



High-Fidelity Prototyping & Evaluation Report

Team Grimer



2024

FIT5152



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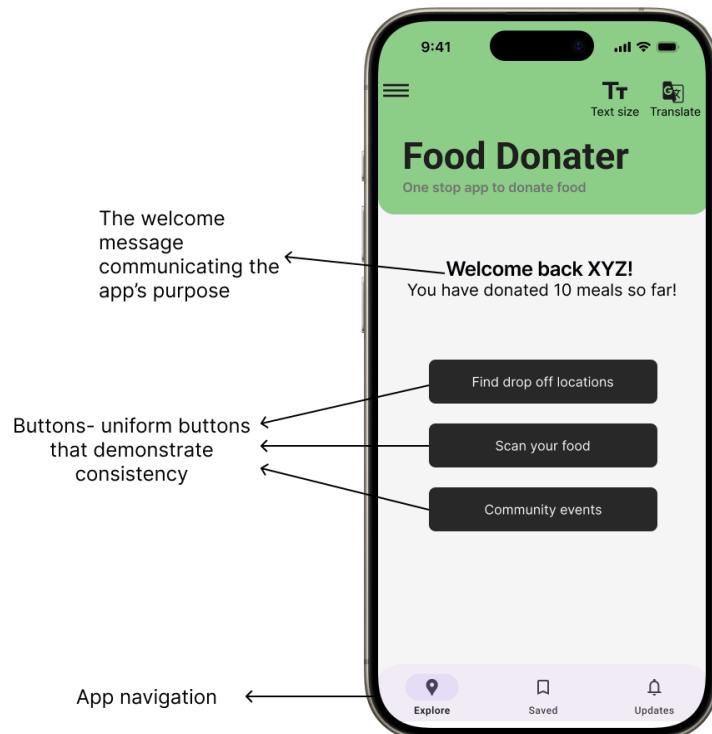
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Group Work: High-Fidelity Prototype

Abbishek Kamak:



Screen: Home

Screen Overview

1. Welcome Message

Design Element: A simple, warm welcome message at the top of the screen.

Usability Principle: Visibility (Norman's Principle)

- The welcome message clearly communicates the app's purpose, enhancing user understanding right from the start.

2. Buttons

Usability Principle: Consistency (Shneiderman's 8 Golden Rules)

- The buttons are uniform in size, shape, and colour, creating a cohesive look and making them easily identifiable as actionable items.

Annotations for Usability and Accessibility Features

- **Welcome Message:** Annotate to highlight how it sets the tone and context for the app.
- **Button Design:** Label the buttons with their functions, emphasizing clarity and ease of navigation.
- **Colour Contrast:** Note the high contrast between text and background for readability.

Accessibility Guidelines

1. Perceivable: Text Alternatives

Implementation: Each button includes text labels that describe its function, ensuring that all users, including those using screen readers, can understand the options.

2. Operable: Bottom Navigation

Implementation: The app allows navigation through buttons using shortcuts, ensuring that users with mobility impairments can easily interact with the interface.

3. Understandable: Clear Language

Implementation: The language used in the welcome message and button labels is simple and straightforward, making it easy for users of varying literacy levels to understand.

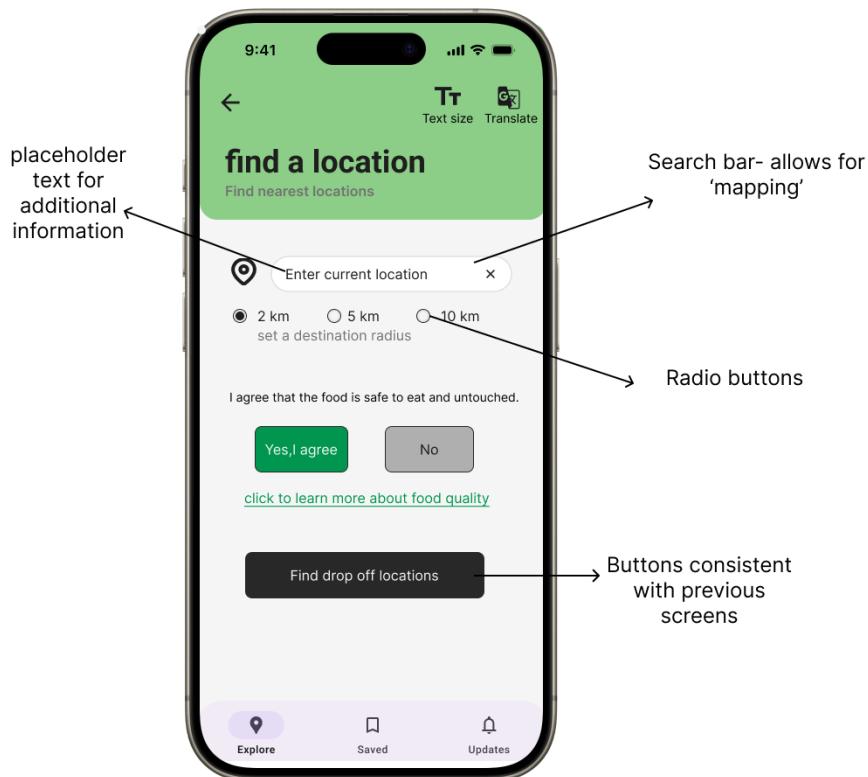
Changes from Low-Fidelity to High Fidelity Prototype

• Change: Introduced a Dynamic Welcome Message

Explanation: In the high-fidelity prototype, the welcome message now includes a dynamic element that greets users by name if they are logged in, such as "Welcome back, [User's Name]!" This personal touch enhances user engagement.

Reasons for the Change:

1. **Personalization:** Addressing users by name creates a more inviting atmosphere and fosters a sense of connection with the app.
2. **Increased Engagement:** A dynamic welcome message can make users feel valued and encourage them to interact more with the app, enhancing overall retention.
3. **Enhanced User Experience:** This feature adds a layer of warmth and familiarity, making the app feel more tailored to individual users while maintaining a minimalist design.



