MAPÚA MALAYAN COLLEGES MINDANAO

CraveCompass: An IOS food guide app for food enthusiasts

By:

Andal, Ethan Alfonz S.
Andoy, Jervin R.
Mayo, Jonathan Lance S.

In Partial Fulfillment of the Requirements in
CS152: Human-Computer interaction

Bachelor of Science in Information Systems

Cherry B. Lisondra

Course instructor

PART I. UNDERSTANDING THE PROBLEM

Overview:

The city's increasing curiosity has led to a higher demand for information about exploring places. Social media platforms are being used to share location-based information, but the current systems lack specialization and often fail to advertise businesses fully.

The widespread use of social media platforms like TikTok, X (formerly Twitter), Facebook, and Instagram has transformed how trends are established. This is especially evident in food trends, which constantly influence people's tastes and preferences. Adapting to these preferences can be challenging for businesses and customers, as meeting customer needs often requires specialized knowledge. For customers, finding a restaurant that caters to their specific tastes and aligns with current food trends can be hit or miss.

Although internet reviews, online food guides, delivery apps, and social media platforms try to serve the market, they often lack specialization and specific features, making it difficult to cater to users' preferences. As a result, businesses lose revenue and publicity, and customers waste time and effort researching locations instead of enjoying their favorite snacks.

Solving the Problem:

The lack of knowledge and preferences in current food trends is supplemented with the implementation of an application where it contains various information related to the users' preferences with food categories, locations, and menus that serve to present information to the customer. It will also include a

dynamic database of food cost to further provide recent food prices which reduces anxiety caused by the lack of detail surrounding food establishments. To construct the necessary framework, data gathered from a sample size of 5-20 respondents, which criteria should be that the respondents uses existing apps with a similar design such as grabfood, foodpanda, or even used food guides as reference points. The ideas will be used to create a basic framework for which the team will use as a reference point for the design and features of the application. After which, it will be subjected to another survey and a working prototype will be provided once all steps have been completed.

The Application:

- **Application Name:** Crave Compass
- **What it is:**
  - Crave Compass is a portable application designed and developed by MA Solutions. Its intended purpose is to provide extensive data regarding food retail, services, and locations based on a user's preferences or current food trends. This is to address the lack of an existing single platform that covers these criteria, which often becomes a problem for customers.

Features:

Based on the initial research conducted by the team, the following features are provided in the application which includes:

- **FOOD GUIDE.** The application provides a map of locations of food establishments found on areas, and with manual/automated implementations, highlights current food trends as gathered from social media platforms.

- **FOOD MENUS.** The application provides recent menus with updated information regarding item costs which aims to inform users on their potential visits to certain food establishments.

- **FOOD CATEGORIES.** The application provides various food locations sorted to the user's preferences and highlights foods found on current trends.

These features are based on preliminary discussions and research on current trends which features may be added or removed based on the results of the surveys.

- **Questions about the application:**
  - **Who are the potential users?**
    - This application primarily targets teenagers, young adults, students, influencers, and tourists who are interested in exploring food locations in specific cities based on their preferences and current trends. The application's features are not limited to the mentioned demographics and can cater to a wide range of users.

- ➢ **What tasks do they seek to perform?**

    - o The mentioned demographics are looking for a single application that can provide most food-related information about specific locations. This simplifies their exploration process, making it faster and less troublesome.

- ➢ **What functionality should any system provide to these users?**

    - o The main functionalities the application includes focus on providing the users with updated and relevant information when it comes to food exploration and experience.

- ➢ **What constraints will be placed on your eventual design?**

    - o The application will mainly be in the English language, which poses a problem for the locals wanting to use the application but find it complicated to use the application with limited English knowledge.

    - o While features for people with disabilities can be implemented, the base program will only feature basic features such as TTS, visual enhancements, and basic speech-to-text for basic commands.

    - o Since portability is one of the key features of this application, this will only be using mobile devices and as such there will be no dedicated application on other devices. However, a web version may be implemented if the survey shows results with the demand.

> ➢ **What criteria should be used to judge if your design is a success or not?**

  o Based on the included features, the team's criteria with the success rate of the application is determined with these factors:

  ▪ It contains relevant information beneficial to the user.

  ▪ The information provided results in noticeable changes to business demands.

  ▪ The provided information is accurate and informative.
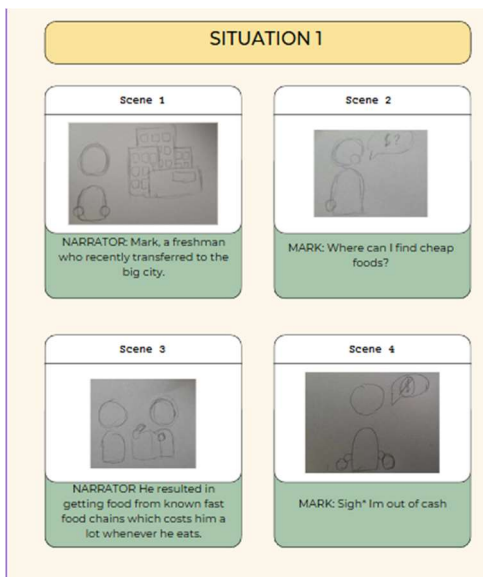
- **Approach:**
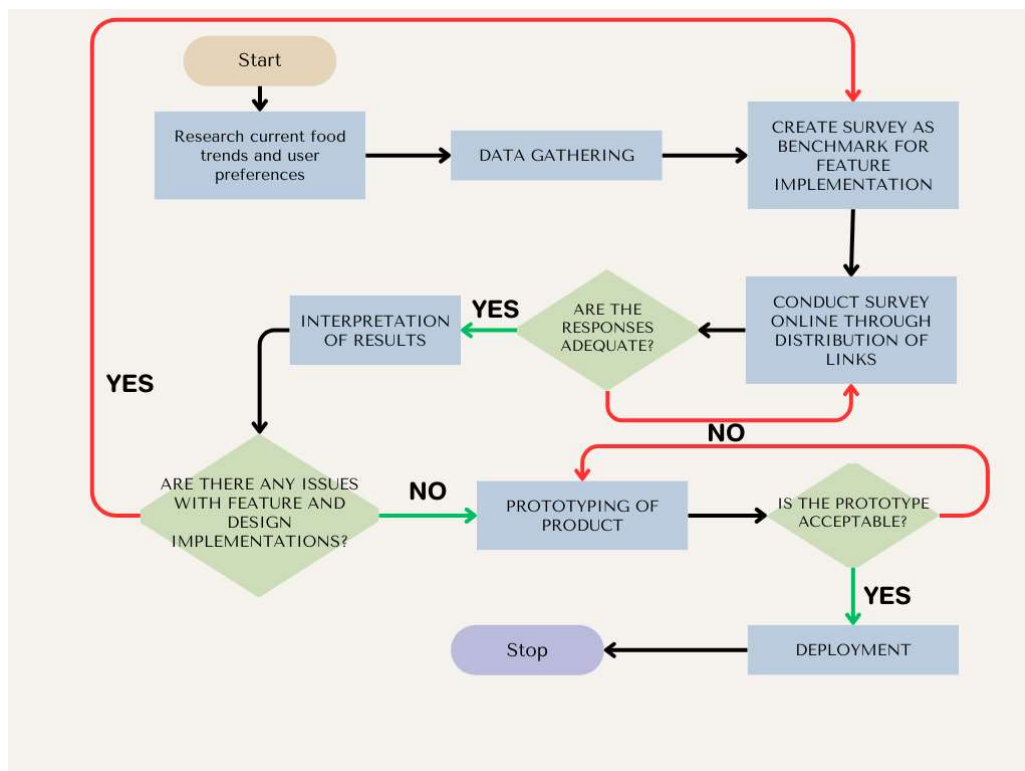
PART II. DESIGN ALTERNATIVES

SCENARIOS:

