

Project Report



“Salla Plus” Online Supermarket Application

Prepared by

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Introduction

As the digital landscape continues to evolve, online shopping has become an essential service for consumers seeking convenience, efficiency, and time savings. "Salla Plus" is an innovative online supermarket application designed to meet these demands by providing a seamless and secure platform for grocery and household product shopping. With its wide range of high-quality products and efficient home delivery system, "Salla Plus" positions itself as a key player in the e-commerce market.

Key Features and Benefits

To deliver an exceptional user experience, "Salla Plus" application incorporates the following key features:

A. User Account Management

B. product Browsing & Search Functionality

The app provides a simple yet effective product browsing experience, with categories such as vegetables, beverages, snacks, and more. Advanced search and filtering options allow users to find specific products by name, brand, price range, or current offers.

C. Shopping Cart & Checkout Process

The app's intuitive shopping cart and checkout system streamline the purchasing process. Customers can adjust product quantities, remove items, and see the total price before completing their purchase. A variety of payment methods—including credit cards, e-wallets, and cash on delivery—offer flexibility for users.

D. Real-Time Order Tracking and Notifications

"Salla Plus" enhances the customer experience by providing real-time updates on order status, from processing to delivery. Customers are notified of any changes or updates, ensuring complete transparency throughout the purchase process.

E. Customer Support and Help Center

"Salla Plus" offers responsive customer support via live chat and phone, ensuring that users can easily resolve any issues or queries. The app also features a comprehensive FAQ section, addressing common topics like payment methods, delivery times, return policies, and order tracking.

1. Customer Statement of Requirements (CSR)

1.1 Problem Statement

Managing household chores, especially grocery shopping, can be time-consuming and exhausting. Many individuals, including working professionals, students, and homemakers, struggle to balance their busy schedules with essential daily tasks. Traditional grocery shopping involves long queues, crowded aisles, and traffic congestion, making the experience inconvenient and stressful. These challenges often lead people to either delay their grocery shopping or settle for limited options available at nearby stores, ultimately affecting their household management and quality of life.

While online grocery shopping services exist, they often fail to provide a seamless experience due to several limitations. Many platforms have restricted product availability, making it difficult for users to find all their essentials in one place. Others suffer from poor user interfaces, which complicate the shopping process rather than simplifying it. Delivery delays and unreliable services further add to customer frustration, making them hesitant to rely on these applications. Additionally, some platforms offer limited payment options, which may not cater to the diverse needs of users who prefer different payment methods, such as credit cards, e-wallets, or cash on delivery.

Our solution, "Salla Plus," aims to revolutionize the grocery shopping experience by offering a comprehensive and user-friendly mobile application.

The application will address these challenges by:

- Providing a wide range of grocery and household products in one place, ensuring that users can find everything they need without hassle.
- Offering a seamless and intuitive user interface that simplifies navigation and enhances the overall shopping experience.
- Enabling real-time order tracking to keep users informed about their delivery status and improve service reliability.
- Supporting multiple secure payment methods, including credit cards, e-wallets, and cash on delivery, to accommodate user preferences.
- Ensuring reliable customer support with a built-in FAQ section and instant assistance for common issues.

By incorporating these features, "Salla Plus" will enhance convenience, save valuable time, and provide users with a smooth and efficient grocery shopping experience from the comfort of their homes. With an emphasis on efficiency, reliability, and user satisfaction, our application will transform the way people manage their household needs and bring a new level of ease to their daily lives.

1.2 Glossary of Terms

Term	Definition
Account Creation	The process of registering a new user by entering required personal information.
OTP (One-Time Password)	A temporary code sent to the user's phone for authentication and secure login.
Category-Based Browsing	A feature allowing users to explore products sorted into specific categories (e.g., Vegetables, Beverages).
Shopping Cart	A virtual cart where users can store selected products before completing a purchase.
Checkout	The process of finalizing a purchase by choosing a payment method and confirming the order.
Order Tracking	A feature that shows the status of an order, including stages like Preparing, Delivering, and Delivered.
E-Wallet	A digital payment method that allows transactions through virtual wallets (e.g., Apple Pay, STC Pay).
Customer Support	Assistance provided to users through help centers, FAQs, and direct communication channels.
FAQ (Frequently Asked Questions)	A section within the app that provides answers to common user inquiries.
Profile Customization	The ability for users to modify their personal information, such as delivery address and payment methods.
Filtering Options	Tools within the app that allow users to sort and narrow down product searches by price or promotions.
Secure Code Entry	The process where users enter a received OTP to verify their identity before accessing the app.
Sign-Up	Registering a new user by collecting personal information and setting up an account.
Delivery Status	An indicator showing the progress of an order, from preparation to successful delivery.
Product Details	Information displayed about a product, including its name, description, price, and available quantity.
Payment Gateway	A service that processes online payments securely within the app.

