**Introduction**:

**2.Background reseach:**

**2.1 Considerations for User Interface Design  
Input Method:**  
To enable users to make non-standard responses, input fields are a crucial component of user interface design. Although they are utilized in a variety of contexts, the majority of people have probably seen them when submitting online inquiries or entering personal information and delivery addresses on e-commerce web forms1. Various input field kinds and states have been found through input UI design exploration, along with style methods and usability advice for creating faultless user experiences.

**Common Gestures:**

Both Android and iOS come with gesture-based navigation. While Android 9 Pie keeps the on-screen home button, which is now shaped like a pill, iOS users may accomplish this by quickly swiping up from the bottom of the phone on the gesture bar. The system navigation on Android has a helpful return function that is really helpful from practically any screen. Creating an app meet the requirement for both platform is necessary

**Web apps against native apps and progressive web apps (PWAs):**

An application that is native to a mobile platform is one that can be obtained through an app store, such as the App Store, Google Play, or Galaxy Apps. Conversely, a program that runs within a web browser is known as a web app. A responsive website that offers an app-like experience is called a Progressive Web App (PWA). Progressive web applications operate in a browser and don't require downloading from an app store, which is the main distinction between them and native apps. In this situation, designing a native app is better than two option remains. Because, smart phone is the most popular in the world every one can have a phone so that native app is the effective way

**Screen Sizes:**

Designing for a variety of screen sizes and resolutions is a multifaceted process that calls for careful testing, technological know-how, and a user-centered approach8. The three main techniques for developing adaptable interfaces are adopting responsive design, giving mobile-first principles top priority, and optimizing media and images8. It is customary in adaptable design to create six designs: 320, 480, 760, 960, 1200, and 1600 pixels—for the six most popular screen widths. My design would take Iphone with 6.1 inch, it not too small and not too big.

**2.2 Usability/Design Guidelines and Standards**

**Jakob Nielsen and Rolf Molich’s Ten User Interface Guidelines:**

Companies like Apple, Google, and Adobe employ these standards extensively in the design of many of their successful products. Visibility of system status, compatibility between the system and the real world, user control and freedom, consistency and standards, error prevention, recognition rather than recall, ease of use and flexibility, minimalist and beautiful design, assistance for users in identifying, diagnosing, and recovering from errors, and help and documentation are some of the guidelines

**Usability Elements For Exceptional Experiences:**

These include error tolerance (supporting a range of user actions and only showing an error in genuine erroneous situations), effectiveness (assisting users in completing actions accurately), efficiency (enabling users to complete tasks quickly through the simplest process), engagement (engaging users and finding it appropriate for its industry/topic), and ease of learning (new users can accomplish goals easily and even more easily on future visits)  
**Design Principles:**

These are suggestions for using design principles to create a satisfying user experience. These consist of layout (list or grid structure), text (font, tone, labels/fields), style (colors, brand logos), accessibility (Aria markup for users with disabilities), and design patterns (forms).

I combine the Ten User Interface Guidelines and Usability Elements for Exceptional Experiences by Jakob Nielsen and Rolf Molich. These recommendations emphasize efficiency, error prevention, and user control—all of which are critical for any application that includes delivery and selection. They also place a strong emphasis on learning simplicity and engagement, both of which are critical for drawing in and keeping users. The ultimate choice, nevertheless, need to be made in light of the particular requirements and preferences of your intended user base. To make sure your design choices meet user wants and expectations, it's a good idea to carry out usability testing and user research

**3. User Group:**

The success of a user interface design largely depends on how well it caters to its user groups. For our food and recipe box delivery application, we have identified the following primary user groups:

**Heal-Conscious Individuals**

This group includes individuals who are conscious about their diet and prefer healthy and nutritious meals. They might be following a specific diet plan like keto, vegan, or gluten-free.

**Persona 1: Maria**

Maria is a 35-year-old yoga instructor who follows a strict vegan diet. She is always looking for new and exciting vegan recipes to try. She appreciates the convenience of having recipe boxes delivered to her home, saving her the time and effort of meal planning and grocery shopping.

