USER INTERFACE DESIGN
Roll no:230701258

AIM:

The aim is to demonstrate the lifecycle stages of UI design through the RAD (Rapid Application Development) model and develop a small interactive grocery shopping interface using Figma as the prototyping tool.

The Rapid Application Development (RAD) model in User Interface Design emphasizes speed and adaptability by focusing on building quick, interactive prototypes. Rather than spending extensive time on initial documentation, RAD encourages early design mockups that can be refined through continuous feedback from users. This iterative, user-focused method helps catch usability issues early on, ensures the interface evolves with user needs, and significantly reduces the time between design and deployment.

PROCEDURE:

=> Phase 1: Requirements Planning(Identify Key Features, Create a Requirements Document)

=> Phase 2: User Design (Display The Wireframe)

=> Phase 3: Construction (Test and Iterate)

=> Phase 4: Cutover(Finalize and Export)

Phase 1: Identify the Requirements

- **Login / Signup Page**
  (Allow users to create an account or sign in.)

- **Home Page with Featured Categories**
  (Display main categories like Vegetables, Fruits, Dairy, Staples.)

- **Search Functionality**
  (Allow users to search for specific grocery items.)

- **Category Listing Pages**
  (Show list of products under each category.)

- **Product Details Page**
  (Display product name, price, image, quantity selector, and Add to Cart button.)

- **Cart Page**
  (View selected items, edit quantity, remove items, view total price.)

- **Checkout Page**
  (Collect delivery address and payment method, confirm order.)

- **Order Confirmation Page**
  (Display thank you message with order summary.)

- **Profile Management**
  (Update address, contact information, view profile.)

Requirements Document:

Objective:

The objective of this grocery shopping app UI design is to create a simple, intuitive, and seamless platform where users can easily browse, search, and purchase groceries online. The app should allow users to log in or sign up, explore various product categories, view detailed product information, manage a shopping cart, complete checkout with delivery details, and view their order history. The design must focus on ease of use, quick navigation, and a delightful shopping experience, ensuring accessibility across all types of devices and catering to users of all age groups.

How to Measure

The success of the UI design will be evaluated through key usability and performance metrics. These include the user task completion rate, which measures how easily users can add items to the cart and place orders without confusion. Time on task will be tracked to assess the efficiency of finding and purchasing products. User satisfaction will be gauged through feedback sessions and usability surveys. Error rates, such as incorrect item selection or abandoned carts, will help identify potential pain points. Retention rate will measure how often users return to reorder groceries, indicating the effectiveness of the overall experience.

Who Are the Users

The primary users of the app are everyday shoppers seeking convenience in purchasing fresh groceries, fruits, vegetables, dairy products, and household staples. Secondary users may include busy professionals, elderly users who prefer home delivery, and small businesses that require bulk grocery orders. The app must cater to varying levels of tech-savviness, ensuring that navigation, cart management, and checkout processes are easy for all types of users. Additionally, delivery partners and admin users might access limited modules for order fulfillment and inventory management.

Product Flow

The user journey begins with a simple and secure login or signup process using mobile number, email, or social login options. Upon logging in, users are directed to the Home Page featuring a search bar, promotional banners, and popular grocery categories. Users can browse through categories like Fruits, Vegetables, Dairy, Staples, and Snacks, or directly search for specific products.

Selecting a product opens a detailed page with product image, price per quantity, description, and an "Add to Cart" button. Users can view their cart, adjust quantities, remove items, and view the running total.

During checkout, users enter their delivery address and select a payment method (e.g., Cash on Delivery). After placing an order, an Order Confirmation page summarizes the purchase with an estimated delivery time.

Users can track their past purchases through the Order History section and manage their profiles by updating personal details like delivery addresses or contact numbers. The design prioritizes quick loading times, a clean visual hierarchy, and a mobile-friendly responsive layout to ensure a smooth grocery shopping experience.

User Stories and Use Cases:

User Story 1:

As a registered user, I want to log in securely so I can start shopping for groceries.

- **Use Case**:
  The user enters their mobile number and password (or uses social login), successfully authenticates, and is redirected to the home page displaying categories and featured products.

User Story 2:

As a user, I want to browse grocery categories easily so I can find the items I need.

- **Use Case**:
  From the home screen, the user selects a category such as "Vegetables" or "Dairy" to view the list of available products under that section.