Home Page	The main screen of the app that displays featured products, categories, and navigation options.
log-In	The process of accessing an existing user account by entering a phone number and secure code.
Promotions	Special offers and discounts displayed within the app to provide users with savings opportunities.

2. System Requirements:

2.1 Enumerated Functional Requirements

REQ- ID	DESCRIPTION
REQ - 1	The system shall start by viewing the logo of “Salla plus” for the users in the log in page.
REQ - 2	The system shall provide users with the option to either log in using their phone number.
REQ – 3	The system shall provide users "sign up" button to navigate to "My account" page.
REQ – 4	The system shall allow new users to sign up by providing the following information in “My account ”page: - Mobile number - Address (city, neighborhood, street name, house number) -Card information (optional) (Card number, expiration date, CVV).
REQ – 5	After completing the required information, users shall be able to sign up by clicking the “done" button.
REQ – 6	After signing up, the system shall go back to the log in page and ask the user to log in by their phone number.
REQ – 7	The system shall allow the user to click the "OK" button to navigate to the secure code page.
REQ – 8	The system shall send a secure code to the user to verify their access.
REQ – 9	The system shall be able to let the user write the received secure code.
REQ – 10	The system shall grant access and redirect the user to the home page after entering the correct OTP and pressing the "OK" button.
REQ – 11	The system shall allow the user to click the "Profile icon" button to navigate to the "My account" page.
REQ – 12	The system shall be able to display the search bar for the user.
REQ – 13	Users shall be able to search for products using the products name.
REQ – 14	The user shall be able to log out after pressing the "log out" button.
REQ – 15	The system shall display products categorized into vegetables, beef, baked goods and more.
REQ – 16	Users shall be able to access any category by clicking on it.
REQ – 17	The system shall be able to display the specified category page with its name as a header.

