesses in the area. These two sides of the application will also be linked, displaying information in different ways as the user filters businesses by badge or clicks on map icons to learn more about. This continuity is only broken for account level operations like logging in or accessing account information, in which case we blur the page and overlay those sequences on top. By largely maintaining the continuity of this two pane layout, we are spatially separating the operations that users can perform, making the application much easier to use.

An alternative approach would be to have single-page windows for each operation, such as map or business profile viewing.

Single Pane Layout

A clear alternative to this would be to isolate different user journeys on different pages in the application. Because this application is intended for users who want to assess the safety of local businesses efficiently, we thought that this design approach would add to many user input steps to the journey of getting that information. In this approach, users would have to put much more effort in navigating the site, which puts less computer-savvy users at a clear disadvantage. Overall, we decided to go a different route from this approach in order to maximize the glanceability of the application and minimize the amount of user effort necessary.

Separation of Users

Zelp is going to be a very different application based on whether or not the user is a business owner or a resident, and there are a few key aspects in our design that reflect this distinction. This decision is most apparent on account-level operations like account creation or modification, and it can also be seen in the types of operations that users and businesses can perform on Zelp. We chose to make this explicit because of the fact that Zelp does not provide the same usage to all of its users. Thus, restrictions were placed on both businesses and non-businesses to ensure that we maintain this separation. For example, one clear restriction on businesses is that they cannot submit reviews on the platform.

The alternative to this was having the same account design for both businesses and other users, using other metrics in our backend to determine account type. While this may have an upside of streamlining the views used for Zelp users, it could also potentially confuse users on the types of operations and capabilities that they have available to them.

Ethics Protocol Analysis

Future #1: Zelp is released, incentivizing the spread of information for businesses, and allowing users to support businesses that follow protocol. Doing so encourages businesses to increase their covid safety practices.

Future #2: Zelp is released. A small company gathers the negative attention of the wrong person, who conspires to bombard the situation with negative reviews that unfairly shift the perception of the business, causing it to shut down.

Identify any and all stakeholders

- Large Businesses owners in Cambridge

- Small business owners in Cambridge

- Residents of Cambridge

 - Immunocompromised residents of Cambridge

 - Elderly residents of Cambridge

- Residents who test positive for Covid

What are your values, what are the values relevant at hand (use moral lenses)

How can bad actors be prevented?

- Choice: limit number of reviews per user

This system prevents any kind of “review bombing”. Users would have to go through an incredible amount of effort in order to create subsequent reviews of a business, and reviews could easily be tracked based on users reviewing the websites.

How can small businesses be supported?

- Choice: use ratio system

This system allows for all businesses to be treated more fairly. Businesses with smaller numbers of customers would not have to worry about hitting a minimum threshold of likes on a business in order to appear as though they are actively putting effort into following the practices. By adaptively weighting reviews as more feedback is added, businesses are all on the same playing field.