User Story 3:

As a user, I want to add multiple products to my cart quickly so I can complete my shopping efficiently.

- **Use Case**:
  On the product listing page, the user taps on "Add to Cart" for each product they want to buy. A cart counter updates dynamically as products are added.

User Story 4:

As a user, I want to view and edit my cart before checking out to ensure my order is correct.

- **Use Case**:
  The user navigates to the Cart page, where they can increase or decrease product quantities, remove unwanted items, and view the updated total bill before proceeding to checkout.

User Story 5:

As a user, I want to complete my purchase by providing delivery details and choosing a payment method.

- **Use Case**:
  During checkout, the user fills in delivery address details, reviews the final order, selects "Cash on Delivery," and places the order.

User Story 6:

As a user, I want to track my previous grocery orders so I can reorder quickly if needed.
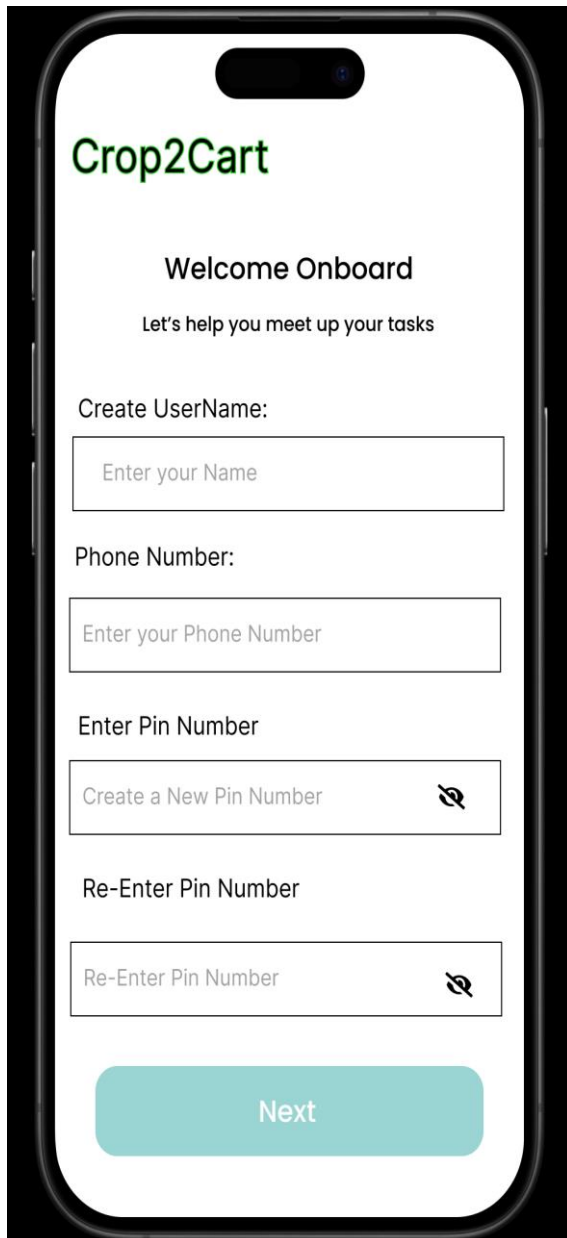
- **Use Case**:
  The user visits the "Order History" section from the profile menu to view past orders, their statuses, and reorder items if required.

Phase 2: User Design

Create The Wireframes:

-Login page:

Crop2Cart

Welcome Onboard

Let's help you meet up your tasks

Create UserName:

Enter your Name
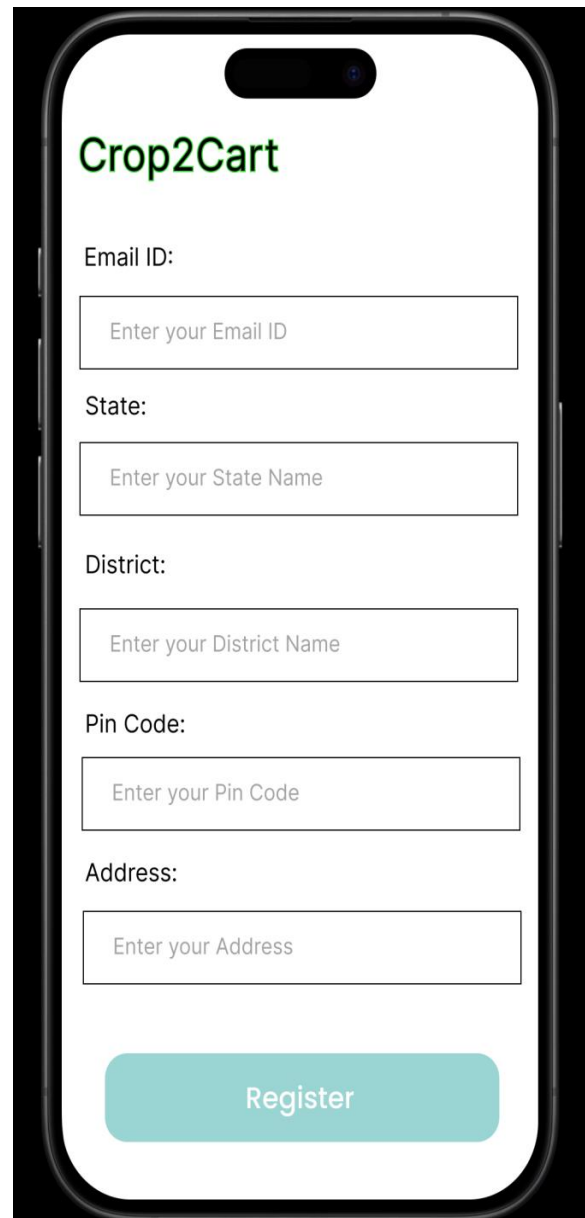
Phone Number:

Enter your Phone Number

Enter Pin Number

Create a New Pin Number

Re-Enter Pin Number

Re-Enter Pin Number

Next

Crop2Cart

Email ID:

Enter your Email ID

State:

Enter your State Name

District:

Enter your District Name

Pin Code:

Enter your Pin Code

Address:

Enter your Address

Register

-Categories Page

-Product Detail Page
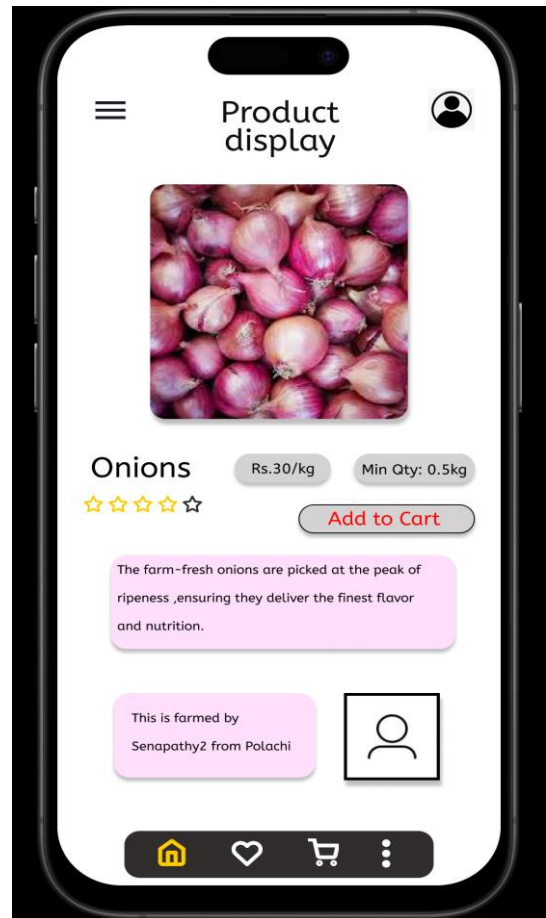
-Checkout Page
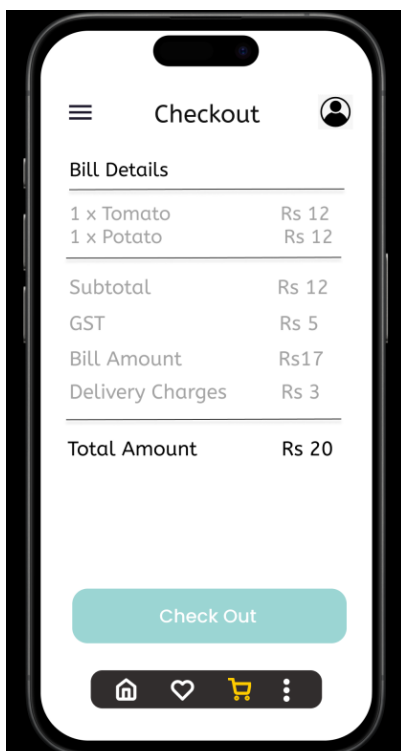
-Payment Page
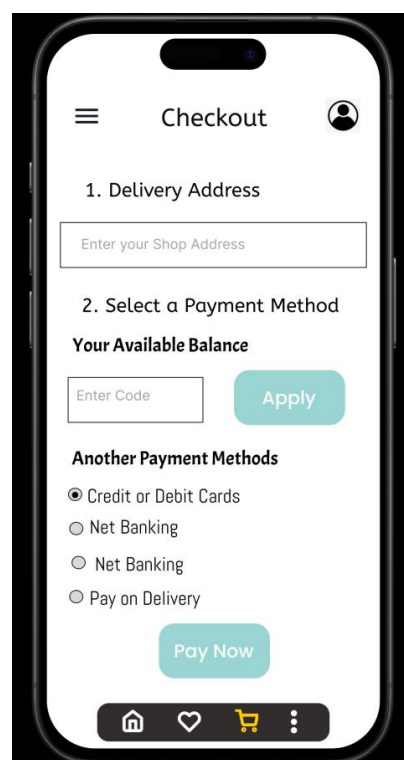
Phase 3: Construction (Test and Iterate)