Screen: Search locations

Screen Overview

1. Search Bar

Design Element: A prominent search bar at the top where users can enter their current location.

Usability Principle: Mapping (Norman's Principle)

- The search bar directly correlates to the action of finding locations, making it intuitive for users to understand its purpose.

2. Radio Buttons for Radius Selection

Options: 2 km, 5 km, 10 km

Usability Principle: Affordance (Navigation Design Guidelines)

- The radio buttons clearly indicate selectable options, guiding users to filter locations based on their preferences.

3. Action Button

Button Style: Consistent with the previous screen (e.g., "Search Locations")

Usability Principle: Consistency (Shneiderman's 8 Golden Rules)

- Using the same style as previous buttons ensures familiarity, making the interface easier to navigate.

Annotations for Usability and Accessibility Features

- **Search Bar:** Annotate to highlight how its placement at the top makes it easy to find and use.
- **Radio Buttons:** Label the purpose of each button, emphasizing that they allow users to set their preferred search radius.
- **Button Feedback:** Note the consistent design and feedback mechanism from the previous screen.

Accessibility Guidelines

1. **Perceivable:** Text Alternatives

Implementation: The search bar includes placeholder text (e.g., "Enter your location") to guide users, ensuring clarity for those who may need additional context.

2. **Operable:** Focus Indicators

Implementation: Clear focus indicators on the search bar and radio buttons ensure users can see where they are navigating, aiding users who rely on keyboard navigation.

3. **Understandable:** Clear Labels

Implementation: Each radio button is labelled clearly with distance options, making it easy for users to understand their choices and the implications of each selection.

Change from Low Fidelity to High Fidelity Prototype

• **Change:** Updated Radio Buttons from Dropdown

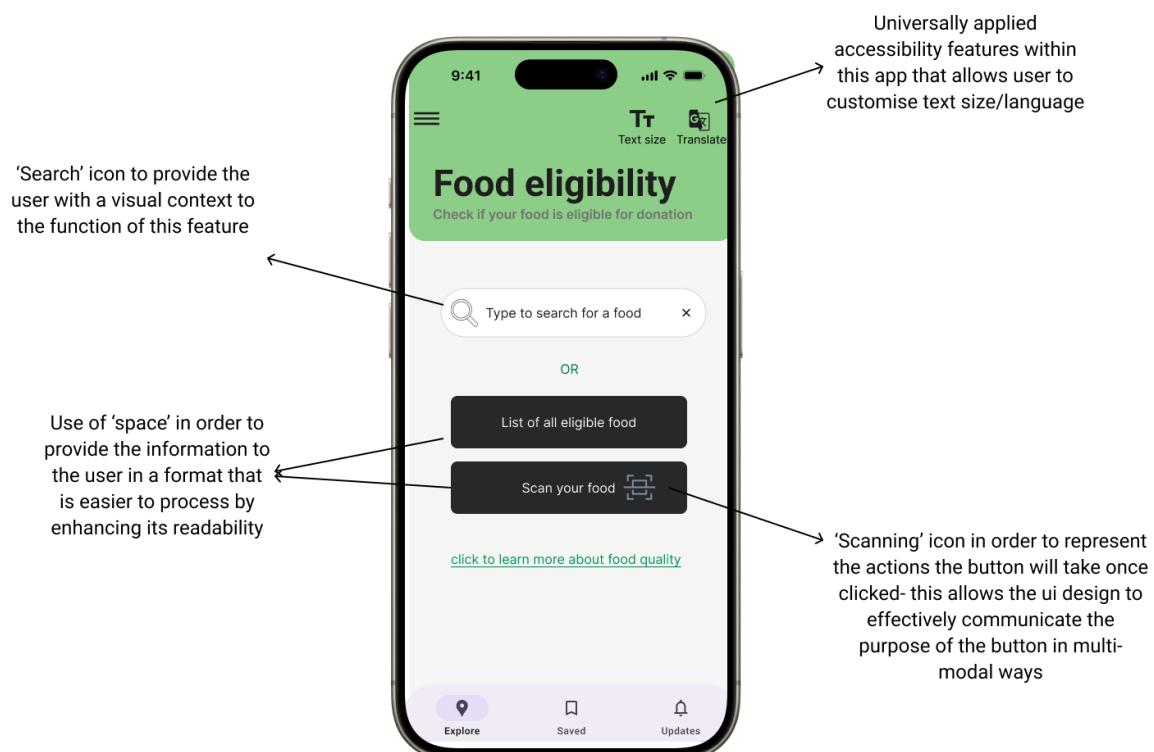
Explanation: The radio buttons replaced the dropdown menu for selecting the radius (2 km, 5 km, 10 km). This change enhances usability by making the options more visible and accessible at a glance.

Reasons for the Change:

1. **Immediate Visibility:** Radio buttons display all options on the screen simultaneously, allowing users to quickly see and compare them without needing to click and open a dropdown menu. This reduces cognitive load and speeds up the decision-making process.
2. **Faster Interaction:** With radio buttons, users can select their preferred radius with a single click, rather than having to navigate through a dropdown. This streamlined interaction can lead to a more efficient user experience, especially for users who may be in a hurry.

3. **Enhanced Clarity:** Radio buttons clearly indicate that only one option can be selected at a time, making the choice more straightforward. This is particularly important for filtering options, as it eliminates confusion about whether multiple selections can be made.