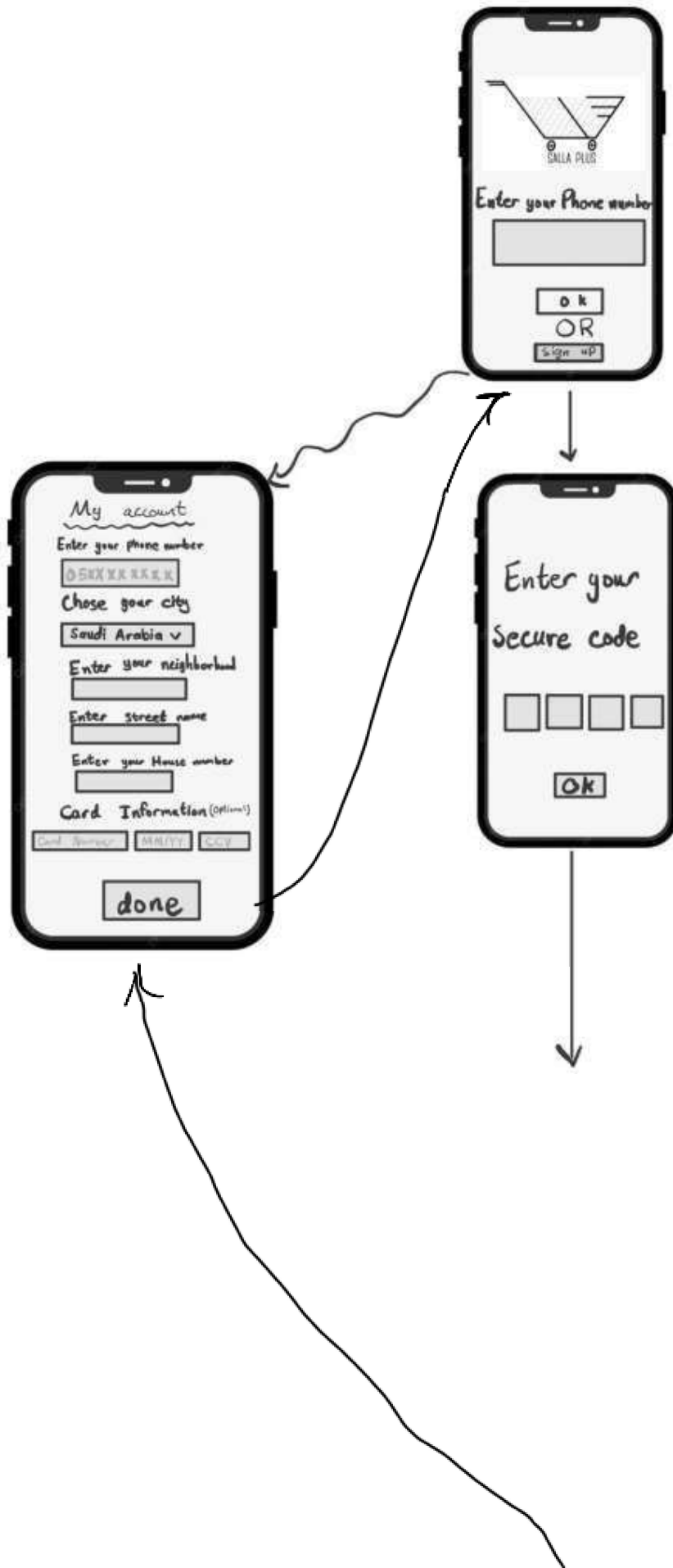
REQ – 18	The system shall be able to display the home icon to go back to home.
REQ – 19	The system shall display a filter icon to provide sorting options, including prices from high to low, low to high, and current promotions.
REQ – 20	The system shall display product details, including name, description, price.
REQ – 21	The "+" button shall be available for each product to add it into the cart.
REQ – 22	The system shall be able to display the cart icon button to navigate to the "shopping Salla" page.
REQ – 23	The System shall display" Shopping Salla" as a header in the shopping cart page
REQ – 24	The shopping cart shall display a list of selected products with name, quantity and total price.
REQ – 25	The quantity of each item shall be able to modify directly from the cart
REQ – 26	For each item ,the system shall display a '-' icon to decrease its quantity.
REQ – 27	For each item, the system shall display a '+' icon to increase its quantity.
REQ – 28	For each item, the system shall display a 'trash' icon to remove the entire item from the cart.
REQ – 29	The system shall give users the ability to add other items by clicking '+' button to go to the home page and choose more products.
REQ – 30	The system shall display total price of all items.
REQ – 31	The system shall allow users to click the "Checkout" button to navigate to the payment page.
REQ – 32	The system shall direct the user to the payment method page to choose how they want to pay by clicking the following buttons: 'e-wallet', credit card', cash'.
REQ – 33	The system shall make the user pay after clicking the 'pay' button.
REQ – 34	The system shall display "Order Track" as a header on the "Order Track" page.
REQ – 35	The system shall display the order status: -Preparing your order -Delivering your order - Delivered
REQ – 36	The application shall provide real-time updates on the status of the order, ensuring the user is informed of its current progress at every stage.
REQ – 37	The system shall display a thankful message to users that includes "Thanks for your order Enjoy!".
REQ – 38	Users shall be able to navigate to the home page directly by clicking the home icon.
REQ – 39	Users shall be able to navigate to the customer support page (FAQ) directly by clicking the 'customer support' icon.
REQ – 40	The system shall display "FAQ" as a header on the Customer Support page that includes a comprehensive FAQ section.

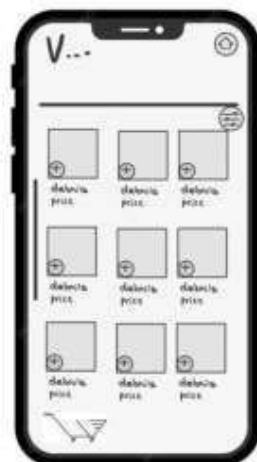
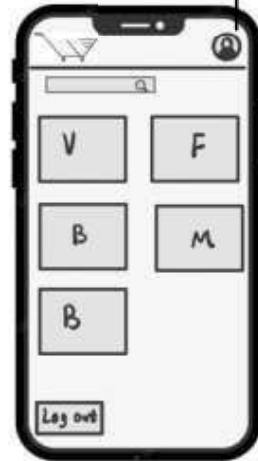
REQ – 41	The FAQ section shall include the following the most likely frequent questions: -What should I do if my delivery is delayed? -How can I make changes to my order after completion? -Can I change the delivery address after completing the order? -Can I cancel my order after completing it?
REQ – 42	The user shall be able to find the answer of the FAQ by clicking the 'down arrow' button to display the answer for each question.
REQ – 43	The Customer Support page shall provide contact phone number details for further assistance.
REQ – 44	Users shall be able to return to the tracking page by clicking the 'Back' icon.

