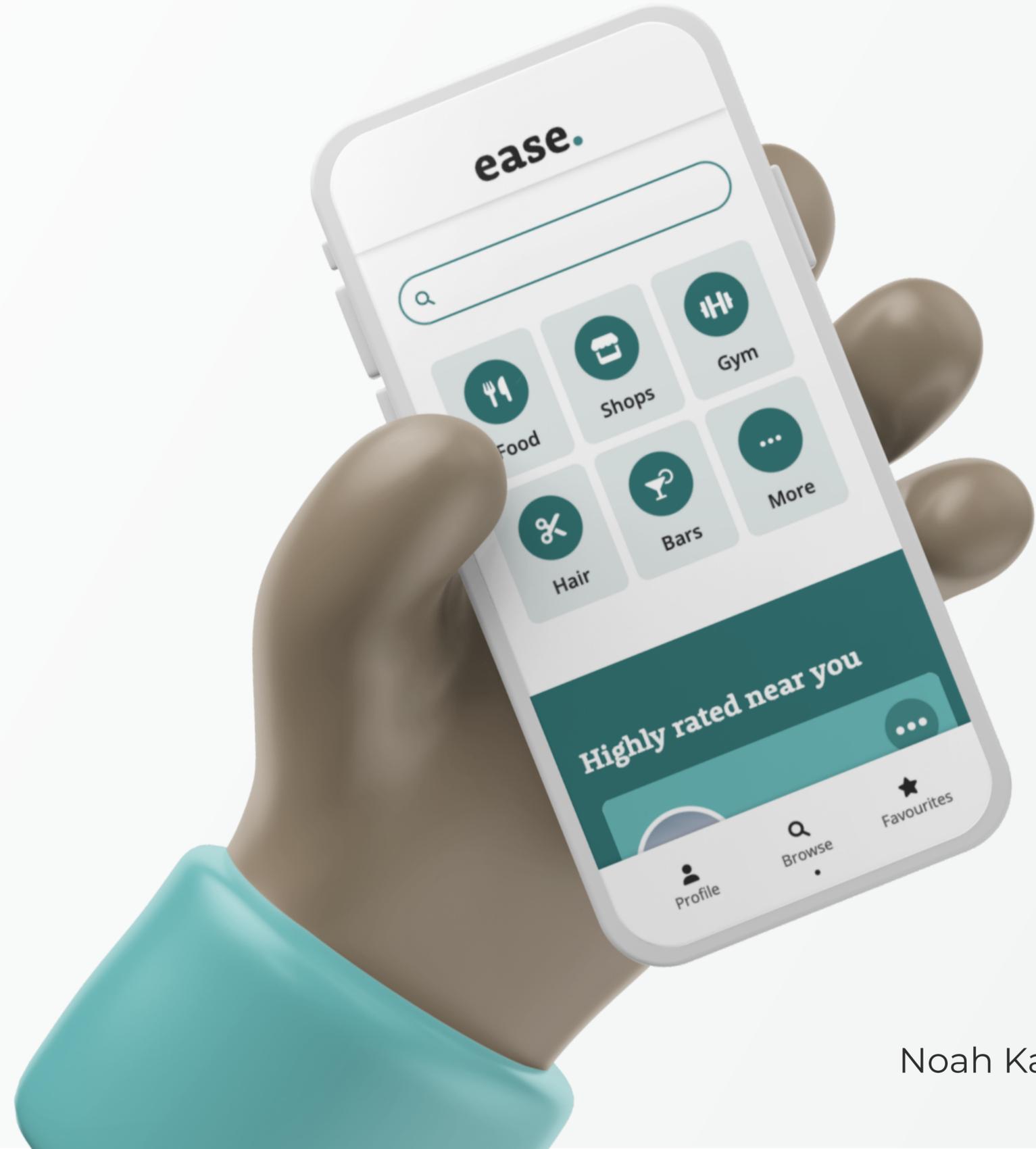


# ease.

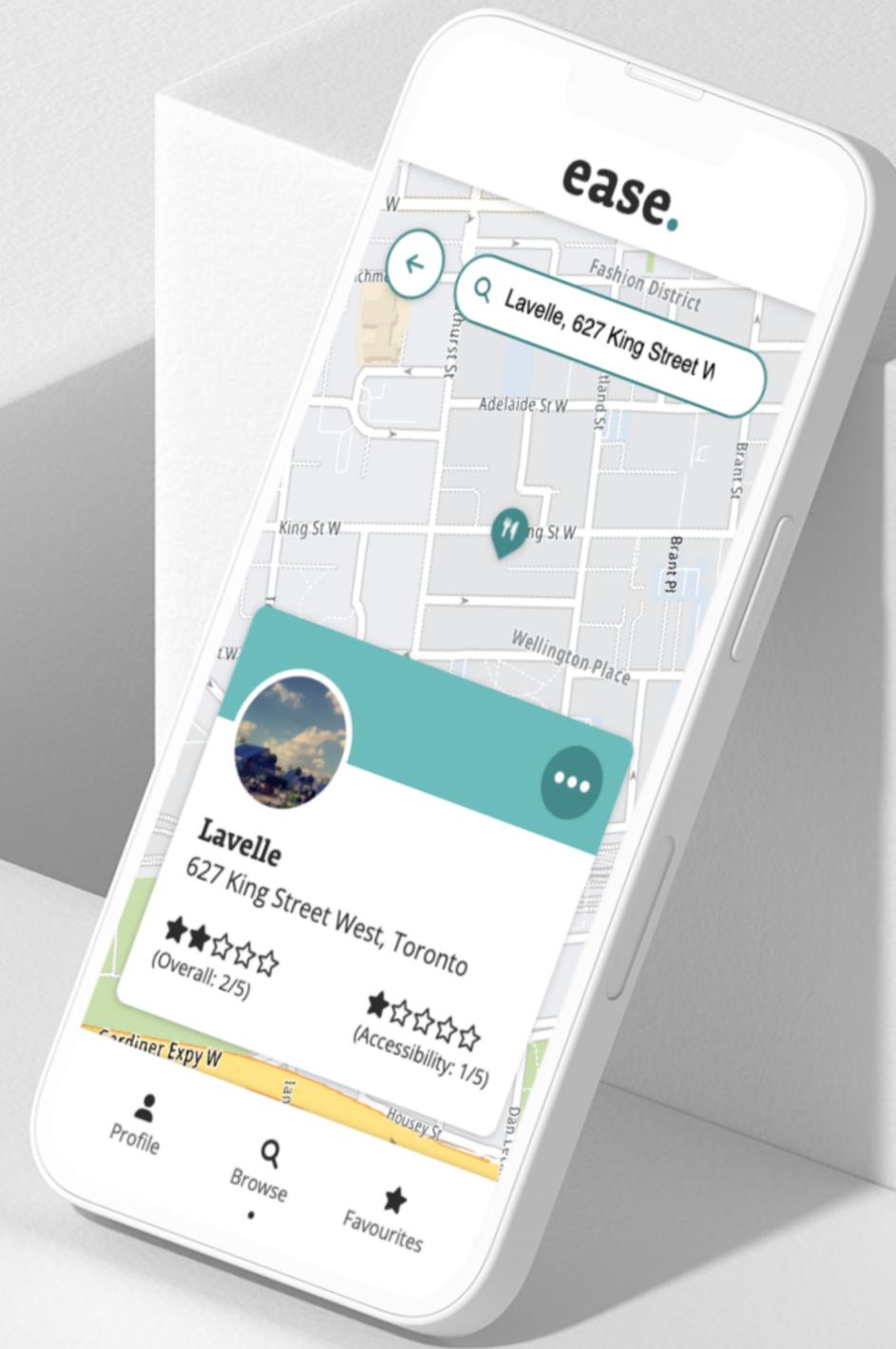
Making access easy



# Product overview

**Ease** is a web application that allows individuals with disabilities to review businesses based on accessibility and overall experience in order to increase the availability of accessibility information online.

After entering information about their disability, users will be able to see tailored reviews and accessibility information that relates to their own personal needs.



# What problem does ease solve?

Trying new experiences can be hard for anyone – but they can be even more difficult for people with disabilities that have more barriers to everyday life than non-disabled individuals.

A major challenge for individuals with disabilities is finding out whether an experience they'd like to try out is accessible to them. The current process for this can be tedious. Whether it's calling to ask staff prior to arriving, searching tirelessly online, or just showing up and hoping for the best, each of these processes can be exhausting, frustrating, and in the worst case humiliating or dangerous.

# How does ease solve this?

Ease seeks to improve the quality of life for people with disabilities by making accessibility information for shops, venues, and other types of businesses more readily available online through the use of user-generated reviews.