Janice Jobin



Screen: Food eligibility

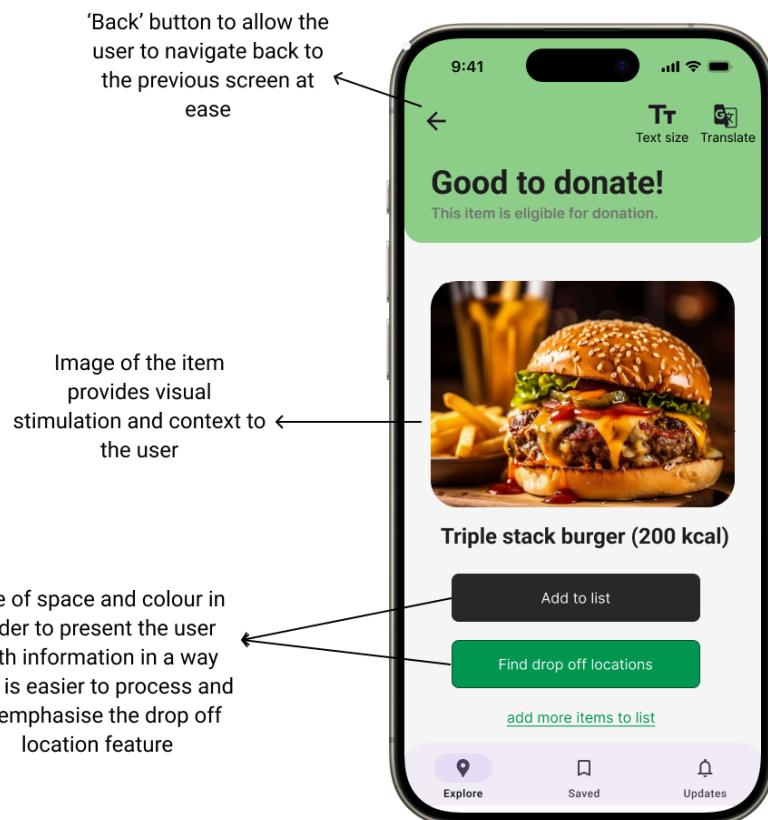
Navigation and menu design guidelines: Utility Navigation

The search bar in this screen ensures utility navigation, allowing users to navigate to or engage with the pages that they require, providing access to these pages at ease.

Accessibility guidelines:

- **Perceivable:** The 'scan your food' icon and 'search' bar icon present the user with visual context that allows them to perceive information in multiple ways
- **Operable:** The 'hamburger' icon on the top left, along with the navigation bar, allows users to quickly navigate between screens, users are presented with multiple ways of undertaking a task - they may either search for, view a list, or scan their food item.
- **Understandable:** The use of 'space' when presenting the options the user may take increases readability and enables it to be easier to process

A few key changes were made to this screen in the process of its transformation from low-fidelity to high-fidelity. A major difference was in the inclusion of more options or constraints within this screen, allowing the user more options and control in terms of the actions they can take within this screen. While the low-fidelity prototype only had the option to search or scan an item, this screen contains various options such as providing a list of food items and more information to the user. There is an additional 'hamburger' icon that displays more navigational options and various accessibility features such as customising text size and language.



Screen: Results screen

Ben Shneiderman's 8 Golden Rules: Keep Users in control

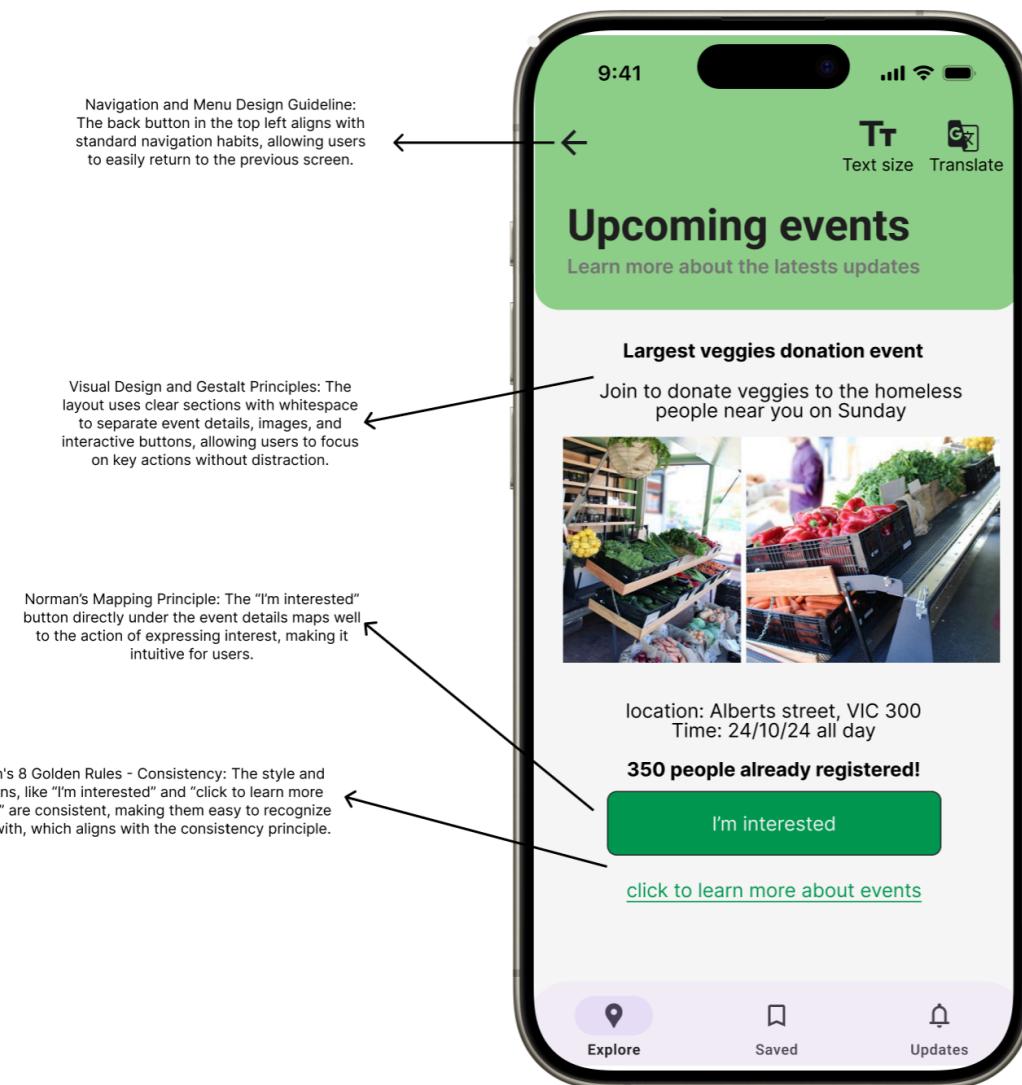
This screen maintains Shneiderman's golden rule of keeping users in control, by ensuring that they are given choices on where to navigate next, without feeling forced into taking an action. They are presented with a 'back' button that gives them the option to back to the previous screen, while also being presented with various options on the screen to allow them to undertake various actions such as adding to their list, finding drop-off locations and searching for more items to add to their list. The navigation bar at the bottom of the screen additionally allows the user extra options to traverse through various screens, providing them with navigational control.