Scenario 1 – Mark, a freshman who recently transferred to the big city has had trouble in finding locations where the cheapest meals are nearby. He got food from known fast food chains which costs him a lot whenever he eats.
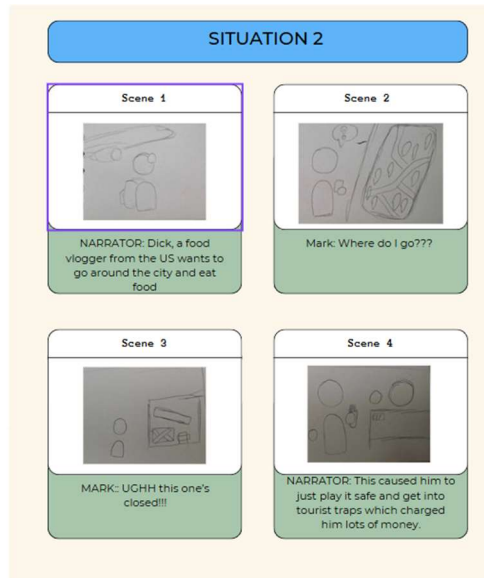
Scenario - Dick, a food vlogger from the US wants to go around the city and eat food but available information about the places is lacking. This caused him to just play it safe and get into tourist traps which charged him lots of money.

Scenario 3 – Willy plans when buying food In advance, however, the price reference on food apps and actual prices have significant markups that he cannot plan accurately. This results in him carrying excess money when buying out which only inconveniences him.
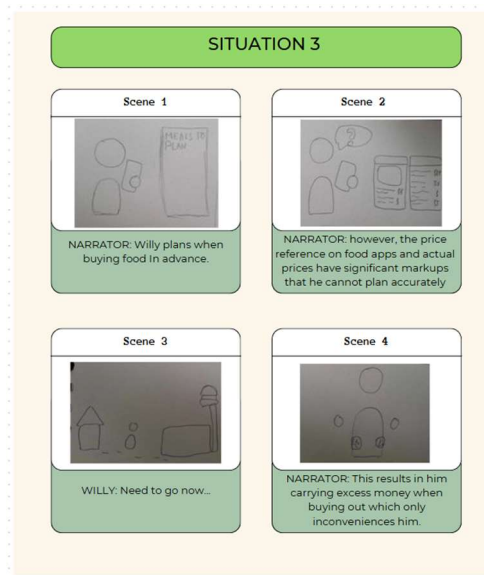
Storyboard (Based on Scenarios):

Storyboard 1 – Mark

SITUATION 2

Scene 1

NARRATOR: Dick, a food vlogger from the US wants to go around the city and eat food

Scene 2

Mark: Where do I go???

Scene 3

MARK: UGHH this one's closed!!!

Scene 4

NARRATOR: This caused him to just play it safe and get into tourist traps which charged him lots of money.

Storyboard 2 – Dick

SITUATION 3

Scene 1

NARRATOR: Willy plans when buying food In advance.

Scene 2

NARRATOR: however, the price reference on food apps and actual prices have significant markups that he cannot plan accurately

Scene 3

WILLY: Need to go now...

Scene 4

NARRATOR: This results in him carrying excess money when buying out which only inconveniences him.

Scenario 3 – Willy

Problem Statement:

-Lack of relevant information on viable food places.

-Lack of updated information to ascertain human consciousness.

-Lack of accurate information relevant to food prices.

Application Icon Size Comparison

36X36   48X48   72X72   96X96   144x144   192x192

The icons presented above showcase the application icon in various sizes. This is essential in identifying the looks of the icon in various resolutions and ratios.

Design Space

Design Requirements

When designing, considerations were made as to how the application would function. Basic functionalities such as maps, menus, and establishments must be considered as vital as the application is based on users interacting with the given data. However, as the developers add more variables to the mix, having to design a UI and feature to work around various variables becomes much more

complicated which makes the implementation much harder, thus the application ends up with fewer variables to consider compared to the initial plans.

Design Limitations

When designing the application features, there were several considerations to be made as to what feature to include in the final prototype. Prioritizations on what data should be emphasized to prevent increasing the device requirements and bloating the system. The Application made a compromise of presenting both map and item but at the expense of complexity which ended up being a basic application to display food locations, menus, and plans.

Design Support

The easiest part of the application to support is by implementing additional data to the menu. As it is a basic application in its prototype stages, additional information about the establishment, accuracy of menu data, and prices can be quickly implemented and new data can be inserted as needed.

Design Difficulties

The design implementation will require studies on existing GUI applications as well as device specifications to be able to create a usable framework while also making sure that every device functions and conforms to the UI design.

Design

The CraveCompas application aims to showcase modern design in a utilitarian aspect. The design is inspired by various existing applications and templates for easier familiarization with it.

Color Palettes

The application Uses various vibrant colors which are based around logo companies. Yellow is the main color with white as the backdrop. Other colors are associated with brand logos to also add varieties to the application

Font Style

Font name: Inter
Version: Version 3.019;git-0a5106e0b
OpenType Layout, TrueType Outlines , OpenType Font Variations

---

abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890.:,; ' " (!?) +-*/=

The application uses the font Inter as its font. This is to provide a more readable formal font applicable to a general-use application. This font is used in computer interfaces, displays, and programs that present information due to its design specially crafted for screen displays.

GUI

The GUI used for the interface of the application is in iPhone 13 & 14, which has a dimension of 390 x 844. To aid users in efficiently navigating the app, this prototype has elements like a clear visual hierarchy, easy-to-read typography, and a basic and clean layout.

Design Sketches and Alternatives

The design sketch for the prototype includes a welcome screen, which displays the logo of the Crave Compass app and a slogan, followed by the home screen that provides a similar look to the other food applications, which makes the user feel that he/she already knows how to navigate the app. The home screen has various elements such as images, icons, a search bar, a food map, and a navigation bar, which navigates you to various parts of the application. Some of the sketches here might not be in the final version of the prototype but most of it are already decided to be included in the prototype.