**Key Facts:**

* They are conscious about what they eat and prefer meals that are healthy and nutritious.
* They may be following a specific diet plan and would appreciate meals that cater to their dietary needs.
* They value convenience and would appreciate a service that saves them time on meal planning and grocery shopping.

**Scenario:**

Maria is planning her meals for the upcoming week. She opens the app and filters the recipes to show only vegan options. She selects a few recipes that she finds interesting and orders the corresponding recipe boxes.

**Busy Professionals**

People in this category struggle to find time to prepare meals, buy for groceries, and cook because of their hectic work schedules. The ease of having meals prepared ahead of time and all the materials delivered right to their home would be greatly appreciated.

**Persona 2: John**

John is a 40-year-old lawyer who often works late hours. He wants to eat healthily but doesn’t have the time to plan meals and shop for groceries. He would appreciate a service that delivers recipe boxes that he can quickly cook at home.

**Key Facts:**

* They often work long hours and may not have the time or energy to plan meals and shop for groceries.
* They value convenience and would appreciate a service that saves them time on meal planning and grocery shopping.
* Despite their busy schedules, they want to eat healthily and would prefer meals that are nutritious and well-balanced.

**Scenario:**

John has a busy week ahead with several court appearances. He uses the app to select meals for the week and schedules a delivery. This way, he doesn’t have to worry about meal planning or grocery shopping during his busy week

**4. Visual Design**

**Color Scheme**

I’ve chosen black for text, white for background, and geen for clicked button.

Here is the Hex:  
**#FFFFFF,#0000000,#1ADB1E**

Black text and white background:  
A timeless combination that offers great contrast for readability is black text on white background. This is in line with the color theory principle of contrast, which says that designs with opposing hues are lively and visually appealing

Green clicked text  
The psychology of color can be connected to the usage of green for clicked text. Green is frequently linked to good behaviors and might indicate to the user that they have interacted with a section of the interface successfully



**Typography**  
For typography, it’s important to choose a font that is easy to read and aligns with the brand’s identity.

San Francisco:

is an Apple designed typeface that provides a consistent, legible, and friendly typographic voice. Across all Apple products, the size-specific outlines and dynamic tracking ensure optimal legibility at every point size and screen resolution. Numbers have proportional widths by default, so they feel harmonious and naturally spaced within the time and data-centric interfaces people use every day

Because design for Ios device there are no reason using that font.

**Layout**  
Making information accessible and comprehensible is the field of information architecture (IA). To assist individuals, comprehend their environment and locate what they're seeking for online and offline, it involves searching, browsing, classifying, and displaying pertinent and contextual information1. IA functions from two angles: Consumers view products, services, and information as linguistic spaces1. These locations, or information environments, can be set up to be as easily found and understood as possible. Context, users, and content all inform good IA  
The following may be the structure of the information architecture for your recipe box and meal delivery application:

**The home screen** is what consumers view when they launch an application. It could show highlighted recipes, best-selling meal kits, and exclusive deals.

**Recipe Selection**: Users can peruse several recipes using this screen. It may be divided into groups according to the kind of cuisine, nutritional requirements, length of preparation, etc.

**Meal Box Customization:** By choosing the recipes they wish to include; consumers may personalize their meal boxes on this screen.

**Checkout**: The user may verify their order and schedule delivery from this screen, which also gives them an overview of their meal box.

**Graphic Design Elements**  
The visual components that users interact with, such buttons, menus, and control panels, are known as graphic design elements. They are essential in designing engaging and intuitive user interfaces that let people move about and engage with the system. The following are some essential components of graphic design that you may use in your application:

**Buttons**: Buttons are interactive design components that a user may tap or click to start a certain action. You may include buttons, for instance, to add a recipe to the meal box or to check out.