Accessibility guidelines:

- **Perceivable:** There is text description, along with an image for visual context of the item therefore the content is able to be perceived through multiple ways.
- **Operable:** Users are presented with multiple options of where they may want to go next, allowing them to easily navigate and traverse through the app.
- **Understandable:** Users are provided with adequate context throughout the process and are also provided with a universal translation option throughout the app in order to efficiently switch between multiple language options.

Huiying Wang

Screen: Upcoming events



Design Guideline

- **Norman's Mapping Principle:** The “I’m interested” button directly under the event details maps well to the action of expressing interest, making it intuitive for users.
- **Navigation and Menu Design Guideline:** The back button in the top left aligns with standard navigation habits, allowing users to easily return to the previous screen.

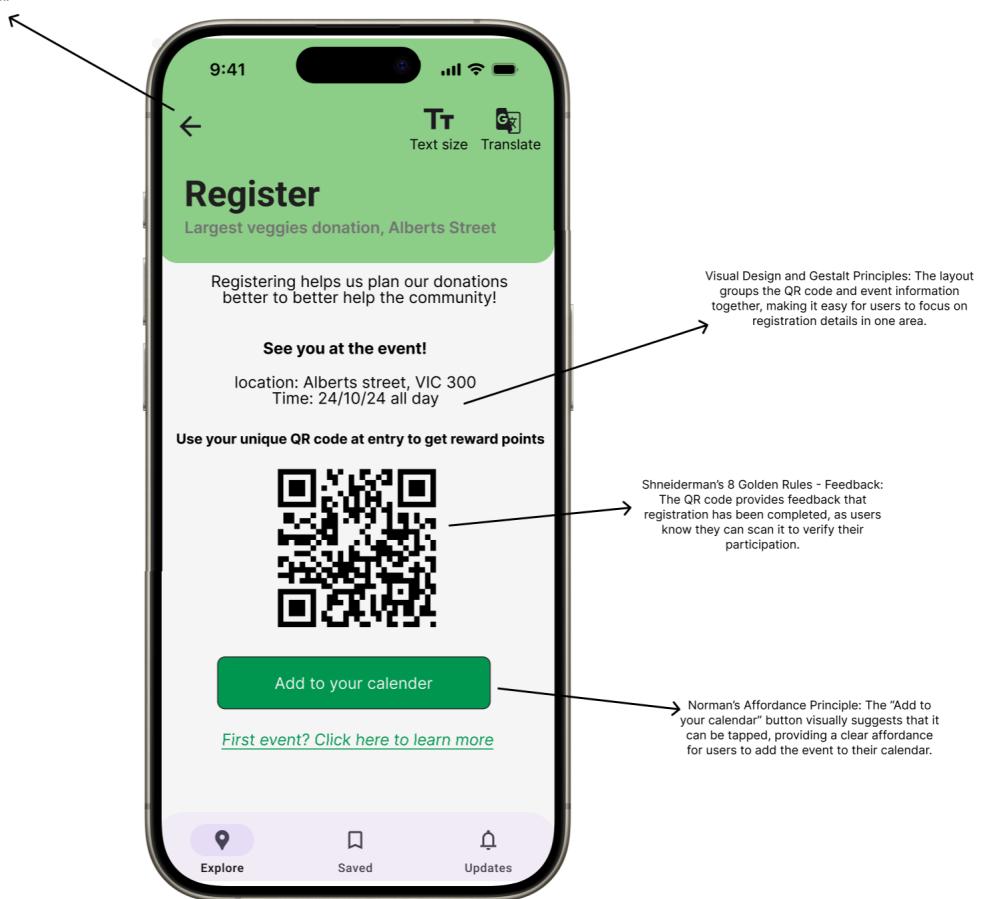
Accessibility Implementation

- **Perceivable:** Clear text size and high-contrast elements make it easier for users with vision impairments to read event information.

- **Operable:** Large, easy-to-tap buttons (e.g., “I’m interested”) ensure accessibility for users with limited dexterity.
- **Understandable:** The screen labels and descriptions, such as “Upcoming Events” and event details, are simple and clear, helping users quickly understand the content and actions.

Screen: Register

Navigation and Menu Design Guideline:
The back button in the top left follows common mobile design guidelines, enabling easy navigation.



Design Guideline

- **Norman’s Affordance Principle:** The “Add to your calendar” button visually suggests that it can be tapped, providing a clear affordance for users to add the event to their calendar.
- **Navigation and Menu Design Guideline:** The back button in the top left follows common mobile design guidelines, enabling easy navigation.

Accessibility Implementation

- **Perceivable:** The QR code and large, high-contrast text ensure that important registration details are visible to all users.