Full Sketch
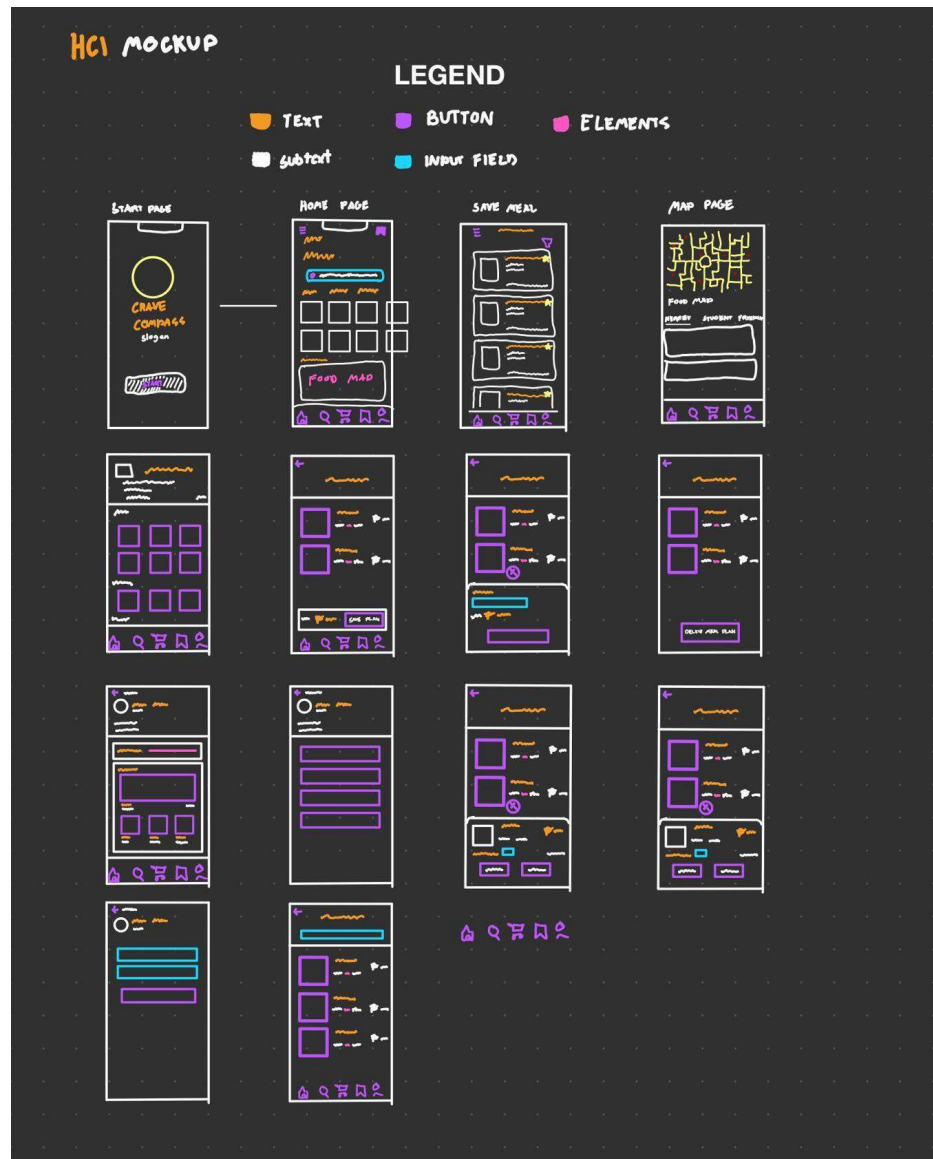
Legend
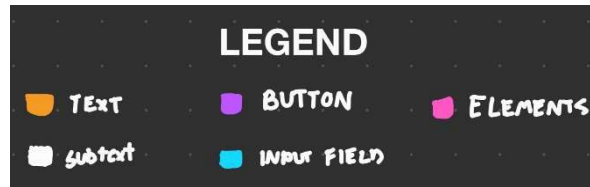
This is the legend for all the colors used in the sketch. Orange is for the main/bigger text, white for the subtext, violet for the elements that can be interacted with, pink for the additional elements (stars, image icons, graphics), and turquoise for the input fields.

Welcome Screen

The welcome screen of the application features the Crave Compass logo with a slogan "Cravings satisfied. Direction delivered" below it. It also has a button "Start" which takes you to the next page.

Home Screen

In the home screen, you can see various elements which can lead you to different pages. At the bottom you can see the navigation bar, at the top the saves page with the bookmark icon, and below that is the search bar. You can also scroll the boxes horizontally which represents the meals. Below that you can see the Food Map, which takes you to a different page dedicated for it.

Search Meal Page
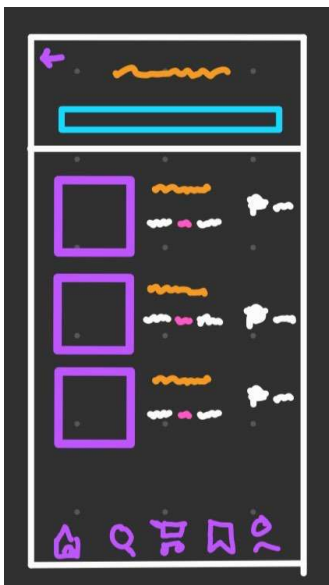
On this page, you can search meals that you are craving. You can also see details of the meal that you are searching for like their price, estimated delivery time, and their distance from your location.

Food Map

Here comes the Food Map Page which is an innovative feature on our part that we haven't seen on other food apps. In this page, you can open the map and can view food stores that are available in your area. You can filter out food stores based on your preferred options, view nearby, student-friendly, budget, popular, etc.

Saves Page
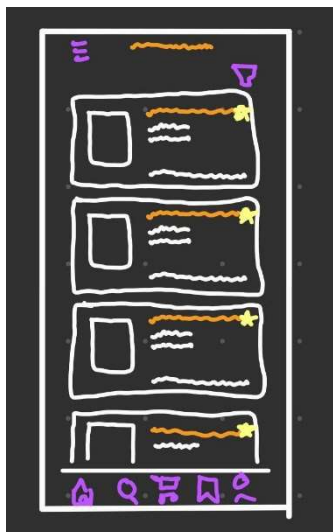
On this page, you can see all of the cravings that you've saved, which is helpful in the future when you want your cravings to be satisfied.

Food Store Page
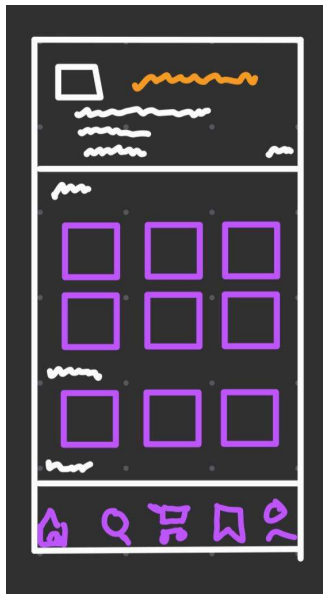
The Food Store page lets you explore a specific food shop page. You can see their menu, their categories, and details of their meals that they offer.

Save Meal List Page
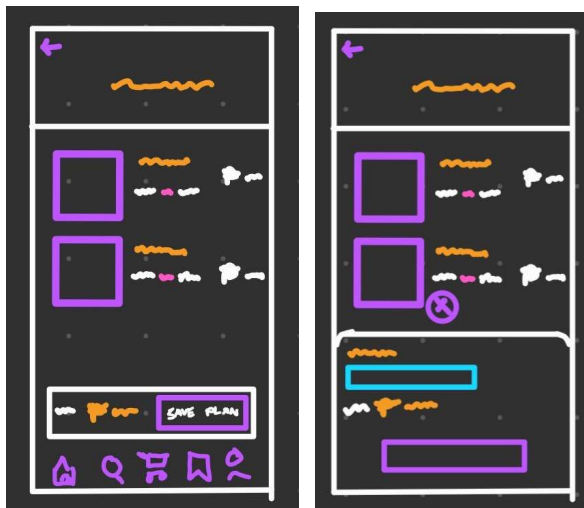
In this page, you can create your own meal plan, which consists of anything you like grouped into one.

After that, you save it and proceed to the next page where you can do some customizations.

Custom Meal Plan Page
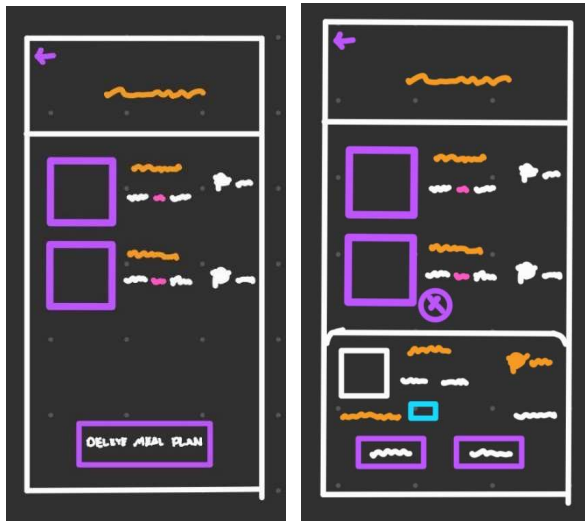
The custom meal plan page lets you customize your meal plan, which you can edit the quantity, and delete a a single meal.

Account Page

The Account page shows your details and your recent cravings. Your contributions are also displayed in this page where you recommended a specific meal and then several people commended your craving recommendation.