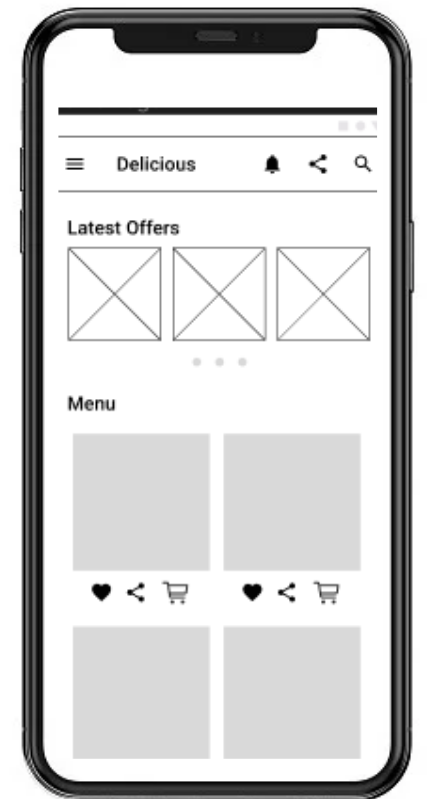
**Icons**: Icons are a small, aesthetically pleasing way to represent various capabilities or functionalities. One may utilize an icon of a shopping cart for the checkout button, a heart for the favorites function, and so on.

**Visuals**: Having clear, crisp photos of the recipes may improve the app's aesthetic appeal and aid users in selecting.

**Badges**: Using badges as visual cues, you may express certain details about an item. To designate recipes that are gluten-free or vegetarian, for instance, you may utilize badges.

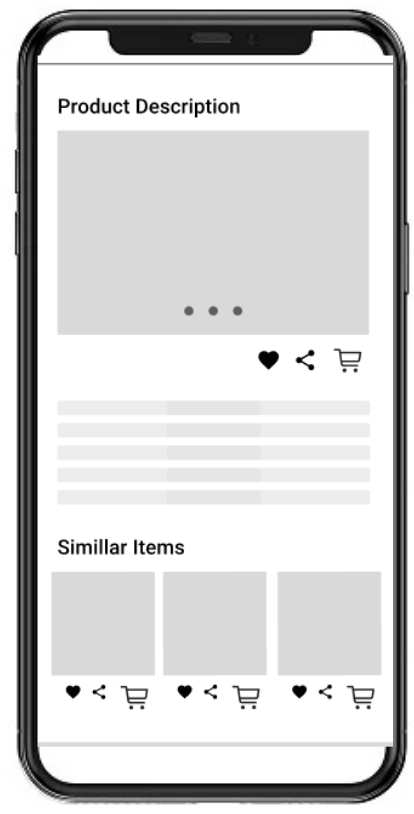
**5. Low-Fidelity**

**Alternative 1:**



**Hamburger Navigation**

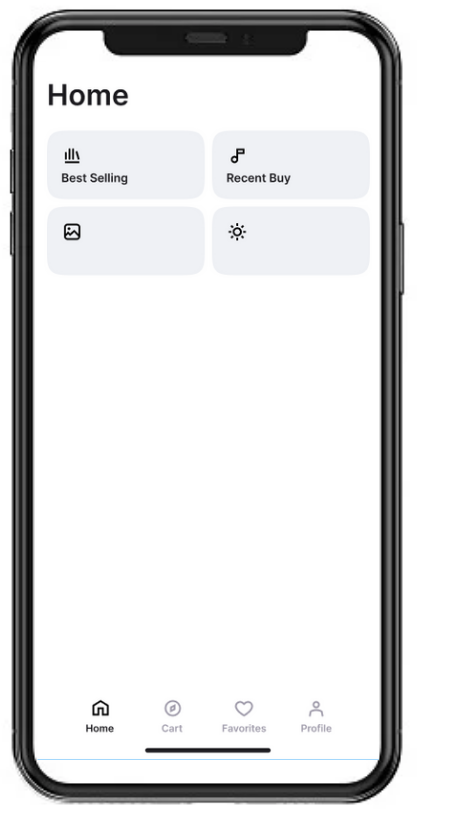
This design I use Hamburger Navigation feature to link all the page such as: Home, Category, Login,....