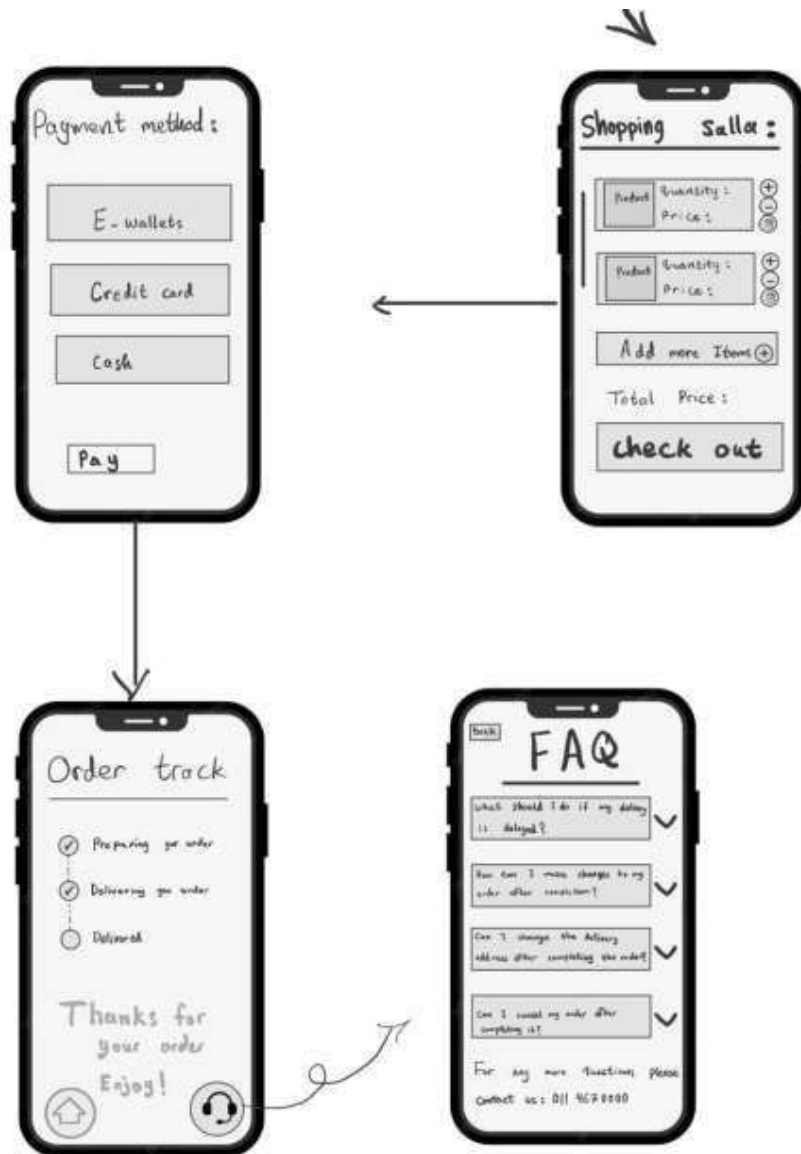
2.2 Enumerated Nonfunctional Requirements

REQ- ID	DESCRIPTION
REQ – 45	The system shall have a user interface that is easy to use and doesn't need training
REQ – 46	The system shall be available 24/7.
REQ – 47	The system shall ensure that each user's account, orders, and personal data remain private and inaccessible to other users.
REQ – 48	The system shall ensure all pages load within 2 seconds under normal usage conditions.
REQ – 49	The system shall log errors and display user-friendly messages without exposing sensitive information.
REQ – 50	The system shall support up to 10,000 concurrent users without performance degradation.