In the second page, you can see the settings and some buttons that can let you view contributions, your license,
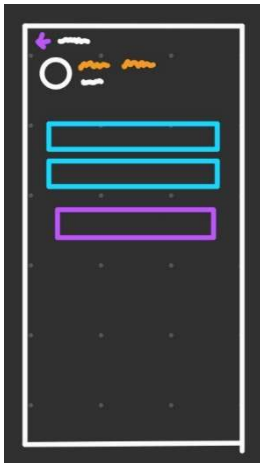
statistics, delete data, and meet the founders of the app.

In the third page, you can edit your account info.

Mock-up/Prototype
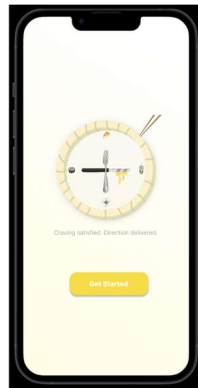
Splash screen

Contains the logo and a
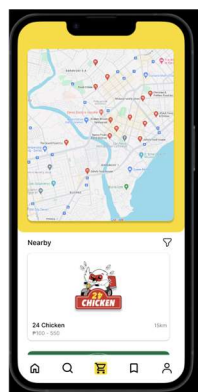get started button for the
users to start.
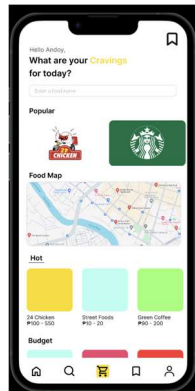
Menu Screen

Contains most of the
functionalities including
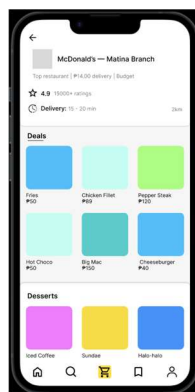navigation buttons, item
previews, food maps,
and popular brands.
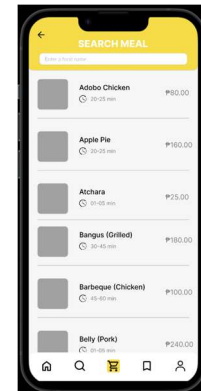
Search Menu

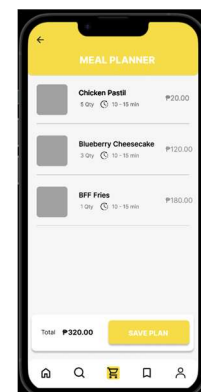Contains a search field
to enter desired food to
view.

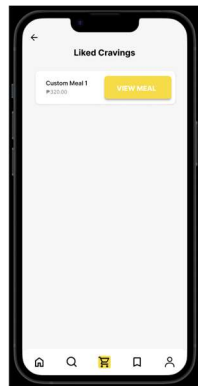
Food Map

Establishment view

Contains food available
in selected

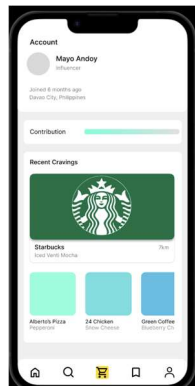**Meal Plan Checkout**

Selected meals that can
be stored as custom

Contains locations of

nearest food locations

and establishments.

establishments included

with prices.

meals to be used as

references.

Saved Meal Plans

This contains the saved

meal plans which can be

viewed as references

Account Menu

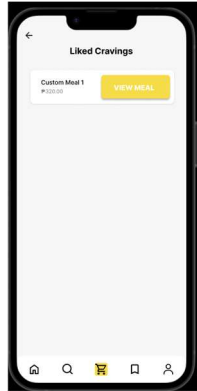This contains the local

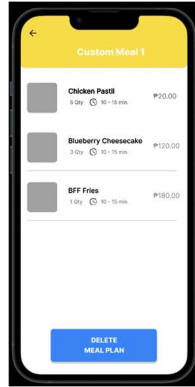account which contains

recent activities.

Food Menu

This contains

manipulation when
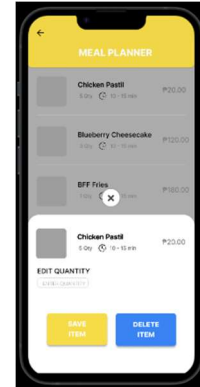
adding food to the meal

plan.

Saved Meals

Displays saved meals

added by user

Custom Meal Menu

Displays the saved
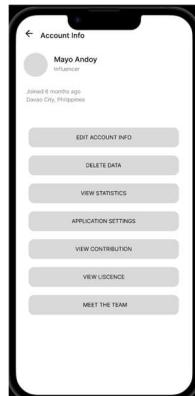
custom meal plan

Item Edit Menu

Displays options for

item.

Edit Account Info

Edit username and

description (local)

Account info

Contains account and

app manipulation (Only

edit account info works)

PART III. PROJECT DESCRIPTION, DESIGN & RESULTS

Project Description:

CraveCompass is a basic IOS application developed and implemented by Andal, Andoy, and Mayo of MA Solutions to address the problems in the food market which revolves around economic and location data with regards to running establishments. The application's intended function is to provide information about establishments, menus, and prices that would help provide information for people who want to explore the food market. The intended users of this program are the general population and tourists.

Requirements Summary:

MINIMUM REQUIREMENTS	Processor Cores	Dual Core
	OS	IOS 12
	RAM	2 GB
RECOMMENDED REQUIREMENTS	Processor Cores	Quad Core
	OS	IOS 17
	RAM	4 GB
OTHER REQUIREMENTS	Permissions	4G Data, Storage Permissions, Notification Permissions

Table 1. System Requirements IOS

This application is designed for IOS devices which is designed for optimization and a lightweight framework. A minimum of 5 generations from the current IOS version is to be required while recommended requirements opt for IOS 17 which offers a smooth process.

Prototype Description

The prototype was designed using Figma as the workspace for this project. It is preferred due to the features available and the simplicity of the interaction which allows for prototyping much faster and more optimized.

Crave Compass Link

https://www.figma.com/design/pD1jeZKpyQhnbxzg9OL0iD/System-Prototype?node-id=0-1&t=rSe18ty9GUcWluIG-1

User Scenario:

Mike is a foreigner who landed in the city and wants to eat around the city. The problem is that his brochure rarely mentioned any nice spots around the city. A quick search on the internet shows but fails to present any relevant prices. Most of the prices he found were outdated or overpriced, which is less useful to him. Finally, he just opened his food app and just used it as a reference point.

On his next visit, he found an application named CraveCompass which was already used by the locals. He installed and opened it and found the app full of various details that were helpful to him. This became his go-to app whenever he visited a random city to enjoy various foods available to him.
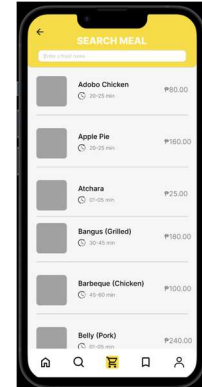
CRAVE COMPASS MOCK-UP/Prototype:
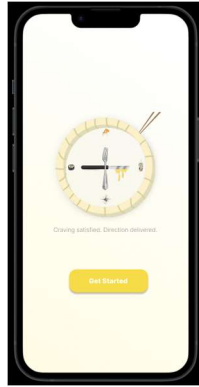
Splash screen

Contains the logo and a get started button for the users to start.
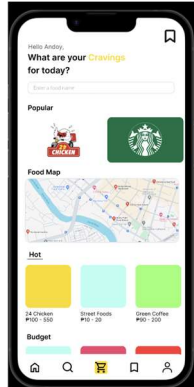
Menu Screen

Contains most of the functionalities including navigation buttons, item previews, food maps, and popular brands.

Search Menu

Contains a search field to enter desired food to view.
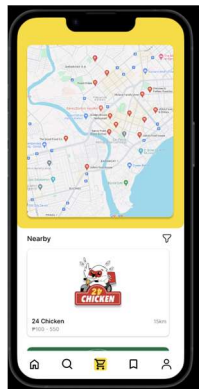
Food Map

Contains locations of nearest food locations and establishments.