**Product Description**

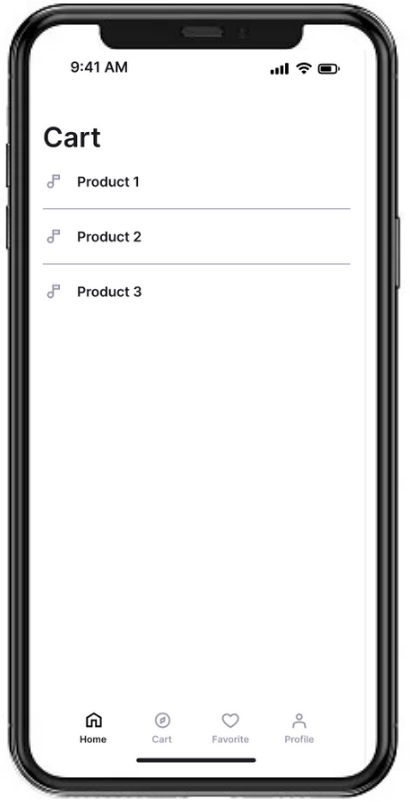
The purpose of this page is showing the detail of the product, also showing the recipe of the mean.

**Alternative 2**



**Home Page with navigation bar**

This Home Page allow user access to their cart, favorite and their profile on bottom navigation. Also it show the best selling, and recent recipe that user have been bought before



**Cart Page**

This is show for customer what they have add to the basket.

**6. Evaluation And Selection Process**

**Evaluation**

A variety of evaluation methodologies were looked at in order to determine the usability and efficacy of the designs when it came to the evaluation and selection process for the low-level prototypes. The following methods of evaluation were taken into account:

**HEURISTIC EVALUATION:**

Using a set of accepted usability guidelines or heuristics, the prototype is evaluated using this technique. It offers a methodical approach to pinpoint usability problems and assess the overall efficacy of the design. Heuristic evaluation is effective and may be carried out by professionals or those who are acquainted with usability concepts.

**PROS:**

* **Efficiency:** Heuristic evaluation is suited for early-stage prototype evaluations since it is frequently faster and need fewer resources than other evaluation procedures.
* **Professional Input:** Because of their familiarity with usability principles and best practices, professional evaluators are able to offer insightful opinions.
* **Systematic Approach:** To ensure comprehensive coverage of important usability elements, the evaluation adheres to a set of organized usability guidelines.
* **Evaluation Based on Objective Standards:** Heuristic evaluation minimizes the impact of subjective judgments and prejudices by concentrating on objective standards.
* **Early Problem Identification**: It facilitates the early detection of usability problems in the design phase, enabling prompt corrections and enhancements.

**CONS:**

* **Restricted Viewpoint:** Certain usability difficulties unique to the task domain or user environment may be missed by heuristic evaluation.
* **Expert Availability:** Access to competent assessors may be restricted, particularly in specialized or niche fields.
* **Interpretation Variability:** Different evaluators may interpret usability heuristics differently, which might result in inconsistent evaluation findings.
* **Inflexibility:** Emerging usability problems that are not addressed by the preset set of criteria may go unnoticed by the evaluation.
* **Absence of User Feedback:** Heuristic assessment may overlook crucial information about user wants and preferences since it does not solicit direct feedback from end users.

**Cognitive Walkthrough:**

**PROS**:

* **User-Centered**: It prioritizes learning convenience, especially for infrequent or novice users.
* **Comprehensive Analysis:** It offers a thorough examination of task performance.
* **Early Design Assessment:** It is applicable at an early stage of the design process.

**CONS:**

* **Time-consuming:** The procedure might take a while, particularly for intricate interfaces.
* **Expertise Required:** It necessitates familiarity with the duties and goals of the user.
* **Restricted to Particular Tasks:** It assesses the user interface just for the tasks that are performed step-by-step.