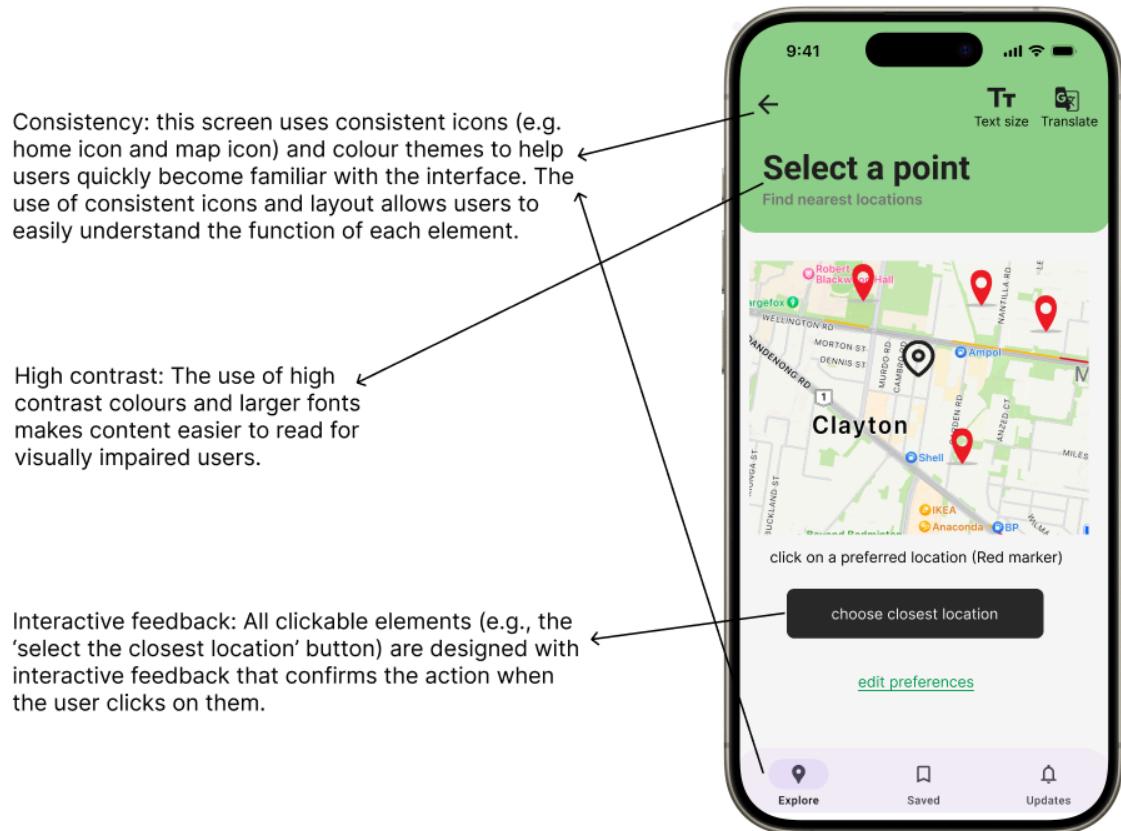
- **Operable:** The “Add to your calendar” button is large and positioned for easy access, improving usability on touch devices.
- **Understandable:** The instructions for using the QR code are clear, enabling users to understand its purpose and usage quickly.
-

Improvements from Low-Fidelity to High-Fidelity Prototype

- **Improvement 1:** Added high-contrast images and clear text on the **Upcoming Events** screen. This addition enhances **visual clarity** and makes it easier for users to scan and understand the event information.
- **Improvement 2:** The **Register** screen in the high-fidelity prototype introduces a **QR code** and “**Add to your calendar**” button, which were absent in the low-fidelity version. These features provide more functionality, streamline the registration process, and allow users to directly add events to their calendars.

Wei Yang

Screen: Select a point



Design principles:

Norman's Design Principles - Consistency: Consistent icons and colour themes are used across the screen to help users become quickly familiar with the interface. The use of consistent list item styles makes it easy for users to understand the function of each element, thus improving the efficiency of interactions.

Accessibility Guide:

WCAG Accessibility Guidelines - Operable: The screen design is simple and intuitive while providing easy-to-access search and filter functions, as well as translation and text adjustment functions, which improve the efficiency of functioning and help visually impaired users to complete operations smoothly.

Screen: Let's start!



Visual guidance: with clear text labels and map navigation guides, users can easily locate and select the nearest donation point. High contrast and large font text displays were designed to ensure readability for all users.

Comprehensible: Clear text messages with location details and instructions make it easy for users to understand the navigation and information about the donation point.

Highly operational: A 'Open in Google Maps' button is provided to help users navigate directly to the target location in the Maps app, simplifying the process.

Design principles:

Norman Design Principle - Feedback: When the user selects the donation location and clicks on 'Open in Google Maps', the interface immediately jumps and displays a detailed navigational map. This visual feedback is instantaneous and effectively responds to the usefulness of the function, thus increasing the user's confidence in the software.

Accessibility Guide:

WCAG Accessibility Guidelines - Easy to Understand: Screens provide clear text descriptions and high-contrast visual design, which enable users to clearly understand what they should do to achieve the intended use. Simple and intuitive content labelling enables users to use the software more efficiently.

Comparison of high-fidelity prototype vs. low-fidelity prototype and reasons for change

Change Analysis:

A notable change from the low-fidelity prototype to the high-fidelity prototype was that I added more intuitive icons and richer colours as well as higher contrast and more intuitive page layouts to make

the interface more attractive. Additionally, 'Font Size Adjustment' and 'Translation' features have been added, allowing users to adjust the content display to suit their individual needs.