# Project Validation

Results from surveys and interviews showed that many individuals are searching for a way to find more information about the accessibility of businesses online, and that they don't always trust businesses to provide it. This was undoubtedly the most crucial finding as it provided clear evidence that there was a need for a product that could solve this problem without relying on help from non-disabled people.

**If there was a way to know whether or not a business was accessible to you without having to contact them, is that something you'd be interested in?**

*"Yes, but often someone's idea of accessibility is wrong or determined by a non-disabled person. So I wouldn't trust it."*

# Project Validation

This qualitative information combined with other quantitative metrics found through secondary research reinforced the need for a solution to the problem and ensured that there were more than enough users that would be willing to use it. By grounding the project in research, it was easy to move forward with confidence that the project was worth pursuing.

**1 Billion** people have disabilities world-wide

People with disabilities make up **20%** of the market in Canada

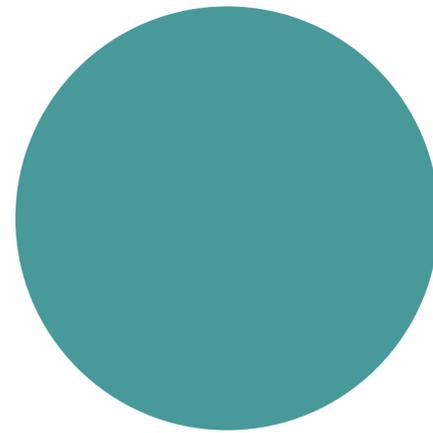
Consumers with disabilities in Canada have a combined purchasing power of **\$55,000,000,000** annually

# Project Validation



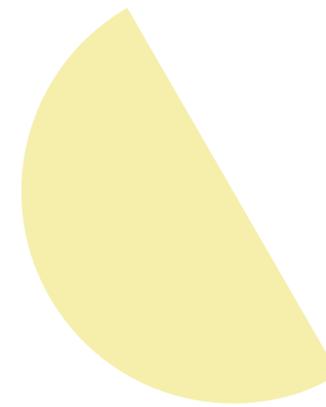
**71.4%**

Of respondents said they try out new restaurants very infrequently if at all.



**100%**

Of respondents said they'd be interested in a better way to find out if a business was accessible.