2.3 On-Screen Appearance Requirements







3. Functional Requirements Specification

3.1 Stakeholders

The "Salla Plus" system involves multiple stakeholders with diverse interests and responsibilities:

Stakeholder	Role & Interest
End Users	Customers use the app to browse products, place orders, and manage deliveries.
Delivery Personnel	Handle the delivery process and update order status within the app.
Customer Support Team	Provide assistance to users through the app's support channels and handle issue reports.

3.2 Actors and Goals

Actor	Type	Goals
End Users	Initiating	Buying products and tracking orders.
Delivery Personnel	Participating	Updating order status and confirming deliveries.
Customer Support Team	Participating	Providing help and answering user questions.

3.3 Use Cases

i. Casual Description

Use Case ID	Name	Short Description	Corresponding REQ-id
UC-01	ShowLogoOnLoginPage	The system displays the "Salla Plus" logo on the login page when the app is launched.	REQ-1
UC-02	UserSignIn	The system allows users to sign in by phone number	REQ-2

UC-03	UserSignUp	The system allows new users to sign up by providing personal information, including address and card details.	REQ-3
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UC-04	NavigateToLoginPage	After registration, the system redirects the user back to the login page.	REQ-5,REQ6-
UC-05	VerificationProcess	Allows users to log in using the secure code.	REQ-8, REQ-9
UC-06	AccessValidation	The system redirect the user to the home page after entering the correct OTP	REQ-10
UC-07	HomePage	The system display products categorized into vegetables, beef, baked goods and more.	REQ-15
UC-08	ProfileIcon	The system allow the user to click the "Profile icon" button to navigate to the my account page.	REQ-11
UC-09	Search	Users can search for products using the products name.	REQ-12,REQ-13
UC-10	LogOut	The user can log out after press the "log out" button.	REQ-14
UC-11	CategoryAccess	Users can access any category by clicking on it.	REQ-16,REQ-17

UC-12	HomePageNavigation	The system will display the home icon to go back to home page.	REQ-18,REQ-39
UC-13	FilterProcess	The system display a filter icon to provide sorting options, including price from high to low, low to high, and current promotions.	REQ-19