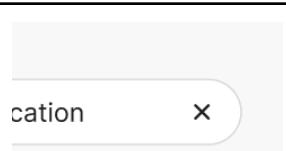
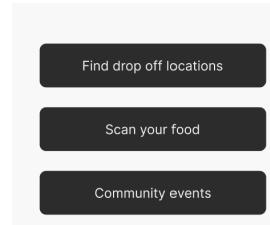
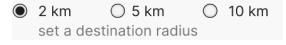
Usability benefits:

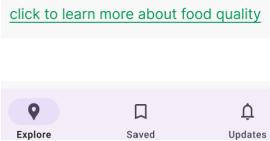
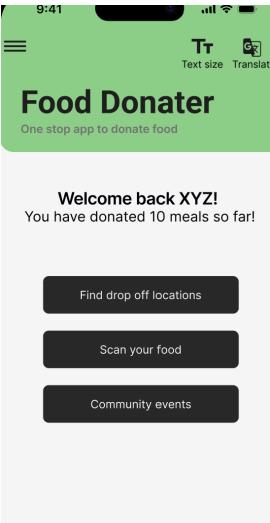
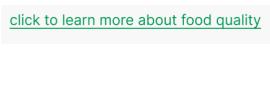
The changes I have made are designed to enhance the user experience by making the interface more intuitive and easier to navigate. By adding these features, users can flexibly adjust the presentation of the interface content and improve the ease of operation. This is not only in line with accessibility design principles but also helps users find the information they need faster and improves overall user satisfaction.

Individual Work: Heuristic Evaluation

Abbishek Kamak:

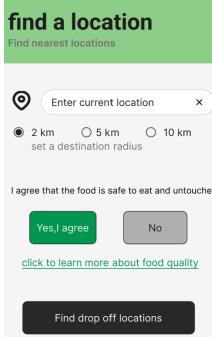
Compliance:

Compliance Instance	Heuristic Rule	Evidence	Design Justification
Freedom of undo when searching for location	#3 User Control and Freedom		If the user types in an incorrect message they can reset the search bar using the X icon.
Design, font and colour consistency	#4 Consistency and standards		Consistency in buttons for examples makes it more familiar to a new user
Using default options for location radius	#5 Error prevention		Assuming that users would not want to travel long distances to donate, the preset of options validates user options.
Navigating back to the previous page	#6 Navigation rather than recall		The back button is a common usability principle which users are familiar with backwards navigation

Helpful tips when needed to support new users	#7 Flexibility and efficiency of use		<p>Novice users: Get more information if they are unsure about a certain thing.</p> <p>Advanced users can use the bottom navigation to navigate faster to different screens.</p>
Simple and minimalist design which steers clear of clutter	#8 Aesthetic and minimalist designs		A clean and simple design with less clutter can make it easy for any user to view and use the app without too many distractions.
Help and documentation are provided for most pages to help users learn more if needed.	#10 Help and documentation		Users can get more information if they are unsure about a certain thing.

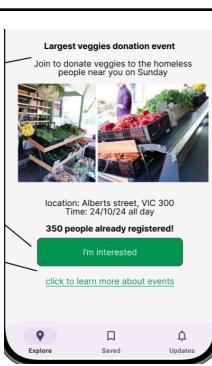
Violations:

Instance of Violation	Heuristic Rule	Evidence	Severity Rating and Justification	Recommendation
The Home screen has no system status updates which can be useful to some users	#1 Visibility of system status	No system status or feedback provided	2	<p>Having feedback for each action will help the users understand the system status.</p> <p>Example: Provide the live number of open food banks nearby so the user does not have to go</p>

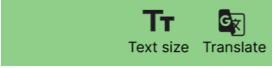
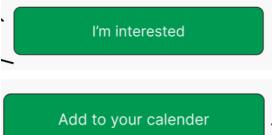
				through the app if they are all closed.
Lack of real world conventions (Skeuomorphic designs)	#2 Match between system and real world		2	<p>Using real world conventions can make the user more familiar with the objects they see on the app and make it easier for them to use it.</p> <p>Example: Use photos or images to make the design more skeuomorphic.</p>

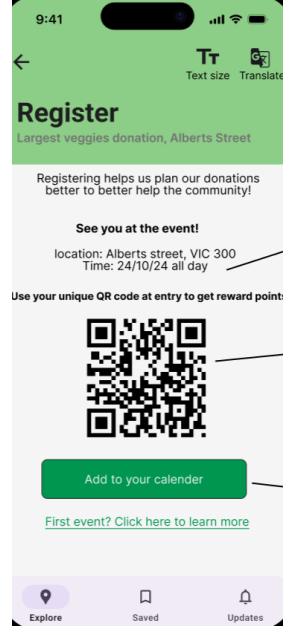
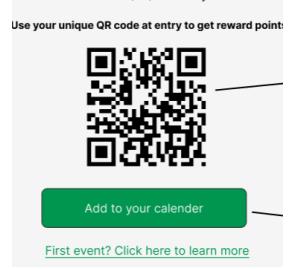
Huiying Wang

Violations Table

Instance of Violation	Heuristic Rule	Evidence	Severity Rating and Justification	Recommendation
The Upcoming Events screen lacks feedback after the “I’m interested” button is tapped, leading to uncertainty.	Visibility of System Status		Severity: 3 (Major) - Users are unsure if their action was successful, potentially confusing.	Add a confirmation message, e.g., “You’ve registered interest.”
The Register screen does not provide an explicit confirmation after scanning the QR code, leaving users unsure if they completed registration.	Help Users Recognize, Diagnose, and Recover from Errors		Severity: 2 (Moderate) - Users may mistakenly scan again or seek assistance.	Add a “Registration Successful” message after scanning.