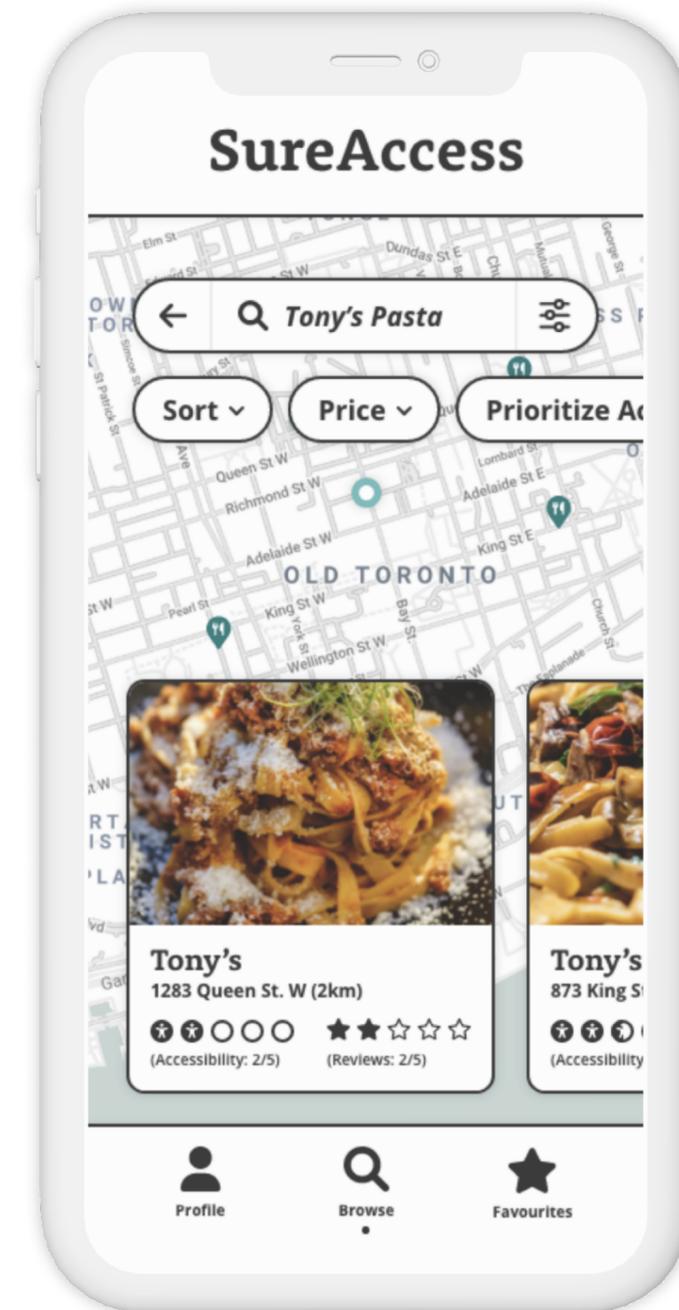
**~ 50%**

Of respondents said the last time they went to a restaurant, store, or venue for the first time the accessibility, customer service, and availability of accessibility info online was below average.

# Usability Testing Overview

Throughout this semester, I spent some time reworking the original visual design of the application after realizing that it might not be as accessible as it could be. I then moved on to improve the user experience through usability testing, conducting 2 tests focusing on three key areas of the user experience:

- Onboarding
- Search
- Leaving a review



# Key Research Findings

## **Content is too long**

Content needs to be more concise. Each user thought that while the copy was descriptive, it needed to be shortened in many places.

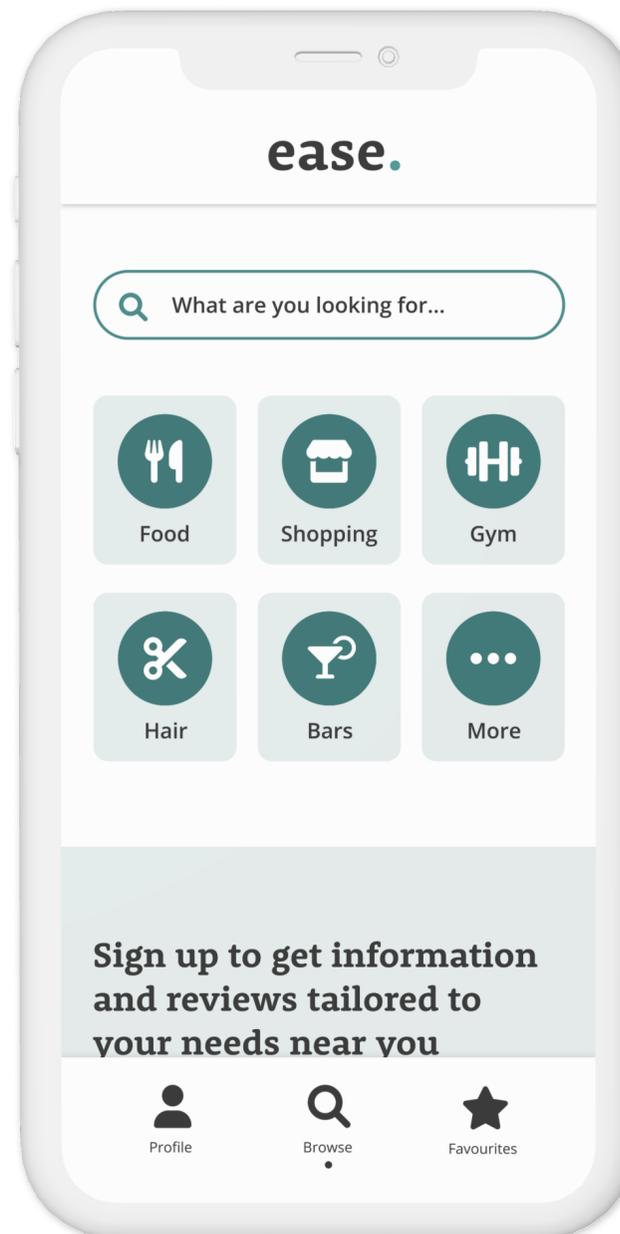
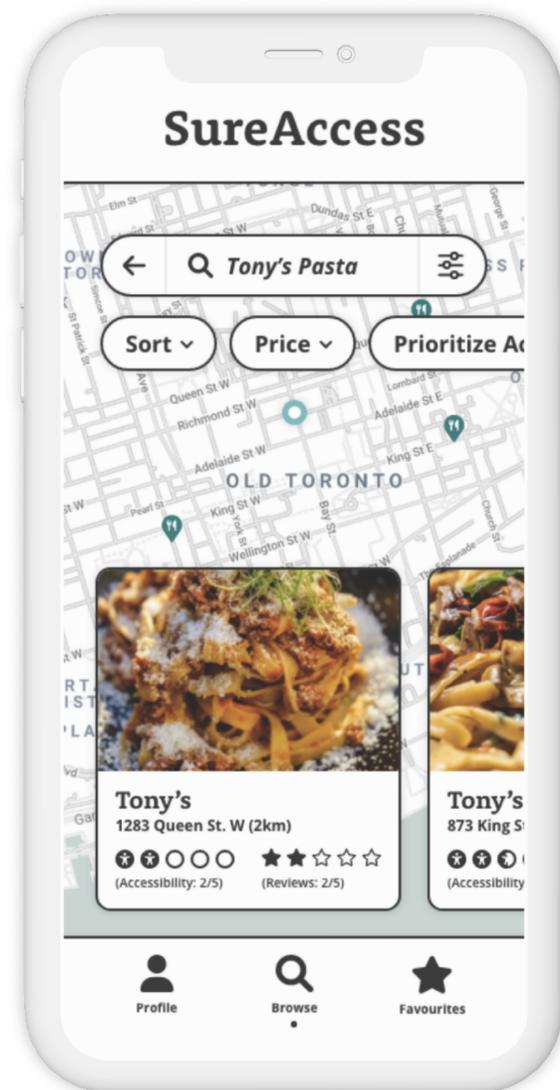
## **Accessibility descriptions**

Descriptions need to be included any time potentially confusing accessibility language is used through the application.