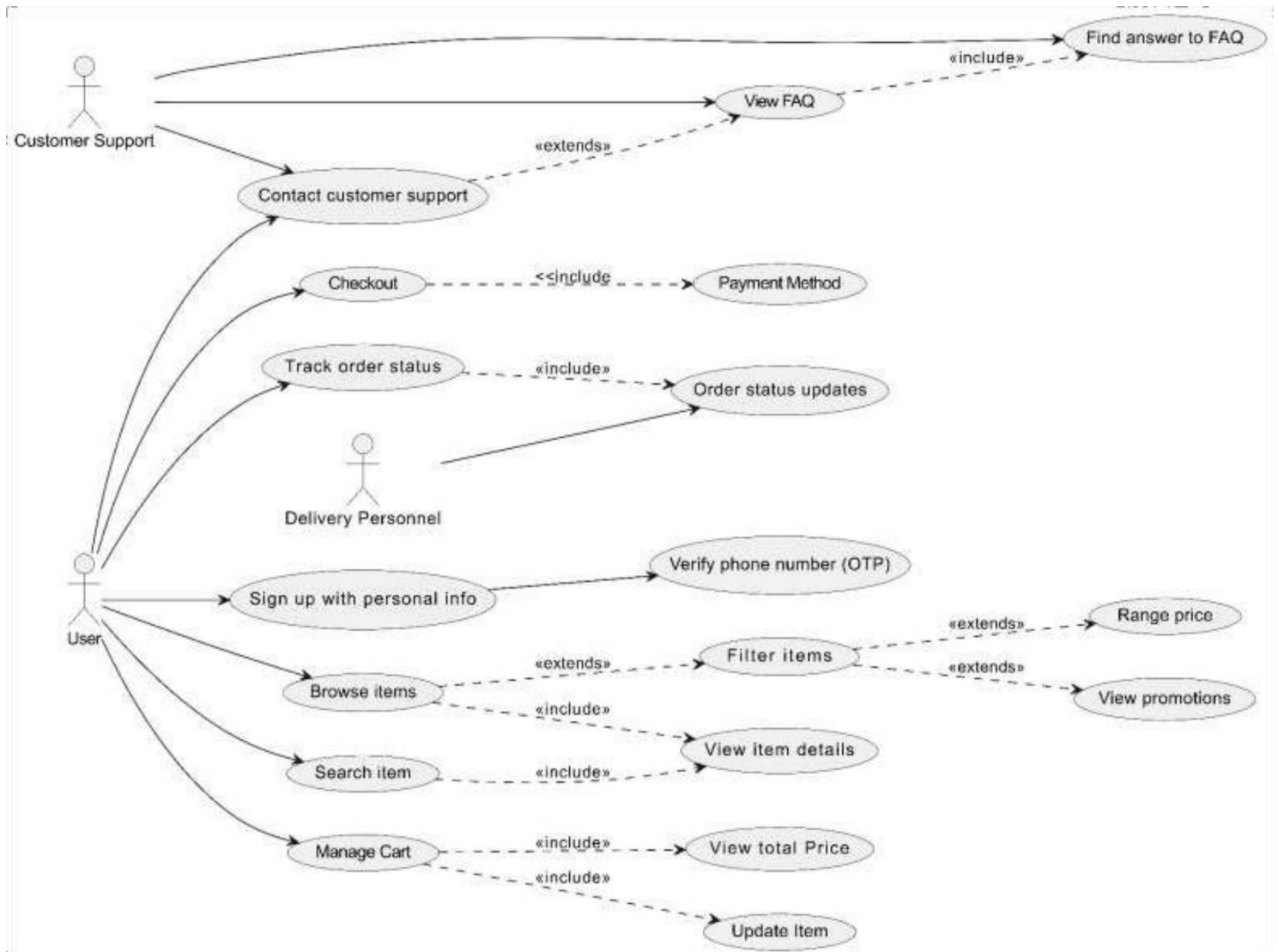
UC-14	Product	The system allow display product details, including name, description, price.	REQ-20
UC-15	AddProduct	The "+" button shall be available for each product to add it in to the cart.	REQ-21,REQ-27
UC-16	CartNavigation	The system display the cart icon button to navigate to the "shopping sala" page.	REQ-22,REQ-23
UC-17	SelectedProduct	The shopping cart shall display a list of selected products with name, quantity and total price	REQ-24
UC-18	DecrementProduct	The system display a '-' icon to decrease the item quantity.	REQ-26
UC-19	RemoveProduct	The system display a 'trash' icon to remove the entire item from the cart.	REQ-28

UC-20	GatherMore	The system give users the ability to add other items by clicking '+' button to go to the home page and choose more products.	REQ-29
UC-21	TotalPrice	The system will display total price.	REQ-30
UC-22	PaymentPageNavigation	The system allow the users to click the "Checkout" button to navigate to the payment page.	REQ-31
UC-23	PaymentMethod	The system will allow users to pay	REQ-32,REQ-33

		using their chosen payment method.	
UC-24	OrderTrack	The system display the real-time updates on the status of the order.	REQ-34,REQ-35,REQ-36
UC-25	Thanks message	The system displays the "Thanks for your order Enjoy!" .	REQ-37
UC-26	FAQ_pageNavigation	Users can navigate to the customer support page directly by clicking the customer support icon.	REQ – 38
UC-27	FAQ section	The system will provide Customer Support page that includes a comprehensive FAQ.	REQ – 40, REQ – 41

UC-28	Answers	The user can find the answer to the FAQ by clicking the down arrow button to display the answer to each question.	REQ – 42
UC-29	Contact	The Customer Support page provide contact phone number details for further assistance.	REQ – 43
UC-30	TrackPageNavigation	Users can return to the tracking page by clicking the 'Back' icon.	REQ – 44

ii. Use Case Diagram



iii. Fully-Dressed Description

UC1 < UserSignIn >	
Initiating actor: End User	Participating actor(s): System
Actor's Goal: Allow the user to sign in using their phone number.	
Pre-conditions: The user has an existing account and app installed.	
Flow of Events for Success Scenario: The user enters their phone number on the login screen. The system sends an OTP to the user's registered phone number. The user enters the received OTP. System verifies credentials. If valid, the system redirects the user to the home page.	Flow of Events for Extension: 1-Invalid phone number Display: "Invalid number. Please re-enter or register." 2-Incorrect OTP Display: "Incorrect OTP. Try again." 3-Missing Phone Number If the phone number field is left empty, the system prompts: "Please enter your phone number."
Post-conditions: The user is successfully logged in and redirected to the home page.	