**User Testing**:

**PROS:**

* **Real User Feedback:** It offers firsthand commentary on actual users' experiences with the system.
* **Versatile:** It may be applied in many design and development phases.
* **Finds Unexpected Problems:** Users may utilize the technology in ways that the creator had not intended.

**Cons:**

* **Resource-intensive:** Finding and scheduling participants can be expensive and time-consuming.
* **Restricted Scope**: The majority of users may not be represented by the few individuals that are usually involved.
* **Observer Effect:** When people are aware that they are being watched, they may behave differently.

**Focus Groups:**

**Pros:**

* **Multiple Viewpoints:** It makes it possible to investigate a variety of viewpoints and concepts.
* **Interactive:** Participants are able to expand on and generate new ideas from one other's answers.
* **Rich Data:** Qualitative, rich data may be obtained from it.

**Cons:**

* **Group dynamics**: Opinions of others might be influenced by dominant players.
* **Difficult to evaluate:** It can be challenging and time-consuming to evaluate qualitative data.
* **Logistical Difficulties:** Focus group scheduling and facilitation might provide difficulties.

**Selection Process:**

The project objectives, the resources at hand, and the unique qualities of the low-level prototypes were all carefully taken into account during the selection process to find the best assessment approach. It was decided to move on with heuristic evaluation as the main assessment approach after weighing the benefits and drawbacks of cognitive walkthrough, focus groups, and heuristic evaluation..

**Selection:**

Heuristic evaluation and cognitive walkthrough together could be a wise decision. These techniques make it possible to evaluate the interface systematically using accepted usability standards and task performance, respectively. But the last call should be made in light of particular limitations and circumstances.

Here is the reason why I combine 2 methods together:

**Complementary Advantages:** There are advantages to each of these strategies. While Cognitive Walkthrough is useful at understanding how a new user might approach activities in your system, Heuristic Evaluation is good at finding broad usability concerns based on known principles. These techniques may be used to provide you a comprehensive and in-depth understanding of usability.

**Various Viewpoints**: Heuristic evaluation offers the viewpoint of an expert and focuses on whether the design complies with recognized usability standards. Conversely, Cognitive Walkthrough provides a user's viewpoint and concentrates on job completion. By utilizing both techniques, you may see your design from many perspectives.

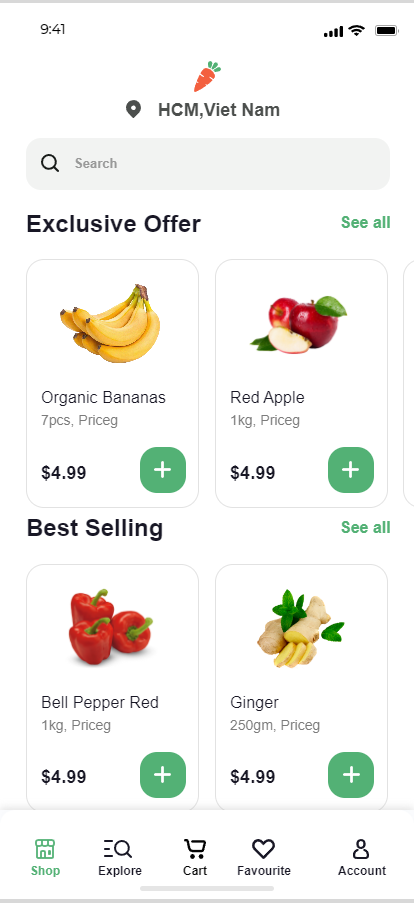
**Enhanced Coverage:** The detection of usability issues may be covered up to a greater extent by using a variety of assessment techniques. Certain problems may be detected by one approach but not by the other.