Establishment view

Contains food available in selected establishments included with prices.
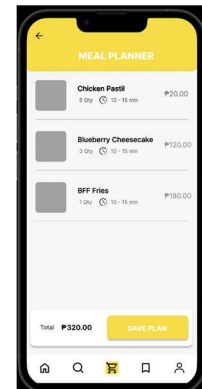
Meal Plan Checkout

Selected meals that can be stored as custom meals to be used as references.
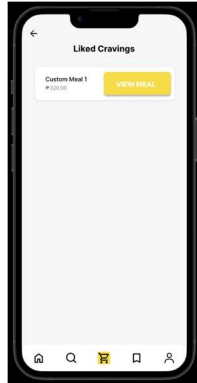
Saved Meal Plans

This contains the saved meal plans which can be viewed as references
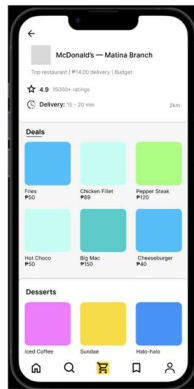

Account Menu

This contains the local account which contains recent activities.

Food Menu

This contains manipulation when adding food to the meal plan.

Saved Meals

Displays saved meals added by user
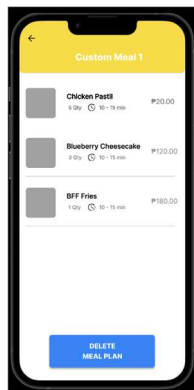
Custom Meal Menu

Displays the saved custom meal plan
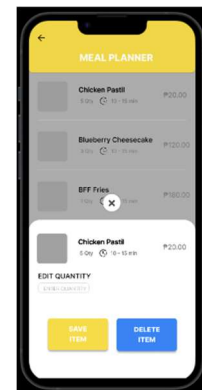
Item Edit Menu

Displays options for item.

Edit Account Info

Edit username and

description (local)
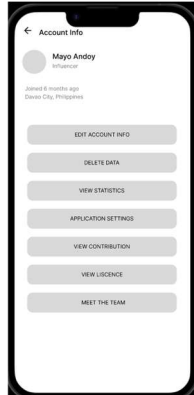
Account info

Contains account and app

manipulation (Only edit

account info works)

Prototype Flow

Opening Program
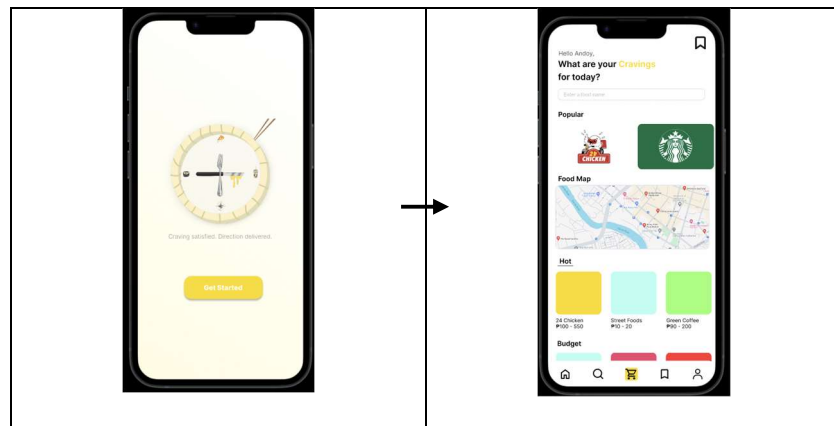
Figure 1.1. Opening Program

Figure 1.1 shows the opening of the application which is greeted by a splash

screen and a get started button which proceeds to the Menu.

Searching Item
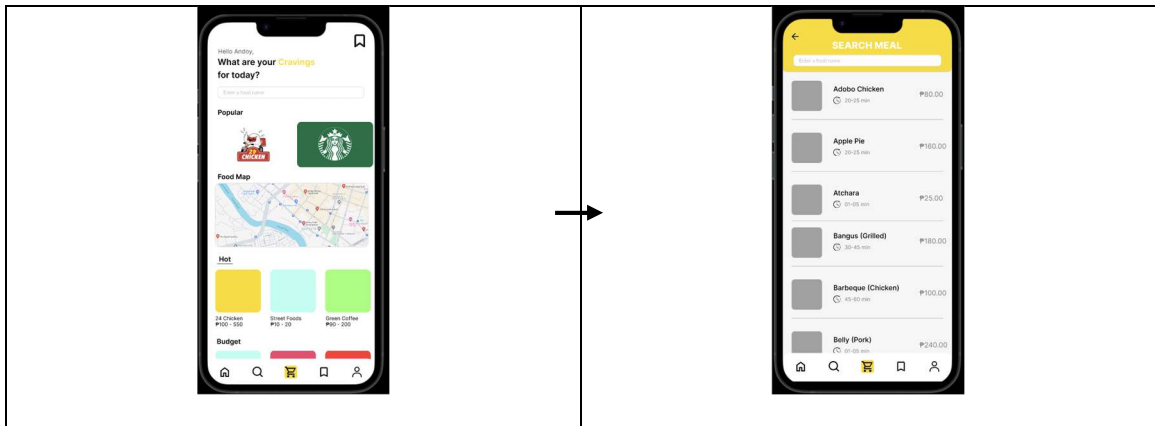
Figure 1.2. Searching Item

Figure 1.2 shows searching the item which can be accessed by Clicking either the search button on the navigation buttons at the bottom or clicking the search bar at the top of the menu.

Viewing Food Map
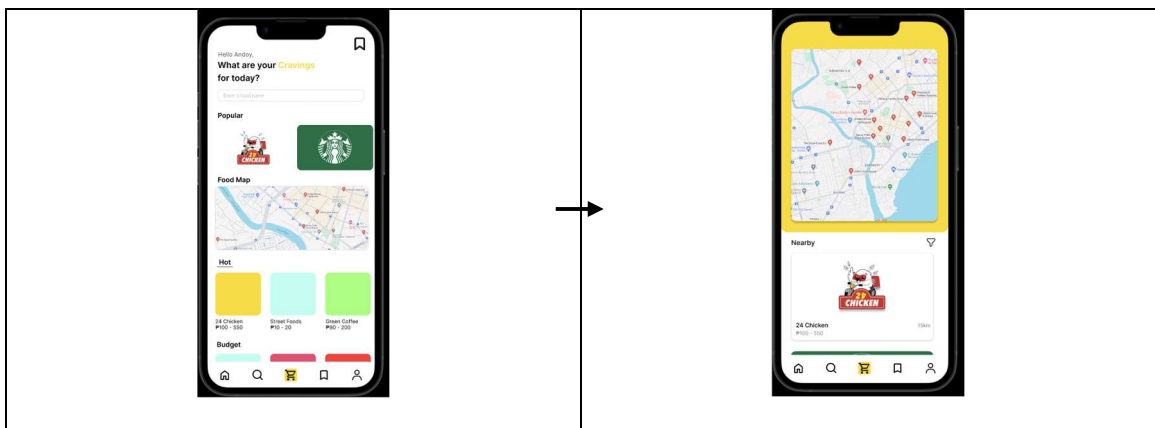
Figure 1.3. Viewing Food Map

Figure 1.3 shows the viewing of the Food Map which can be accessed by clicking the map photo on the menu.