## **More clarity for reviews**

It needs to be made more obvious that only the relevant reviews are being show to users based on the information in their profile.

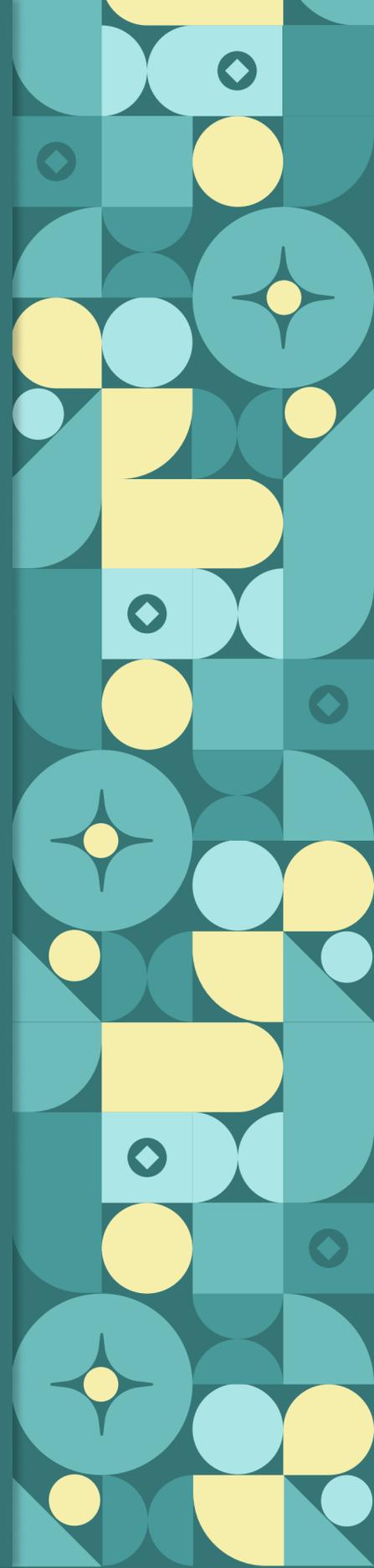
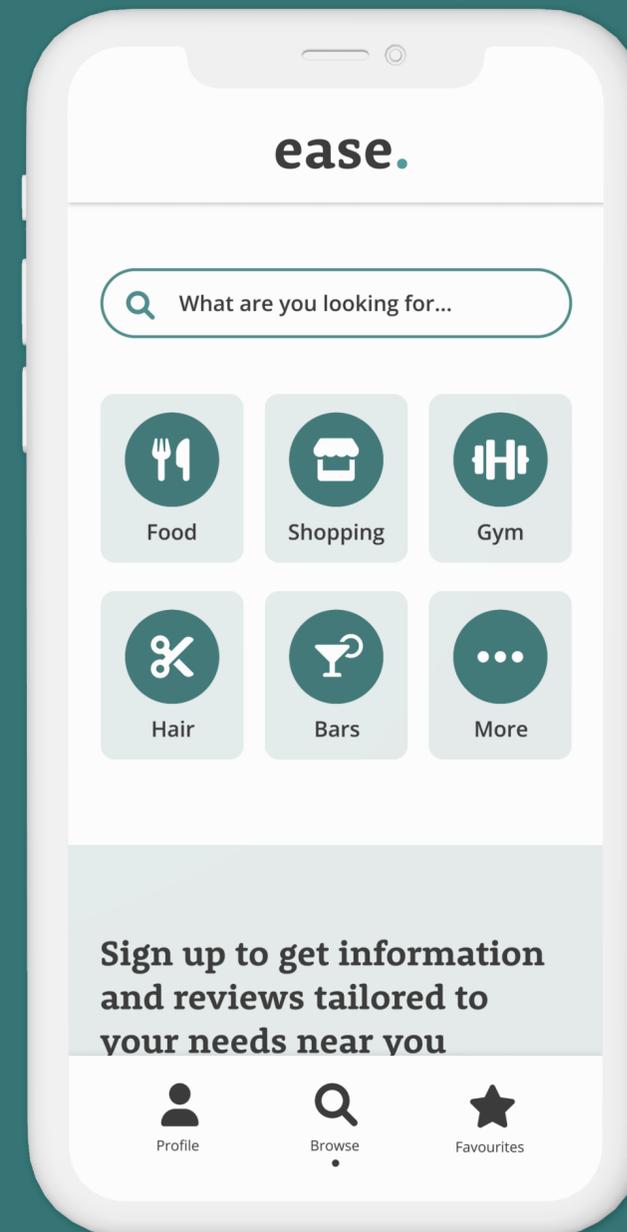
# The evolution of ease