**Final Mid-fidelity Prototype Design**

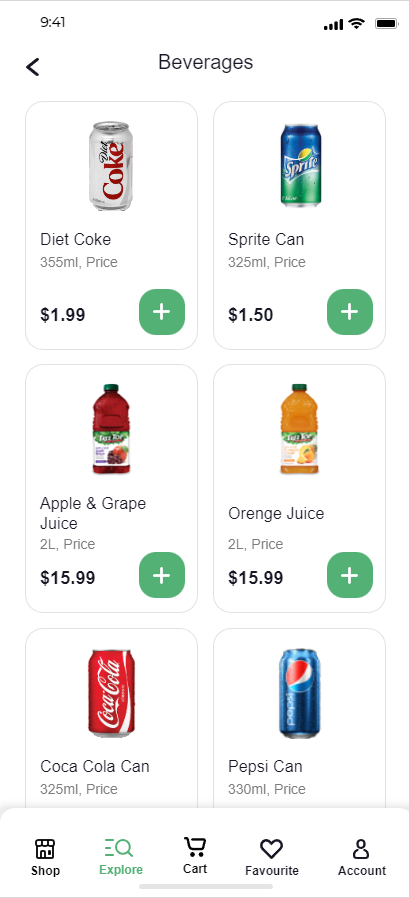
**Home Page**

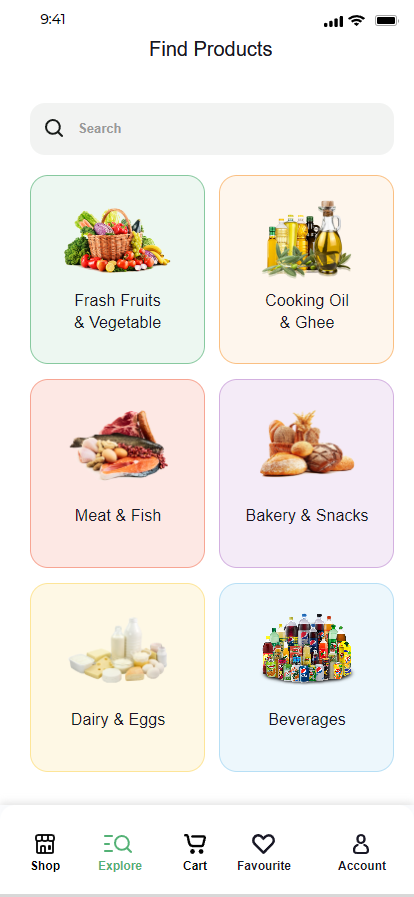
Here is the Home Page:

This Page allow user to search the product that they want. Also showing exclusive offer, best selling. When the user find a meal that they want. By Clicking the Plus Button the cart will increase. Using bottom navigation bar is very good for customer to access to another page easily

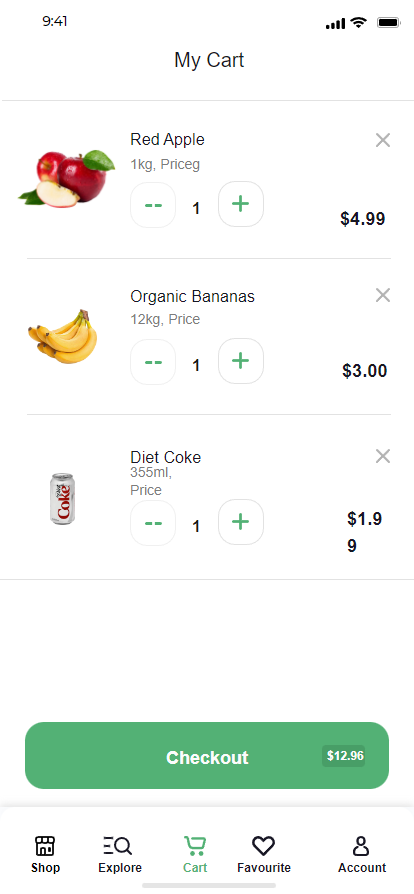
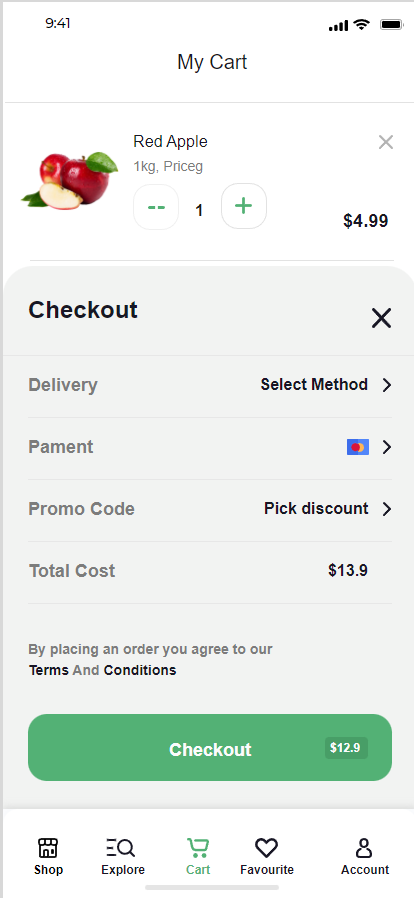