Adding to Meal Plan
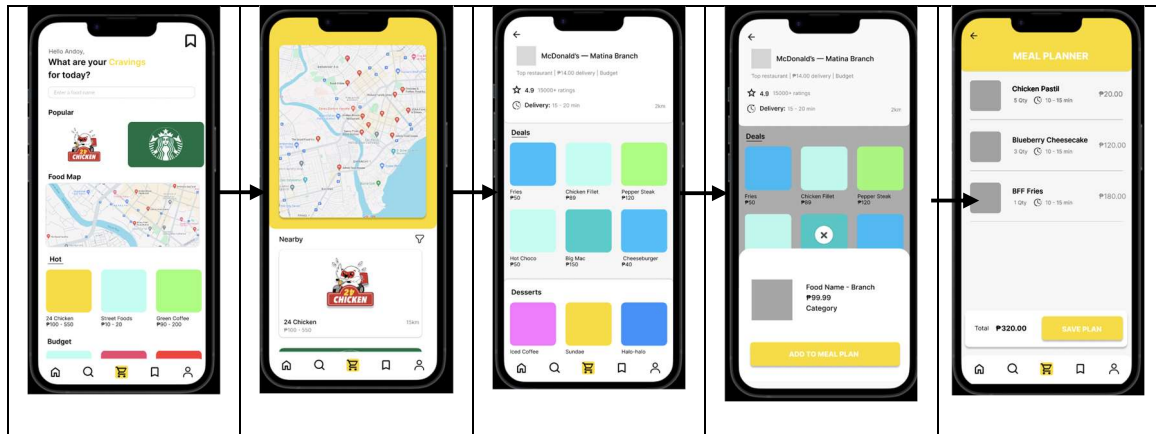
Figure 1.4. Adding meals to meal plan

Figure 1.4 shows adding meals by first clicking the Food map or the available food, if food map is clicked, scroll down to see nearby establishments and click preferred, then when the Establishment menu is present, the user can click any, which a pop-up opens prompting the user to add to meal plan. The user then can open the meal plan check-out by clicking the center icon on the navigation.

Viewing Meal Plan
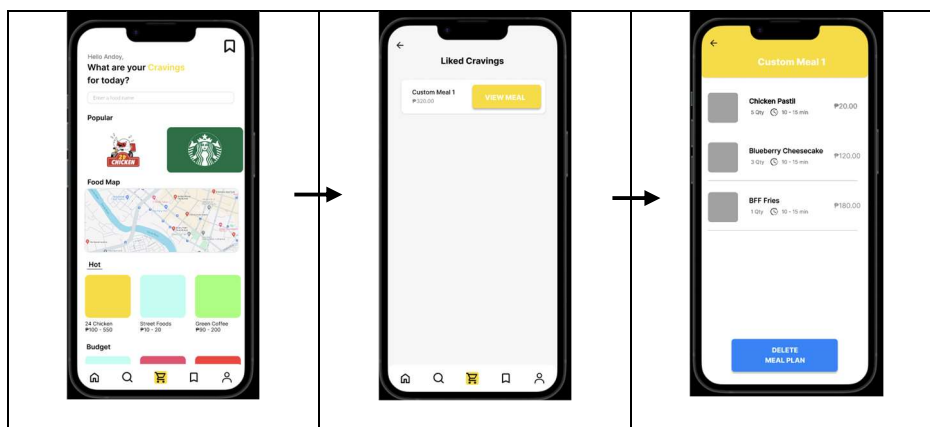
Figure 1.5. Viewing Meal Plan

Figure 1.5 shows viewing Meal Plan which can be accessed through the ribbon icon beside the check-out icon. Which presents Saved meal plans that can be viewed.

Editing Meal Plan
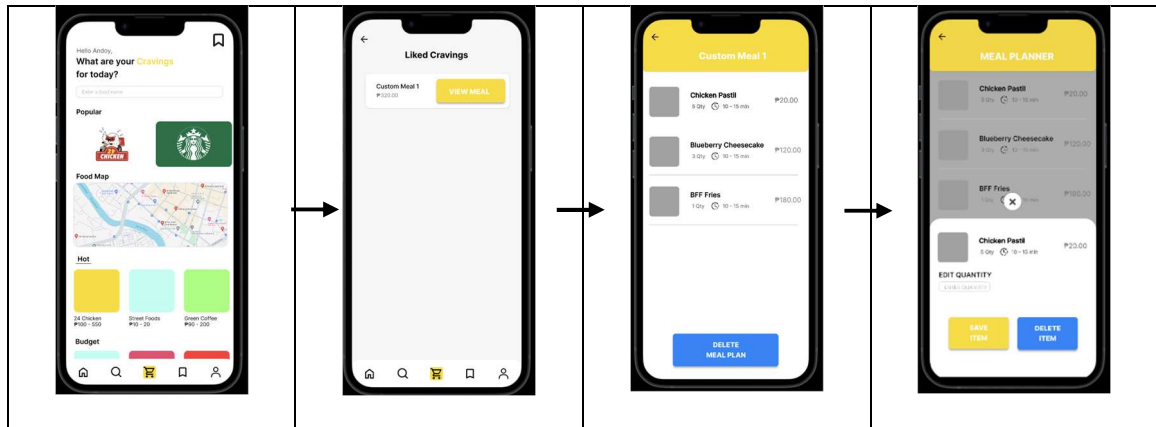
Figure 1.6. Editing Meal Plan

Figure 1.6 shows editing items in the meal plan based on the user's discretion. The same process as viewing the meal plan but has the additional step of tapping the item to edit quantity, or delete.

Rationale:

The team used Figma as a method for creating the prototype since it is an intuitive application that contains functionalities that are easy to understand and manipulate and allows for simultaneous editing which speeds up development work. There's also a feature where Figma can simulate the final application based on the inputs of the Developers which allows for better prototyping. This comes at

the cost of having an internet connection as a requirement which hinders full-time editing.

Changes to the Requirements:

The prototype has undergone several changes from the initial plans of the team to further simplifications of the program to save time. Another is the use of Heuristics which reveals flaws with the design that need modifications such as the removal of the delivery function which will require more resources to be allocated to the application which becomes unviable, especially for a prototype. This instead is replaced by a save feature where the user can save meal plans that can be used as references.

Initial Evaluation Plan:

Due to conflicts in schedules, availability of the members, and limitations in time, the team is unable to conduct this physically or online. Instead, the evaluation is to be conducted asynchronously, through Forms with guidance from the development team. While this limits the effectiveness of evaluations, this creates another factor which is how users are to be expected when there's no guidance from the developers.

Usability Specifications

The development of this Prototype aims to address the following factors based on the use of the users such as:

- Effectiveness: This allows us to determine whether or now the prototype functions or the level of its applicability in real-world situations.

- Efficiency: This allows us to determine whether the prototype is easy to follow/use.

- Utility: This aims to provide a measure of the functionality and features of the program.

- Learn Ability: This will determine how easy the application is to understand and utilize in various cases.

- Memorization: This will determine how the users easily understand the flow of the program.

Population

Around 5-10 participants will be selected to test the prototype. They will be required to do given tasks that aim to test the functionality of the prototype and determine its usefulness. Examples include navigating the menu, adding an item, and changing account information. These tasks will determine the success of the prototype.

Prototype Tasks

The tasks for this prototype are continuous as the intended function of the prototype is to have the functionality to be fluid enough that at most there's 1 navigation that can head straight back to the main page. Provided below are the tasks that users are required to perform to consider the functionality. These are categorized as Main, Navigational, and Manipulation:

- Enter the Program (Navigation)
- View Food Map (Navigation)
- View Item Price (Main)
- Add Item to Meal Plan Checkout (Main)
- Save Meal Plan (Main)
- View Meal Plan (Manipulation)
- Edit Meal Plan (Manipulation)
- Delete Meal Plan (Manipulation)

These tasks are selected to be able to test all functional features of the prototype which provides:

- Navigational Challenges
- Memorization

Roles

This team will be sending out the Forms with the attached link for the application which the respondents will be given ample time to test and start the application testing.

DEVELOPER/DESIGNER	TASK(s)
ANDAL, ETHAN	Finding participants
ANDOY, JERVIN	Will record Manipulation of the application.
MAYO, JONATHAN LANCE	Performs QA with the user tests and records user experience.