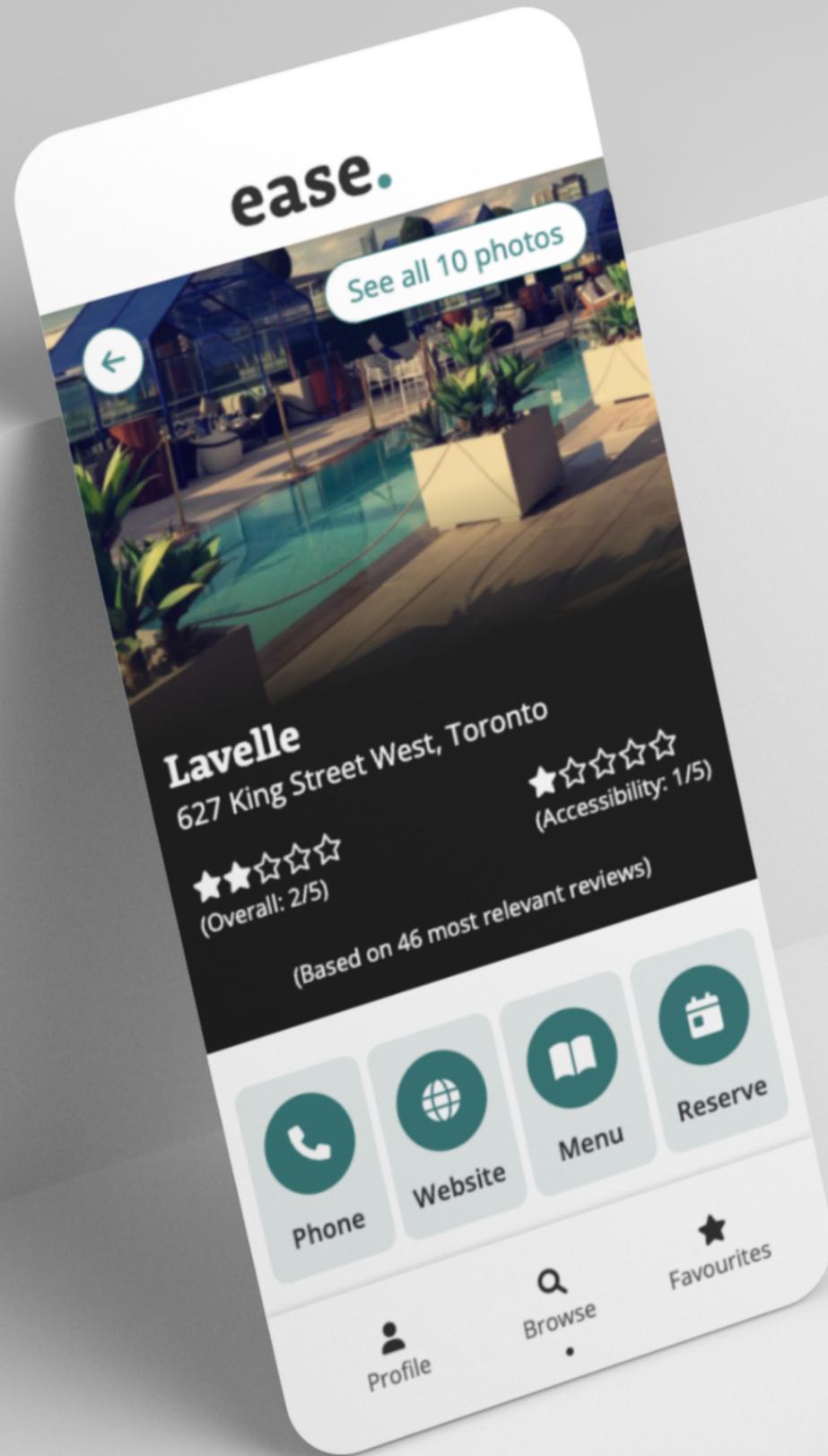


Over the course of developing this project, it has seen a few redesigns. What started out as SureAccess, eventually became ease, and with it came a revitalized and more welcoming visual style, along with a new and improved user experience.

# Final Prototype

After implementing the necessary updates in response to the feedback, the result was a fully functional, updated prototype, that achieved each of the intended project goals.





# Final project scope

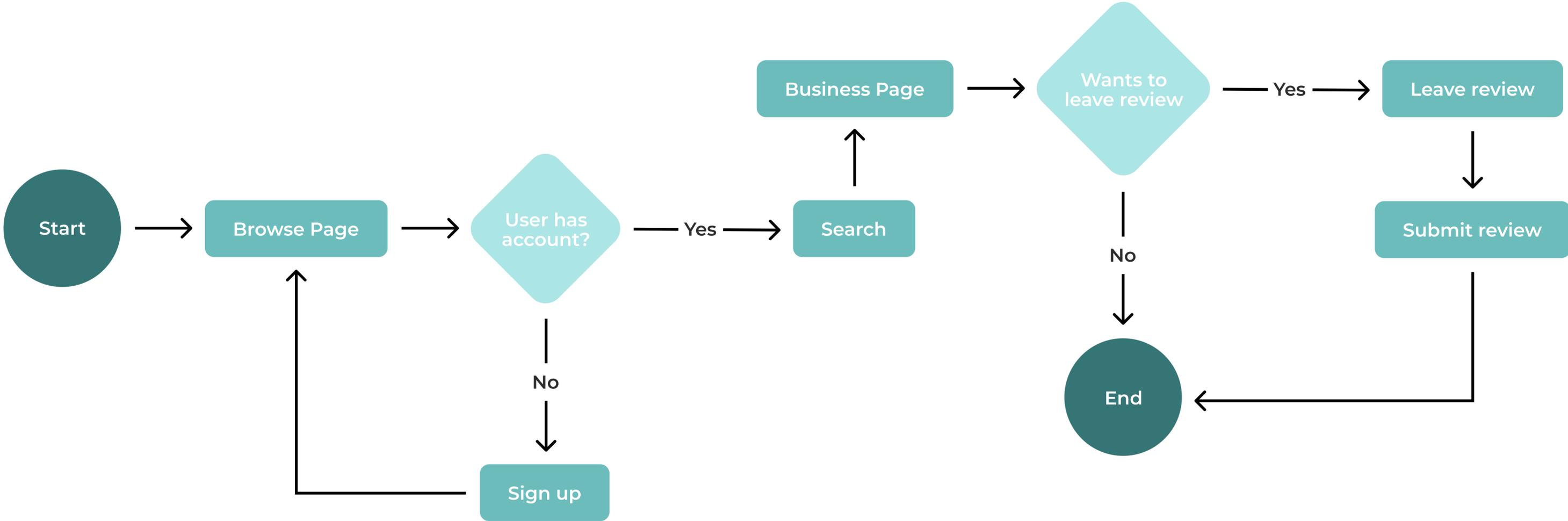
## Deliverables

Fully developed front-end simulated user journey including:

- Functional Search
- Ability to view business pages and accessibility information
- Ability to leave a review

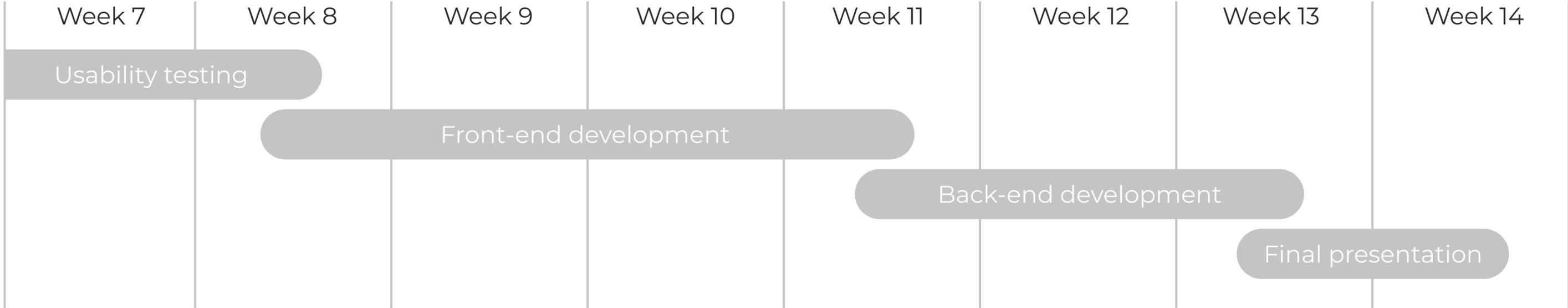
In order to ensure that the simulated user journey was as convincing and demo-able as possible, I opted to include functional search over an onboarding experience.