UC2 < User Sign-Up >	
Initiating actor: New User	Participating actor(s): system
Actor's Goal: User must not have an existing account	
Pre-conditions: The user is not registered in the system.	
Flow of Events for Success Scenario: 1-The user clicks on the "Sign Up" button.	Flow of Events for Extension:

2- The system displays a form requesting: -Mobile number -Address (city, neighborhood, street name, house number) -Optional card information (card number, expiration date, CVV) 3- The user fills in the required details and clicks "Done". 4- The system verifies the details and creates the user account. 5- The system redirects the user back to the login page.	1-Duplicate Account: display: "This number is registered". 2-Missing required fields "Please fill in all required fields." 3-Invalid phone number format "Invalid phone number format."
Post-conditions: The user account is successfully created in the system, and the user can proceed to log in.	

UC3 < Search >	
Initiating actor: End user	Participating actor(s): System
Actor's Goal: Allow users to search for products by name.	
Pre-conditions: The user is logged into the system.	
Flow of Events for Success Scenario:	Flow of Events for Extension:

1- The user types a product name into the search bar. 2- The system displays relevant search results. 3- The user selects a product from the list.	1. No products match the search: The system displays: "No products found." 2. Empty search bar: If the user attempts to search with an empty search bar, the system displays: "Please enter a product name to search." 3. Invalid characters in search: If the user enters invalid characters (e.g., special symbols), the system displays: "Invalid input. Please use letters and numbers only."
Post-conditions: The user successfully finds the desired product.	

UC4 < Order Tracking >	
Initiating actor: End User	Participating actor(s): System
Actor's Goal: Allow users to track the status of their orders.	
Pre-conditions: The user has placed an order.	
Flow of Events for Success Scenario: 1-The system displays the real-time order status: - Preparing your order - Delivering your order	Flow of Events for Extension: 1-Delivery Delay If the order status remains "Delivering" beyond the estimated time, the system updates the status to "Delayed" and provides an option to contact support.

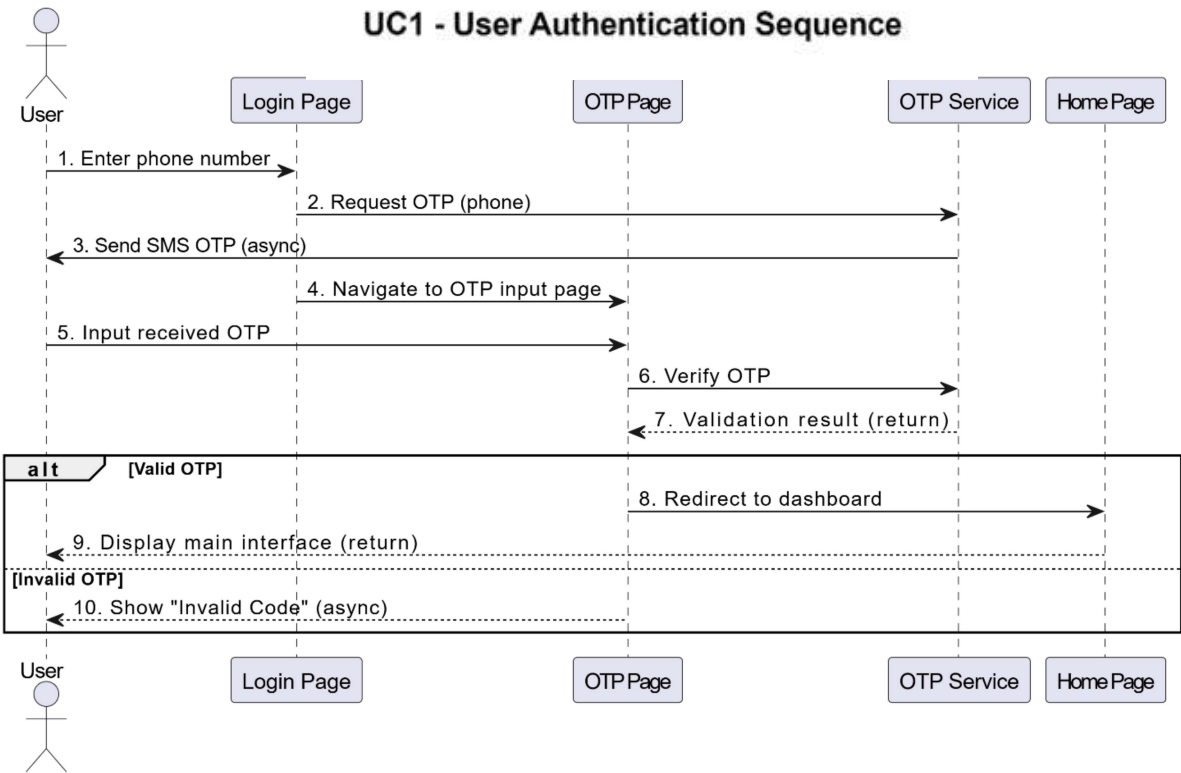
- Delivered 2-The system updates the status as the order progresses.	2-If status update fails: Show "Unable to retrieve order status. Please refresh."
Post-conditions: The user successfully tracks the order until completion.	