**Explore Page:**

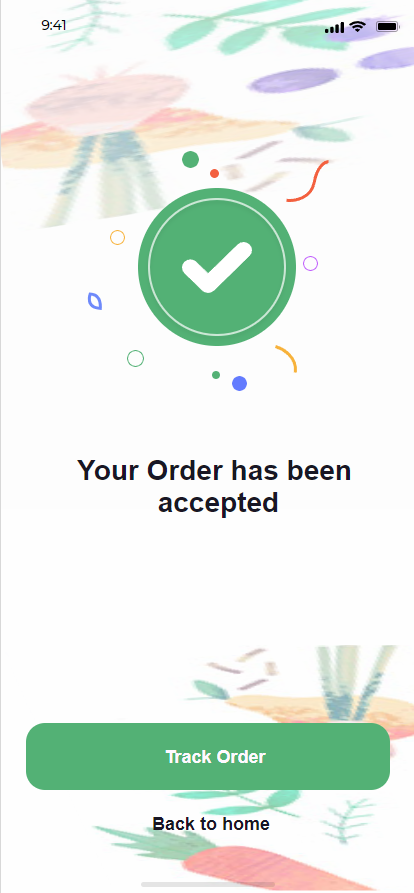
Explore Page will display arranged meal into exist category. I’ve use the grid layout, my opinion design view using grid, it looks very intuitive. If customer click in the card, it will locate to the page that contain all the related product

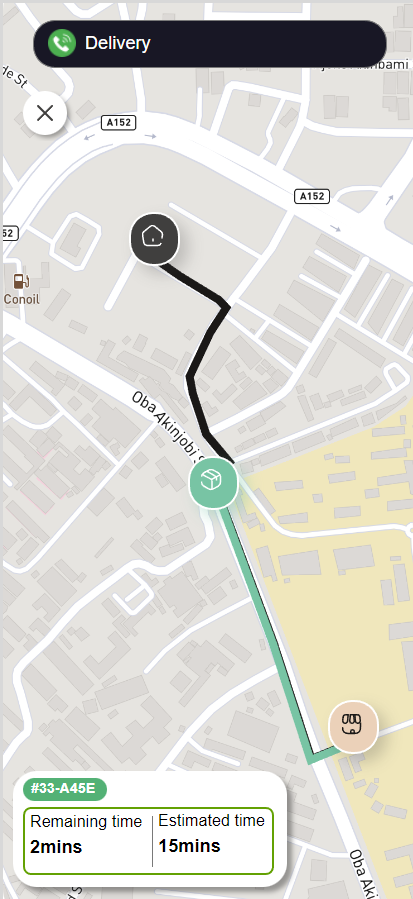


**Cart Page:**

This card show the customer the product that they have add, more over checkout button will show another card. Checkout card delivery, discount and total cost

**Success Page And Tracking The Order:**



This page will appear after customer pressed checkout button, if they click Back to home, customer will return to home. If they pressed the Track Order it will display the tracking order. This Page include estimate time, shipper, location of customer home and the store. I’ve also implement phone call simulation if customer pressed that call button. I will locate to the order history.