# Final User Flow

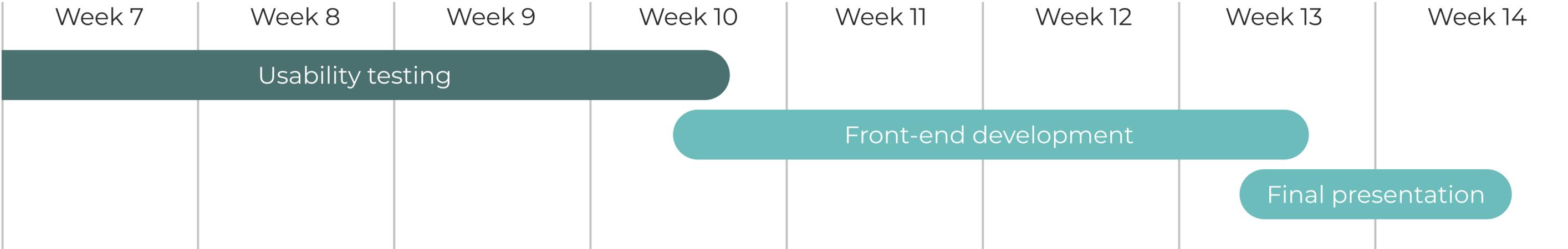


# Schedule Changes

## Schedule from last iteration



## Final Schedule





# Final iteration — Development

In the final iteration it was time to move on to development of the final product. This phase consisted of four parts:

- 1. Updated technical requirements**
- 2. Continued technical research**
- 3. Development of the final product**
- 4. Testing and bug fixing**

# Technical Planning

User



Client-side



HTML5  
CSS  
JAVASCRIPT



External API Calls



TOMTOM SEARCH API

With the scope being reeled in to focus on a front-end only experience, the technologies required for the MVP was greatly reduced. The web application would be built using **HTML**, **CSS**, and **JavaScript**, and would utilize the **TOMTOM Search API** for maps, search functionality, and POI (point of interest) data.



# Final iteration — Development

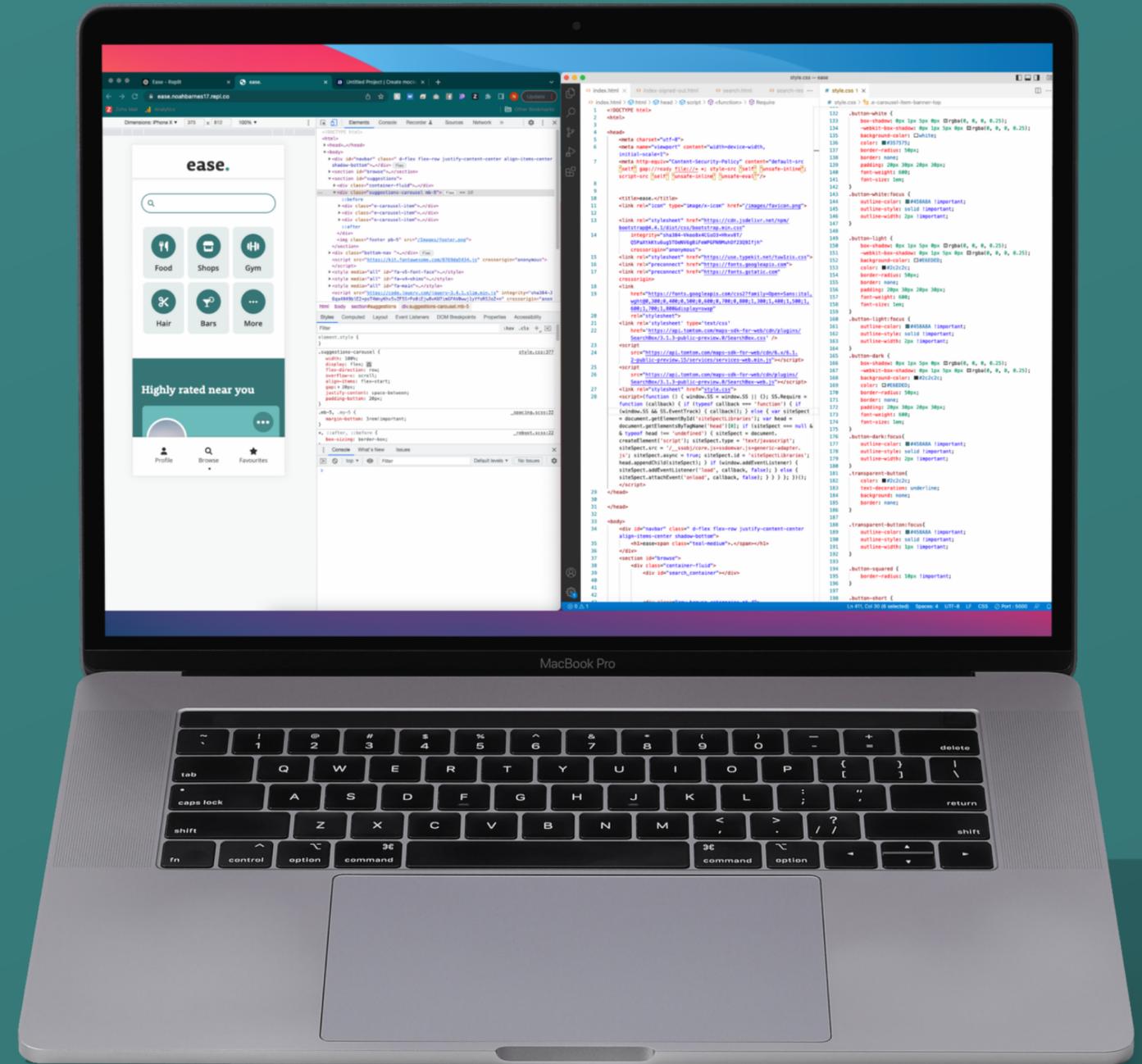
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- 1. Updated technical requirements**
- 2. Continued technical research**
- 3. Development of the final product**
- 4. Testing and bug fixing**

# Development

Using **Visual Studio Code** and the **Live Server** extension, I was able to spin up a **simulated Node.js environment** for development and testing.