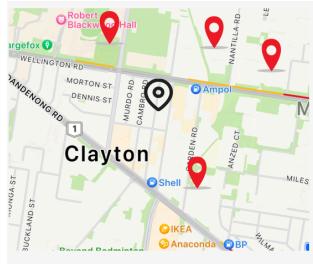
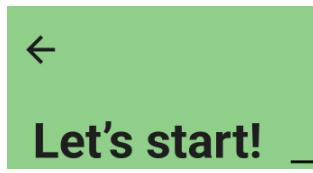
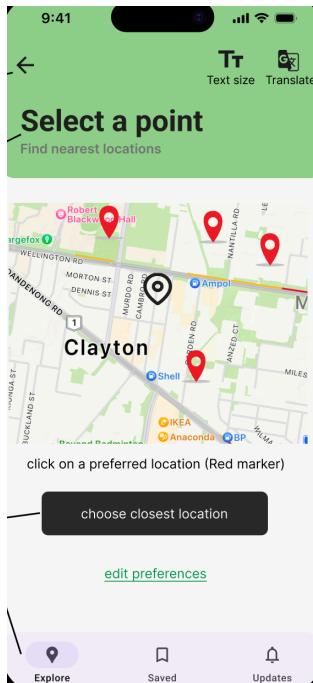
Compliances Table

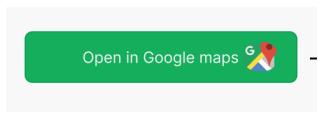
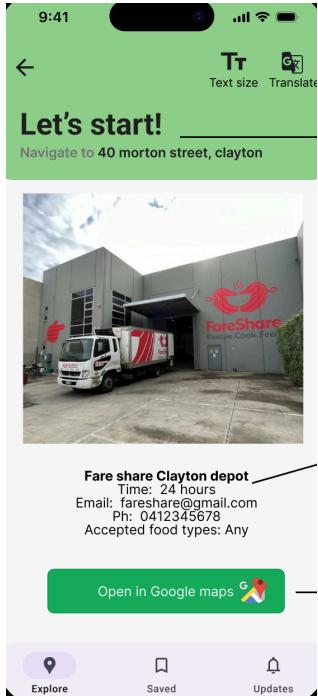
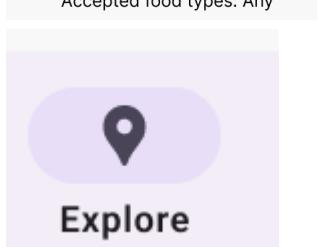
Compliance Instance	Heuristic Rule	Evidence	Design Justification
Text size and Translate options on both screens provide accessibility enhancements.	Visibility of System Status		Ensures users can adjust text and translate content, aligning with the visibility of system status.
The back button on both screens follows common mobile navigation standards.	Match Between System and Real World		Consistent with user expectations, allowing easy return to previous screens.
The “ I’m interested ” and “ Add to your calendar ” buttons allow users to exit actions freely.	User Control and Freedom		Provides users the ability to engage or exit actions at their discretion.
Buttons and labels are consistently styled across screens, making actions easily recognizable.	Consistency and Standards		Consistent button styles enhance predictability and reduce learning time.
A warning message appears if the user attempts to interact without registration.	Error Prevention		Prevents unintentional actions by reminding users to complete registration first.

<p>Clear icons (e.g., QR code, calendar icon) on the Register screen help users recognize functions without needing to remember them.</p>	<p>Recognition Rather Than Recall</p>		<p>Reduces cognitive load by presenting recognizable icons for key actions.</p>
<p>QR code and “Add to your calendar” offer efficient ways for users to interact with the registration process.</p>	<p>Flexibility and Efficiency of Use</p>		<p>Provides shortcuts that make the process more efficient, catering to experienced users.</p>
<p>The layout of the Upcoming Events screen is simple, with only essential information shown.</p>	<p>Aesthetic and Minimalist Design</p>		<p>Minimizes visual clutter, making it easy for users to focus on event details.</p>
<p>The Register screen includes brief instructions on using the QR code.</p>	<p>Help and Documentation</p>		<p>Simple instructions provide context, helping users understand the registration process.</p>

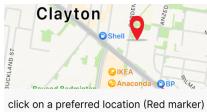
Wei Yang

Compliance:

Compliance Instance	Heuristic Rule	Evidence	Design Justification
Feedback on System Status for Navigation Start	1. Visibility of System Status		Navigation is displayed as soon as the user clicks 'Start', providing feedback on the status of the system and increasing confidence in the operation.
Real-World Mapping of Location Data	2. Match Between System and Real World		Use real-world map views that match the user's intuitive understanding of location and navigation.
Freedom to Correct Navigation Choices	3. User Control and Freedom		Users are free to return to the previous page, allowing them to correct navigation choices.
Consistent Icon and Layout Design	4. Consistency and Standards		Consistent iconography enhances user familiarity and reduces learning costs.

Map View to Aid Recognition	6. Recognition Rather Than Recall		The map view visually displays the user's location, reducing the memory burden and helping the user to quickly find the nearest donation point.
Efficient Access to Navigation	7. Flexibility and Efficiency of Use		Users can choose to navigate directly to the designated location to improve operational efficiency and meet the needs of different users.
Minimalistic Layout to Reduce Clutter	8. Aesthetic and Minimalist Design		Displaying only the core functionality reduces unnecessary information and ensures that the user focuses on the main task.
Access to Additional Information and Support	10. Help and Documentation		Provide help links to help users find additional information if they have a problem.

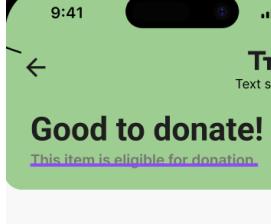
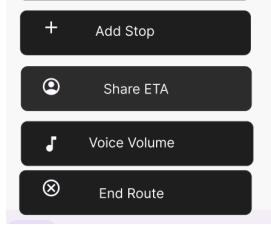
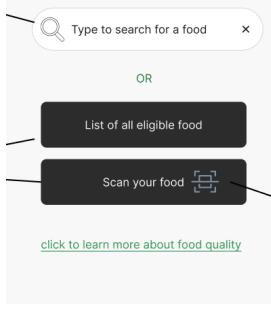
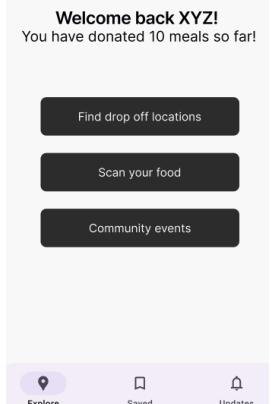
Violations:

Instance of Violation	Heuristic Rule	Evidence	Severity Rating and Justification	Recommendation
Missing Confirmation for Location Selection	5. Error Prevention		3 — Without a confirmation prompt, users might accidentally select the wrong location. This can cause frustration if they realize the error only after starting navigation.	Add a confirmation alert message to verify the selected location twice
Insufficient Guidance for Error Recovery During Navigation	9. Help Users Recognize, Diagnose, and Recover from Errors	<p>Fare share Clayton depot Time: 24 hours Email: fareshare@gmail.com Ph: 0412345678 Accepted food types: Any</p> Open in Google maps	3 — Users may feel lost or uncertain if they deviate from the suggested route, as there is no clear prompt to help them recover from errors. This lack of guidance could lead to frustration.	Provides detailed navigation steps and real-time feedback to help users stay on course and recognise errors when they occur.

Janice Jobin

Compliance:

Instance of Compliance	Heuristic Rule	Evidence	Design Justification
The 'results' of the item search screen provide users with more context on the item from a real-world perspective.	#2- Match between the system and the real world	 Triple stack burger (200 kcal)	Inclusion of language and real-world concepts the user may be familiar with (e.g. kcal) and images that represent the real-world item.

The 'back' button allows users to exit the results screen and go back to the screen to search/scan items.	#3- User control and freedom		Allows users to exit this screen altogether quickly, providing them with more control and freedom.
Consistent 'text size' customisation, translation, and 'hamburger' icon menu across screens. Consistent design and use of navigation bar throughout the application.	#4- Consistency and standards		Allows for a consistent design that does not introduce too much new information to process for the user.
Displays various icons to the user that are easily recognisable, in order to effectively represent the actions or meaning behind each button.	#6- Recognition rather than recall		Ensures the user has a way of recognising the actions presented through these buttons through the use of universally-used icons.
This screen gives the user various options of entering their item according to how comfortable they are with each mode/their preferred mode.	#7- Flexibility and efficiency of use		Provides users with adequate guidance and options to choose from, while also having an interface that is straightforward to use without the inclusion of too many steps or processes.
Our screens are minimal and use a set palette throughout the app that consists of colours such as green, black and white. The buttons and the space used throughout all the screens are also consistent.	#8- Aesthetic and minimalist design		This ensures that our app is easy, not overstimulating, and fun to interact with, even in terms of processing information and engaging with the app effectively.

Violations:

Instance of Violation	Heuristic Rule	Evidence	Severity Rating and Justification	Recommendation
This was not explicitly addressed within our screens. With screens such as this one, we could provide more user feedback and guidance throughout the process that assures the user that their tasks are being undertaken by the system.	#1- Visibility of system status		3- This is a common theme that occurs throughout the screens and it would be greatly beneficial to the users if it was addressed.	Adding feedback to actions taken such as providing a text field under the option that says, for example, something similar to "now looking for areas within a 2km radius".
We do not explicitly address error prevention within our designs, but there are several instances where this would apply.	#5- Error prevention		2- minor usability problem that, if fixed, will enhance the usability of the application and allow the users a more seamless experience.	Adding autofill suggestions and constraints to the search bars.
We have not addressed the errors the user may undertake within this app, and its subsequent diagnosis and recovery. However, there are various screens in which we may incorporate this rule into.	#9- Help users recognize, diagnose, and recover from errors		3- This would be a major usability problem that should be given primary focus.	Adding error messages and solutions when the item cannot be effectively scanned or correctly interpreted by AI. Also including error messages when there are no locations found within the specified radius.
Though the app incorporates helpful labels for all its functionalities, we lack a specific	#10- Help and documentation		3- this could also be a major usability problem as it does not cater to individuals who	Adding a skippable guide that walks users through the app screens. We could also create

guide that the users may refer to when they are stuck.			might really require these guides to assist them in using the app effectively.	another screen that will provide users with more detailed information on how to use the app. We could link this screen to various pages where the user may struggle to use the features.
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Group Work: Evaluation Summary

1. Translating Low-Fidelity to High-Fidelity

Problem: The team had difficulty converting low-fidelity concepts into high-fidelity prototypes, leading to inconsistencies.

Recommendation: Create a simple style guide that outlines colours, fonts, and button styles. Use shared tools like Figma for easy collaboration, allowing everyone to see and follow the same design elements.

2. Collaborating on Different Ideas and Methodologies

Problem: Team members had different ideas about design processes, which caused confusion and slowed progress.

Recommendation: Have a team meeting to discuss everyone's ideas and agree on one design approach to follow. This will help unify the team's direction and make collaboration smoother.

3. Understanding Different Principles in Application

Problem: Team members were not on the same page regarding design principles, leading to inconsistent decisions.

Recommendation: Organise a casual study session where team members can share their understanding of key design principles. This way, everyone can learn from each other and ensure consistent application in the project.

Figma link:

<https://www.figma.com/design/VYwEcmsgld0mg1luQDvuoU/Untitled?node-id=1-2&node-type=canv as&t=fFBqeJX2jSapUJfm-0>

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AI-Generated Food Photography. (n.d.). *Burger with melted cheese* [Image]. Foodiesfeed.
<https://www.foodiesfeed.com/free-food-photo/burger-with-melted-cheese/>

Fare share image:

<https://www.fareshare.net.au/wp-content/uploads/Derrimut-exterior-4-1024x708.jpg>

Events photo 1:

https://premiersdesignawards.vic.gov.au/_data/assets/image/0011/565418/food_justice_truck3.jpg

Qr code sample:

https://upload.wikimedia.org/wikipedia/commons/d/d0/QR_code_for_mobile_English_Wikipedia.svg