Test (n Times):

In this phase, the grocery shopping app design was reviewed and tested multiple times by a small group of users and stakeholders. Each testing round involved exploring the current UI and suggesting improvements or missing elements. Based on the feedback, iterations were carried out to enhance usability, add missing functionality, and improve the overall user experience. Each round focused on a specific improvement before retesting the updated version.

Iteration 1:

→ **User Feedback:**
Users requested the ability to view and manage their profile details after logging in.

→ **Action Taken:**
A dedicated **Profile Management Page** was added. Users can now update their name, delivery address, and contact number through a clean, accessible interface.

Iteration 2:

→ **User Feedback:**
There was no way to view selected items before checkout. Users needed an overview page to review and manage cart items.

→ **Action Taken:**
A fully functional **Cart Page** was designed and added. It allows users to review products, change quantities, remove items, and view the total bill before placing an order.

Iteration 3:

→ **User Feedback:**
After placing an order, users wanted confirmation that the process was successful along with basic details like order ID and estimated delivery.
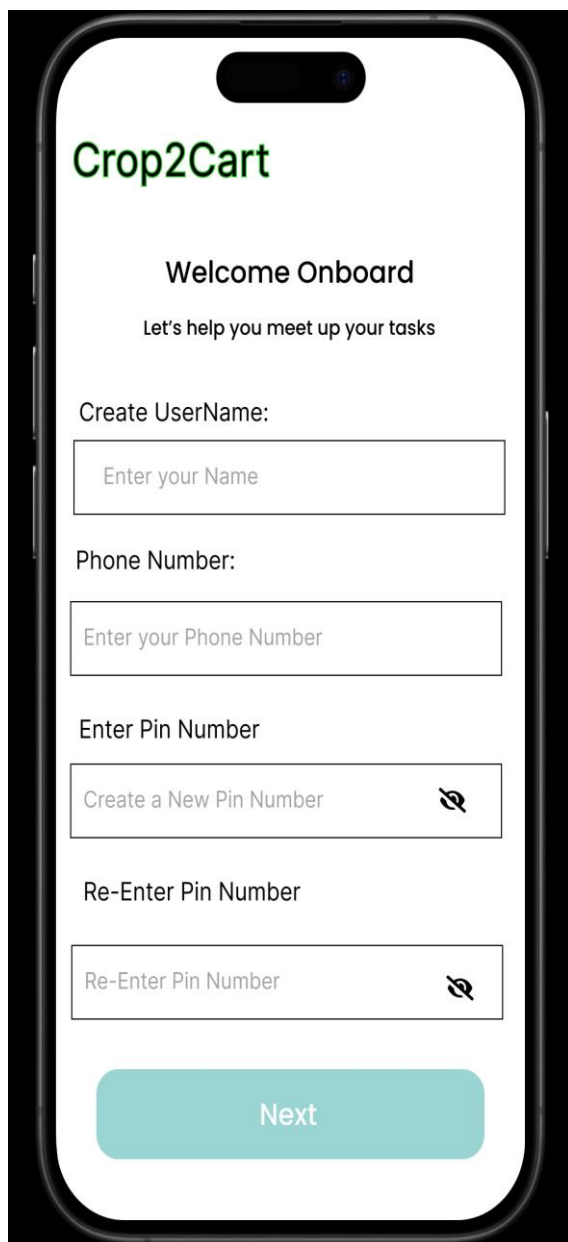
→ **Action Taken:**