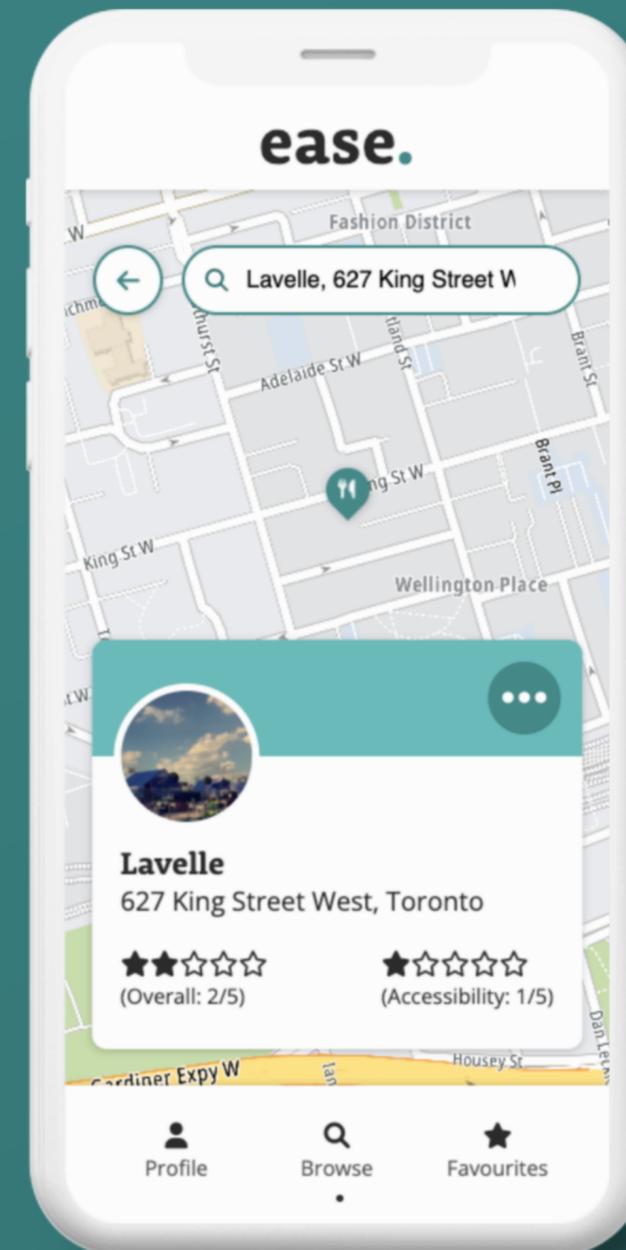
From there, I started by first coding the front end elements that I wanted to include, then moved on to integrating the search API.



# Functional Search

To make a convincing, demo-able product, I wanted to ensure that users could actually look up real restaurants, see their location and some reviews, and leave a review themselves.

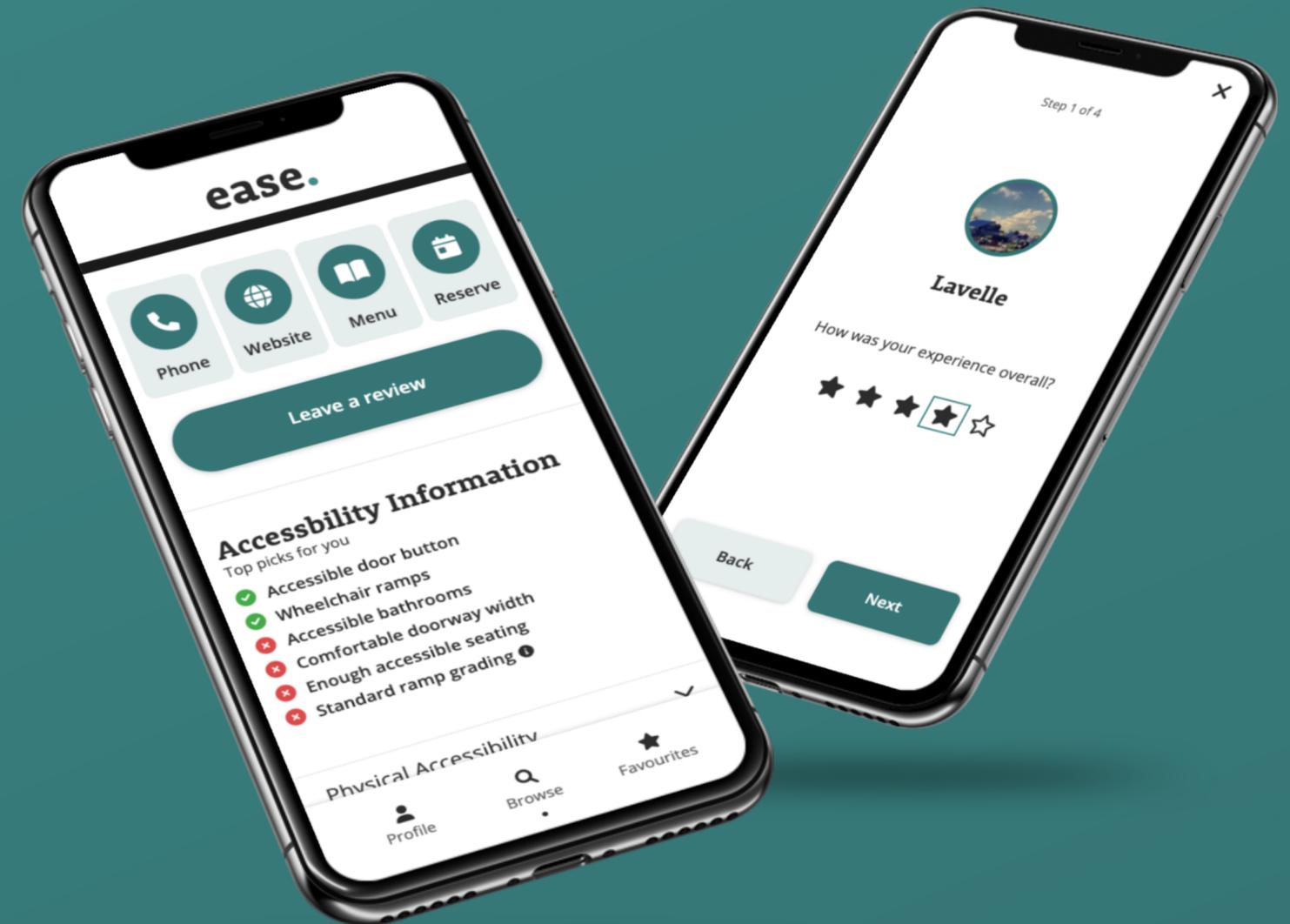
Using the **TOMTOM Search API** I was able to integrate a functional search bar which would allow users to search for businesses and get real results, along with auto-complete functionality on their searches.