Table 1. Team member Tasks

Navigation	Within 1 minute	Highly Acceptable	Successful
	Above 1 minute	Not acceptable	Unsuccessful
Main	Within 1 minute	Highly Acceptable	Successful
	Above 1 minute	Not acceptable	Unsuccessful
Manipulation	Within 1 minute	Highly Acceptable	Successful
	Above 1 minute	Not acceptable	Unsuccessful

Table 3. Time interpretation

Table 3 is the interpretation of how long the users navigate through the tasks which will determine the success rate of the application. The table will be used as a reference for interpretation of the design and success rate of the application.

Heuristic Evaluation

As standard practice, CraveCompass will be utilizing the 10 usability Heuristic method of evaluation as a benchmark on how the application functions.

Visibility of System Status:

The Prototype will keep the participants informed on what is happening in the Prototype.

Match Between System and Real World:

The prototype speaks the user's language, with familiar words, phrases, and concepts rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

User control and Freedom:

The Prototype offers to deal with mistake provided clearly marked "Emergency Exit". To leave the unwanted state without going through an extended an extended dialogue. Support undo and redo.

Consistency and Standards:

Users will not have to worry whether different words, situations, or actions mean the same thing.

Error Prevention:

Error Messages are Carefully designed which prevents a problem from occurring in the first place.

Recognition rather than recall:

Make objects, actions, and options visible. The user does not have to remember

information from one part of the dialogue to another. Instructions for use of the prototype

is visible and easily retrievable whenever appropriate.

Flexibility and Efficiency of Use:

The prototype caters to both experienced and inexperienced users. Users readily tailor

frequent actions

Aesthetic and Minimalist Design:

The prototype does not contain information which is irrelevant or rarely needed. Every

extra unit of information in a dialogue competes with the relevant units of information and

diminishes their relative visibility.

Help Users Recognize, Diagnose, and Recover from Errors:

Error messages are explained in plain language (no codes), precisely indicating the

problem, and constructively suggest a solution.

Help and Documentation:

Users can easily find help and documentation when need to interact with the prototype.

This information is easy to search for.

Participant Survey and Feedback

After conducting the forms:

Data Gathering Method	Description
Survey (Quantitative)	After conducting, the team will include a post-survey for gathering quantitative data with regards to the user experience of the program. This will be using a 5-point Likert scale as reference.
Feedback (Qualitative)	The post-survey will also contain information with regards to the Feedback of the users to ensure openness and customer feedback is met and identified.

Table 4. Data Gathering Methods

The table above showcases the different data-gathering methods that will be utilized by the team in conducting the surveys.

QUESTION	METHOD OF ANSWER
SECTION 1	
PARTICIPANT NUMBER	SHORT ANSWER (QUALI)
On a scale of 1 to 5 how would you rate your experience with the Sasha Prototype	5-Point Scale
On a scale of 1 to 5 how was the UI design of the prototype	
How easily were you able to follow the tasks provided	
SECTION 2: Features of the Prototype	
Enter the Program (Navigation)	5-Point Scale
View Food Map (Navigation)	
View Item Price (Main)	
Add Item to Meal Plan Checkout (Main)	
Save Meal Plan (Main)	
View Meal Plan (Manipulation)	
Edit Meal Plan (Manipulation)	
Delete Meal Plan (Manipulation)	
Section 3: Feedback Section	
USER FEEDBACK	SHORT ANSWER (QUALI)

Table 5.Survey Questionnaire

Table 5 will be the format for the questionnaire that will be used in the evaluation of the prototype. This will be handed over to the participants as it also contains the link to access the prototype. This survey can be accessed through this link

Mean	Scale	Descriptive Equivalent	Classification
5.51 – 6.49	5	Highly Acceptable	SUCCESSFUL
4.51 – 5.59	4	Acceptable	
3.51 – 4.49	3	Moderately Acceptable	NEUTRAL
2.51 – 3.49	2	Fairly Acceptable	FAILED
1.51 – 2.49	1	Not Acceptable	
Overall Mean		**Overall Descriptive Equivalent**	

Table 6. 5-point Likert Scale Survey Interpretation

Table 6 presents the interpretation of the question provided in the forms. The survey will determine the applicability of the design and Functions based on the results.

Project Description:

CraveCompass is a basic IOS application developed and implemented by Andal, Andoy, and Mayo of MA Solutions to address the problems in the food market which revolves around economic and location data with regards to running establishments. The application's intended function is to provide information about establishments, menus, and prices that would help provide information for people who want to explore the food market. The intended users of this program are the general population and tourists.

Requirements Summary:

MINIMUM REQUIREMENTS	Processor Cores	Dual Core
	OS	IOS 12
	RAM	2 GB
RECOMMENDED REQUIREMENTS	Processor Cores	Quad Core
	OS	IOS 17
	RAM	4 GB
OTHER REQUIREMENTS	Permissions	4G Data, Storage Permissions, Notification Permissions

Table 1. System Requirements IOS

This application is designed for IOS devices which is designed for optimization and a lightweight framework. A minimum of 5 generations from the current IOS version is to be required while recommended requirements opt for IOS 17 which offers a smooth process.

Overview

Due to conflicts in schedules, availability of the members, and limitations in time, the team is unable to conduct this physically or online. Instead, the evaluation is to be conducted asynchronously, through Forms with guidance from the development team. While this limits the effectiveness of evaluations, this creates another factor which is how users are to be expected when there's no guidance from the developers.

Moving on, the evaluation plan is split into three sections: Functionality and Applicability of the prototype, Heuristics Evaluation, and Participants survey and Feedback. Below is presented a description of each section.

TECHNIQUE	DESCRIPTION
Functionality and Applicability of the Prototype	The prototype's desired functionality is to be fluid enough that there should only be one navigation that leads directly back to the main page, hence the duties for this prototype are ongoing. The tasks that users must complete in order to evaluate the functionality are listed below. They fall into three categories: Manipulation, Navigation, and Main.
Heuristics Evaluation	As per regular procedure, CraveCompass will use the 10-usability heuristic method to evaluate the application and establish a baseline for its functionality.
Participants survey and Feedback.	A survey will be provided to participants after conducting the prototype. The survey will contain quantitative questions that

	are interpreted into a 5-point Likert Scale as well as Qualitative questions in the form of Feedback. This will ensure that no designer bias will be done to the *result* of this evaluation.

Table 1. Evaluation Plan

The tasks for this prototype are continuous as the intended function of the prototype is to have the functionality to be fluid enough that at most there's 1 navigation that can head straight back to the main page. Provided below are the tasks that users are required to perform to consider the functionality. These are categorized as Main, Navigational, and Manipulation:

- Enter the Program (Navigation)
- View Food Map (Navigation)
- View Item Price (Main)
- Add Item to Meal Plan Checkout (Main)
- Save Meal Plan (Main)
- View Meal Plan (Manipulation)
- Edit Meal Plan (Manipulation)
- Delete Meal Plan (Manipulation)

These tasks are selected to be able to test all functional features of the prototype which provides:

- Navigational Challenges
- Memorization

Method of Conducting Online Test:

Due to the unavailability of the developers, and the time constraints. Asynchronous means were conducted where the participants were given instructions which they could do so at their own pace. This is guided by remote

guidance with the developers in case of unexpected developments which there were none. Google Forms was the main platform for evaluation.
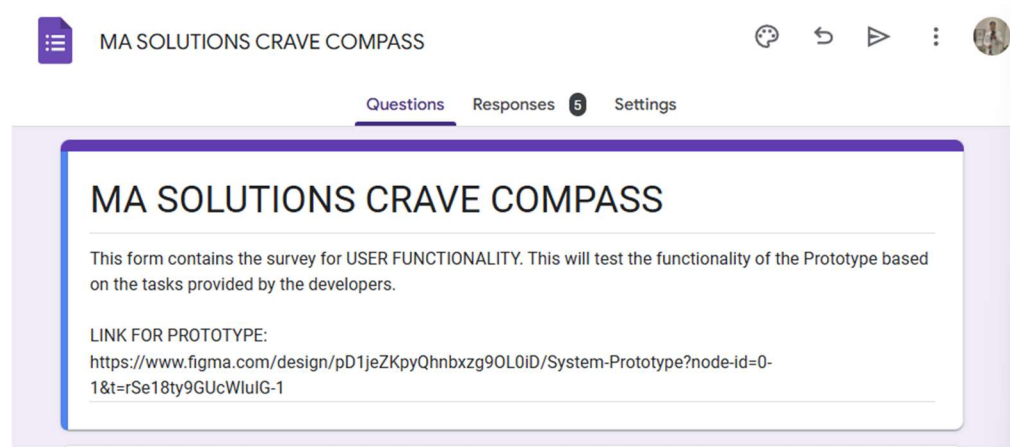

Figure 1. Image of Online Test.