An **Order Confirmation Page** was introduced. It displays a thank you message, summary of the order, and a "Continue Shopping" button to return to the Home Page.
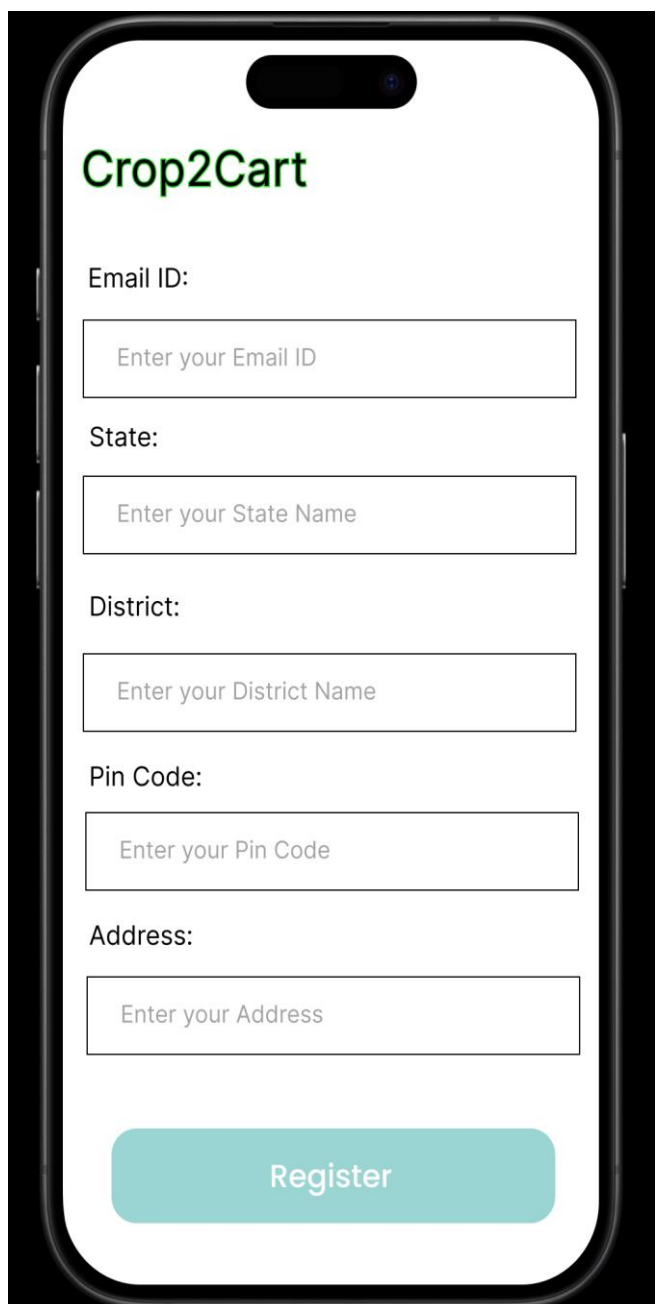

