MVP Design Doc

Review Feedback

No suggestions for changes were made from our proof of concept phase and our wireframes were very accurately translated into the application, but we are keeping in mind user and business incentivization for the final product.

Usability Heuristics

#1: Visibility of system status

Whenever the user performs an important operation like account editing or review posting, a notification briefly appears at the top of the page. This also occurs when the user is missing an input or is trying to perform an operation that they don't have access to. With the use of these notifications throughout Zelp, users are always made aware of the system status.

#2: Match between system and the real world

We formatted the success and error message on Zelp to be human-readable, rather than propagating exactly what the backend is producing. This ensures that users not familiar with software will be able to understand the problems happening at a high level. Elsewhere, we use button types and layouts that should be very familiar to users who have used other platforms on the web.

#3: User control and freedom

This heuristic can be clearly seen with the use of confirmation pop-ups on the account pages for users and businesses. When a user / business wants to delete their account, for example, they are given a confirmation prompt that they can easily back out of if they made a misinput. In the more specific case of businesses, there are confirmation prompts for the addition and deletion of badges, as these operations convey very important information to the public and should be handled carefully.

#4: Consistency and standards

This heuristic influenced many aspects of our website. For example, our choice to use Google API conforms with many common popular websites. Using the Google Maps API allows us to maintain a quality of experience and interaction that users have come to expect. This heuristic also plays a part in our general design. Our main setup always has 2 panes, a map and an information pane, which mimics many websites with similar functions (AirBnb, Yelp, etc.)

#5: Error prevention

We have focused on error prevention by ensuring forms cannot be submitted without required information, as well as by our visual display. For errors (both user and developer) a red panel will pop up from the top of the page, immediately gaining the attention of the user with a clear and informative message that explains exactly what went wrong.

#6: Recognition rather than recall

Our main implementation of this heuristic comes from our layout. There are only 2 main interface types for Zelp: 2 Pane and Account. 2 Pane handles all of the information a user should expect while browsing Zelp, and always looks the same: a map and an information pane. The information on the info pane can change, but there are back buttons and home buttons provided as needed, and they are both shallow in scope, stopping a user from getting “lost” on the website. The account page either gives the basic information about an account, or allows users to create an account. Even from there, the home button is located at the same location, further reducing mental strain from users.

#7: Flexibility and efficiency of use

This heuristic is the main thought process behind the functionality of filtering businesses by their safety badges on the main page. As soon as a user goes to Zelp, without even logging in, they see a list of businesses, which is efficient for anyone trying

to quickly receive information from the website. Filtering businesses by badges gives each user the flexibility to see businesses that meet all of their COVID safety criteria, therefore also making their business search efficient.

#8: Aesthetic and minimalist design

Zelp is designed with a minimalist black-and-white color palette that allows select important information to be emphasized with color. Some of the few elements that have color on Zelp include: error and success messages, business names, and map icons. Overall every page is meant to show only the information necessary. The main page shows a list of business names with their associated badges and the rest of the information can be learned by going to a separate business page. This prevents information overload for the user and focuses on showing what is important relevant to the rest of the content on the page.

#9: Help users recognize, diagnose, and recover from errors

This heuristic is implemented through our *EventHandler* Vue component. Any error from our backend is forwarded to the EventHandler, which then promptly posts it in the upper middle section of the screen. The error messages also stack upon each other (limited to 3), can be closed, and automatically disappear after 3 seconds. The user gets immediate feedback from any errors on their inputs. And our descriptive error messages notify the user of what they might have done to cause this error.

#10: Help and documentation

This heuristic is addressed through our simple and clean UI. Allowing the user to immediately understand where everything is from our homepage. We also utilize tooltips in order to more thoroughly explain detail along our UI (i.e. badge filtering in our Feed and info windows in our Map component) . All features are standard, and easy to learn. While we do not have any iconography at the moment, when we do add them, we will provide additional information in the form of a key.

Additional Design Decisions

Any additional significant design decisions you made when implementing your app. As with the assignments, produce a short and compelling title that summarizes each design question you addressed and detail the alternatives that were considered.

Frontend Routing

Previously we had a layout for one single router-view and multiple separate pages. We had the homepage which had the map and feed, a business page to view an individual business, a user page to see user info/settings, and a login page; however, with the versatility of

vue-router, we established two router-views, one for the left panel of the homepage, and one for a new overlay. This allowed us to drastically simplify the layout of our website, while also still utilizing route naming. We now have the map as a one-time load component for the page. Other more simple pages then got placed on the overlay layer, which allowed for simple user actions. While we could have stuck to a more trivial use of vue-router, and made a page mimicking a standard multi-page web application our single-page application layout allows for a more intuitive, modern user experience.

Pagination

At first the main page displayed all businesses at once in the business feed. This made the page load a little slower than we would have liked and, more noticeably, the map was overwhelmed with markers for all 800+ businesses. We decided to instead paginate the businesses into groups of 10. Each page loads much more quickly and the map is more legible with ten numbered markers that clearly correspond with the businesses that are also numbered. The business feed is also much less intimidating and feels more cohesive since it does not scroll infinitely.

Info Window Condensation

Initially, we planned on having the map function such that if an informational marker was clicked, the user would be sent to the business' page. However, after implementing this, we realized that it did not feel intuitive, users should be encouraged to use the map to explore, not to make a final decision. As such, we used an Info Window, so that when users click on a marker in the map that represents a business, a pop up shows up on the window that allows for users to get a brief overview of the information instead.

Updated Ethics Protocol

An updated version of the protocol with one additional design decision (4 total), as well as enumeration of changes made to the original protocol after having iterated on your design

Ethics Protocol Analysis

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. This was kept the same during the next phase, but it was made a bit more specific. We decided to set the limit as one review per user per business. Any given user is only able to leave one review for any given business.

Business authentication

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. This idea was kept the same, and will be implemented fully in our final. As of right now, our metric for this system is the number of positive reviews/number of positive and negative reviews. No weight is given for a user that decides to not leave a review.

How can user experience quality be standardized?

Choice: Pagination

Because of the large number of businesses in the Cambridge community, rendering them all on the business feed would put undue stress on users with weaker internet tools and would be less effective at conveying information. Thus, we used pagination such that all of the computers/smartphones of users could reasonably render the information with ease. This also ensures that information is presented in a digestible way that all users on the platform can understand.