Data Presentation

Data Analysis

Usability Specifications.

During the testing phase with the participants. MA Solutions has found that there was a pattern with the results, Navigating the application never reaches the 30-second mark, manipulating the data consumes 30 seconds on average, while the main functionality took the most spending more than 40 seconds on average. This presents a possibility where the familiarity of the UI to existing applications made it much easier to follow while the longer time is due to having to navigate to multiple pages but can be directly accessed through the menu.

TASK	MEAN	INTERPRETATION	CLASSIFICATION
Navigation	25.4 Seconds	Highly Acceptable	Successful
Main	48.8 Seconds	Highly Acceptable	Successful
Manipulation	30 Seconds	Highly Acceptable	Successful

Table 2. Task to Perform.

Table 2 presents the results of the timed tasks during the testing phase. The data shows that all tasks were performed under the recommended time which results in all three tasks as highly acceptable. With this, the prototype was interpreted as successful in all 3 accounts.

Heuristic Evaluation

The **CraveCompass** prototype will be evaluated with each type of Heuristic Evaluation where:

Visibility of System Status

The prototype was able to display adequate information within the prototype.

Match Between System and Real World

The prototype uses modern English which can be easily understood by all users within the participants. Stated words and phrases can be easily understood.

User Control and Freedom

The flexibility of the application is that it provides buttons and navigation areas to move within the prototype. Using common universal symbols allows for the understanding of functions without much understanding.

Consistency and Standards

The application was consistent albeit with some features not implemented as of the current prototype. Buttons and design are consistent.

Error Prevention

The basic functionalities of the application allow for basic error prevention, but more complexities can be encountered.

Recognition rather than recall.

Strategic button placements and symbols allow users to directly interact and are easy to navigate through.

Flexibility and Efficiency of Use

The prototype uses a similar UI to various established applications allowing for easier learning curve and understanding.

Aesthetic and Minimalist Design

The Prototype has a more utilitarian design but incorporates modern designs as well. However, clutter can be observed at some places.

Help Users Recognize, Diagnose, and Recover from Errors

The simplicity of the design is an oversight from this as there was no implementation of this functionality especially with the unimplemented functionality on some buttons.

Help and Documentation

The prototype is documented through diagrams and instructions that are well implemented.

Heuristic Conclusion

Overall, the prototype managed to perform most of the heuristic requirements but failed at one which can be addressed in future iterations.

Participants Survey and Feedback

SECTION 1			
QUESTION	MEAN	INTERPRETATION	CLASSIFICATION
On a scale of 1 to 5 how would you rate your experience with the Sasha Prototype	4.4	Acceptable	Successful
On a scale of 1 to 5 how was the UI design of the prototype	4.4	Acceptable	Successful
How easily were you able to follow the tasks provided	4.2	Acceptable	Successful
SECTION 2			

Enter the Program (Navigation)	4.8	Highly Acceptable	Successful
View Food Map (Navigation)	4.6	Highly Acceptable	Successful
View Item Price (Main)	4.4	Acceptable	Successful
Add Item to Meal Plan Checkout (Main)	4	Acceptable	Successful
Save Meal Plan (Main)	4.8	Highly Acceptable	Successful
View Meal Plan (Manipulation)	4	Acceptable	Successful
Edit Meal Plan (Manipulation)	3.6	Acceptable	Successful
Delete Meal Plan (Manipulation)	4.4	Acceptable	Successful

Table 3. Survey Results, Interpretation, and Classification.

Table 3 presented above shows the results of the survey conducted by the developers. The result shows that the application is successful with acceptable-highly acceptable records in some areas. However, some parts require attention such as the edited meal plan which requires design changes to make it more coherent with the overall functionality and design. Also, based on some answers on the Heuristic approach, the aesthetics of the application requires a bit more attention as while functionality is focused on the prototype, its design can be a bit outdated on some parts.

Feedback

Based on the comments in the survey, UI design and smoothness of the application need to be updated as these two factors affect the overall results of the survey.

Design Implications:

- **Does your prototype need to be altered to address the results of the analysis, or was it completely successful?**

  The results show an acceptable result and are classified as successful; however, this is only a prototype, and important functionalities were only implemented as some parts have unimplemented functions such as in the account information which will be implemented at a later iteration if this project is continued. Furthermore, UI design can be improved and some parts can be redesigned for a much more coherent look and feel.

- **What improvements could be made to the design to address any shortcomings?**
  As for the design issues, a redesign for the edit meal plan with the repositioning of buttons and resizing of spaces to further improve the looks of the page.
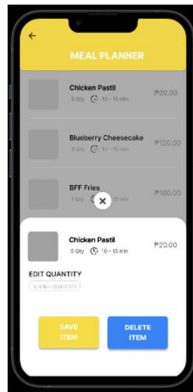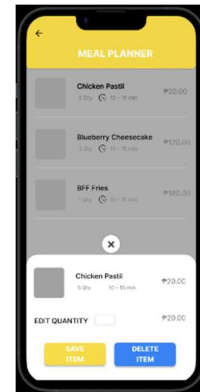
Before Changes   After Changes

As for the other parts of the application, minor changes to the positioning and changes to the font were observed but found to be negligible changes to the outcome.

- Did you discover any major flaws that would suggest a completely different type of design?

Since the Save Meal plan was an unintended feature to replace the delivery/ pick-up, some parts might confuse the user when it comes to navigating as the UI is like existing food delivery apps. Furthermore, the local account is not necessary and can be replaced with live account usage at the cost of increased server maintenance and user requirements.

Critique and Summary:

What were the advantages and disadvantages of your evaluation?

- The advantages of the conducted evaluation were that it was able to demonstrate most of the functionalities of the program and gather

more comprehensive data in various situations and levels of the application. The downside is that it was conducted online, asynchronously, which hindered live demonstrations and real-time communication with the developers. Also, the data collection part is slow as the participants gathered opted in and out at any time requiring a do-over on the tasks at hand. Overall, the evaluation went almost smoothly but required some oversight on some crucial parts of the session. Lastly, the population size is small the results can be biased based on user preferences.

What would you have done differently knowing what you know now (both design-wise and evaluation-wise)? Given more resources, what could you have done that would have produced significantly more insightful evaluation results (again, whether this is an improved prototype or a different evaluation path)?

If given more time and resources, the team would conduct a physical evaluation with more tasks and present various cases that could test the limits of the prototype. This would result in more comprehensive information compared to before and will utilize a different application to do so for better integration.

Summary of the Project.

In conclusion, the team found during the conduct of this study that while the food market lacks an application similar to the one being currently designed, the oversaturation of various applications can be an undesirable path in creating a dedicated one. However, first-hand accounts of the difficulties, the knowledge of

food economies, and also understanding of existing applications, have led to the production of this prototype which while looks like a clone of existing applications, its purpose has implications for the current food market, finding potential to benefit a lot of users based on the results on this study. Overall, the current design requires lots of improvements, but the plans and functionalities are effective and have found the potential to be classified as a success.