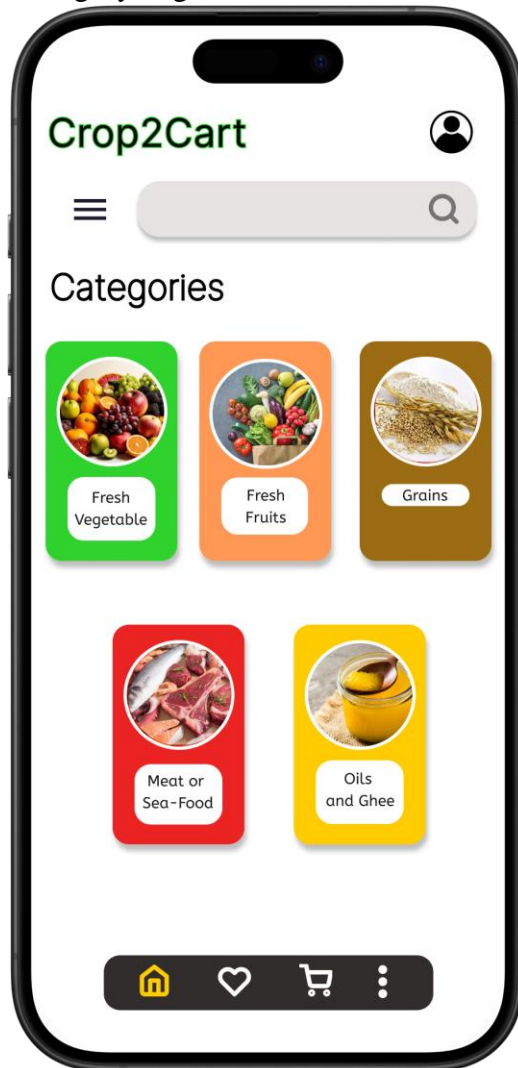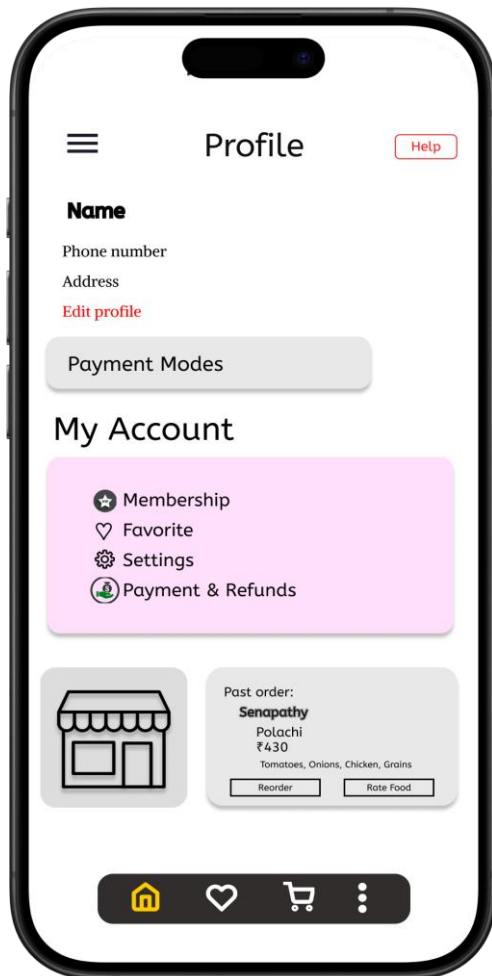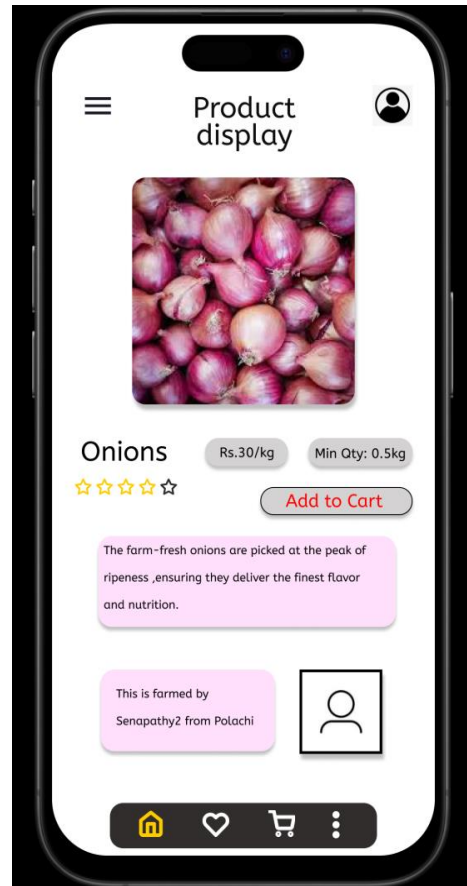Phase 4: Cutover(Finalize and Export)

Finalized Design:

-Login page:

-Category Page

-Product page:

-Profile Page

Product Display Page

Profile

Help

Name

Phone number

Address

Edit profile

Payment Modes

My Account

⭐ Membership
♡ Favorite
⚙ Settings
🫳 Payment & Refunds

Past order:
Senapathy
Polachi
₹430
Tomatoes, Onions, Chicken, Grains

Reorder | Rate Food

Product display

Onions | Rs.30/kg | Min Qty: 0.5kg

☆☆☆☆☆

Add to Cart

The farm-fresh onions are picked at the peak of ripeness, ensuring they deliver the finest flavor and nutrition.