# Leaving a Review

From there, I was able to utilize **JavaScript** and the **HTML Web Storage API (localStorage)** to mimic a real set of forms meant to collect review data.

This would perform exactly like a normal review form, and is even able to output a completed review summary at the end for the user to see what they're entered.



# Functionality & Limitations

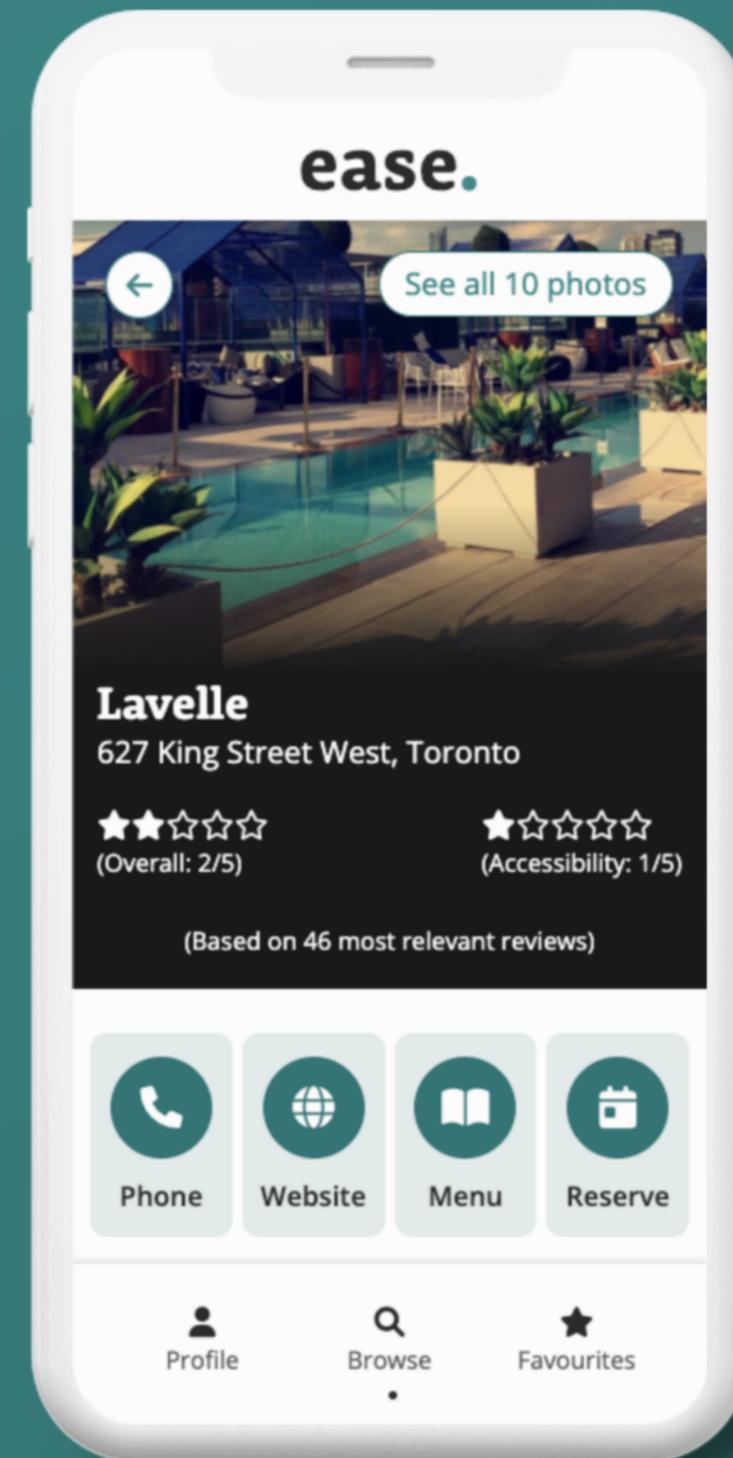
For this proof of concept, I chose to limit the final build to a functional mobile-only walk-through that would allow users to see what it felt like to really use the application. The intent was to make the experience feel as real as possible, and as such, I chose to make sure that features such as search and leaving a review actually worked, and that pre-populated fields and data would be as non-existent as possible. This would ensure that users could get a good idea of how the application could help them.

If I'd have had more time, I would have continued this with the onboarding experience, using the exact same method of development as I did for leaving a review; using localStorage to keep track of the data that the user enters, and then using it to populate the application. From there it would be a much smaller effort to simply add a database to store the users' information and share their reviews on the platform.

# Final Product

The final product is a functional front-end experience, that serves as a proof-of-concept for ease. It allows users to search for business', find and view business accessibility data, and share their own experience—all contributing to a greater ecosystem of accessibility information online.

While the current iteration only stands as a product trial, it could be easily scaled to meet the needs of users.



# Appendix

[Link to GitHub](#)

[Link to Replit \(join link\)](#)

[Link to Replit \(site link\)](#)

[Link to TOMTOM Search API Documentation](#)

[Link to Computation P2](#)

[Link to Computation P3&4](#)

[Link to IXD Studies Research](#)

[Link to IXD Studies Proposal](#)

[Link to Video Archive](#) Password: easy-peasy