This is farmed by Senapathy2 from Polachi

-Cart Page

- - Checkout Page

Your Cart

🏠 Delivery to (Address)

Tomato
Rs.25/kg

Min Quantity : 0.5kg
⊕ 0.25kg ⊖
cost : Rs 12

Potato
Rs.25/kg

Min Quantity : 0.5kg
⊕ 0.25kg ⊖
cost : Rs 12

Missed something? Browse store

Would you like to tip?

A small tip, a big gesture! Tip to show your appreciation for the works.

Rs 10 | Rs 20 | Rs 30 | Other

Checkout

Bill Details

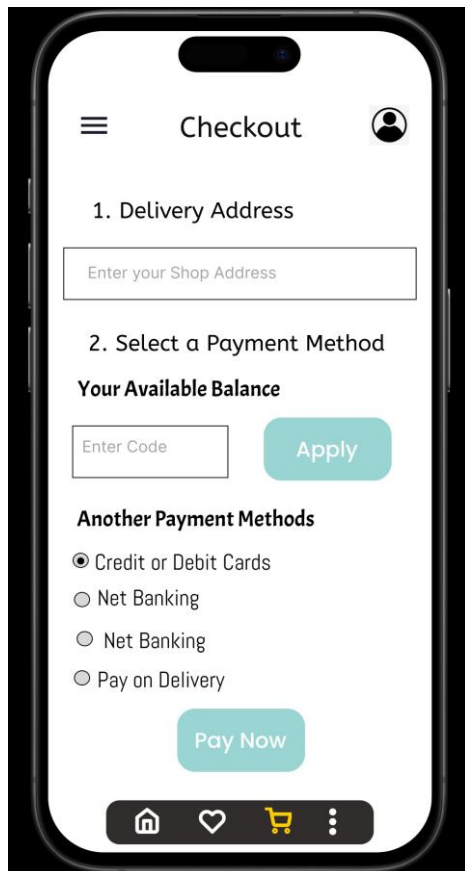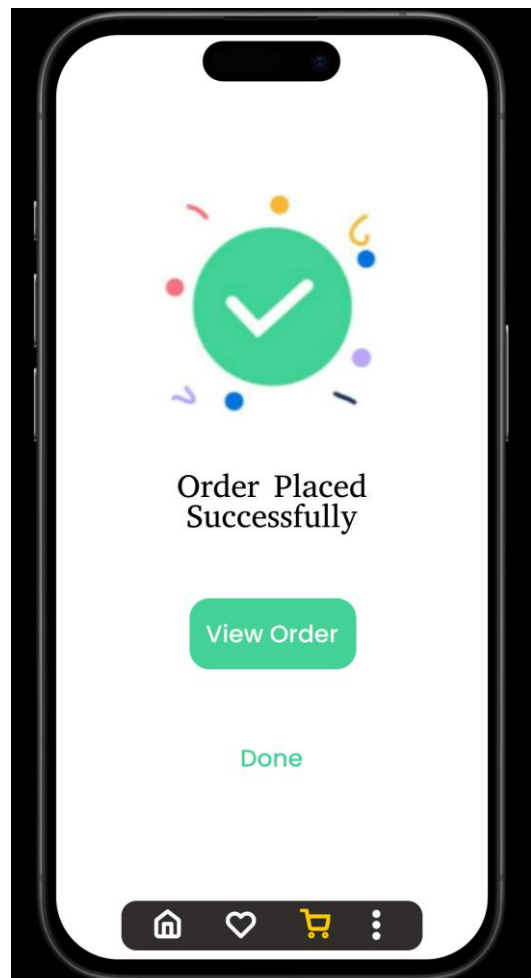|	
1 × Tomato	Rs 12
1 × Potato	Rs 12
Subtotal	Rs 12
GST	Rs 5
Bill Amount	Rs17
Delivery Charges	Rs 3
Total Amount	**Rs 20**

Check Out

-Delivery Address Page

-    Order Placed Message Page

Exporting the UI via Figma:

https://www.figma.com/design/dQ7xhdRQgKrgPMN0P4rDAI/Mobile-Sign-in---Sign-up-Design--Community-?node-id=706-885&t=yciEPTZZIZPXA7tS-1