UC5 < FAQ section >	
Initiating actor: End User	Participating actor(s): System, Support Agent.
Actor's Goal: Provide users with assistance through customer support.	
Pre-conditions: User The user has logged into the system. The user has an inquiry or issue that requires assistance.	
Flow of Events for Success Scenario: 1- The system displays the available support options, including FAQs and contact information. 2- The user selects a support method (FAQ or contact support). 3- If the user selects FAQ, the system displays common questions and answers. 4- If the user needs more help or wants additional assistance, they can contact the Customer service representative.	Flow of Events for Extension: 1-Unhelpful Answer Displays support number: "Call now: 9200000000"
Post-conditions: The user's inquiry is resolved.	

4. Software Design Document

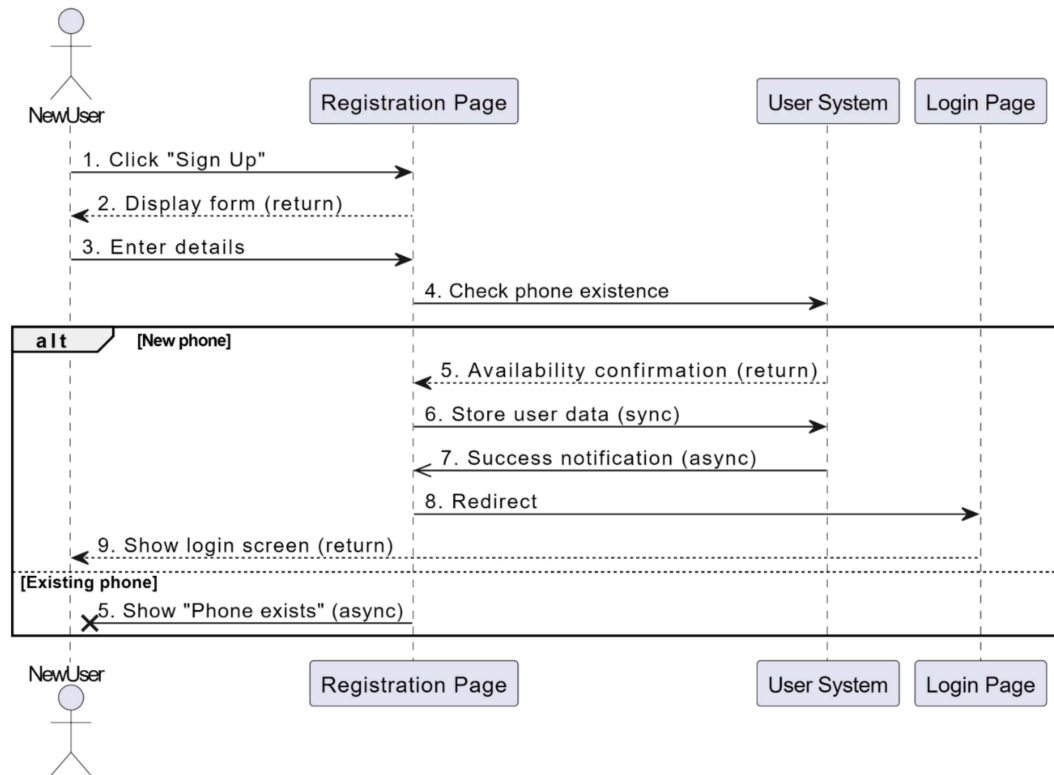
4.1. Interaction Diagrams

4.1.1 UC1



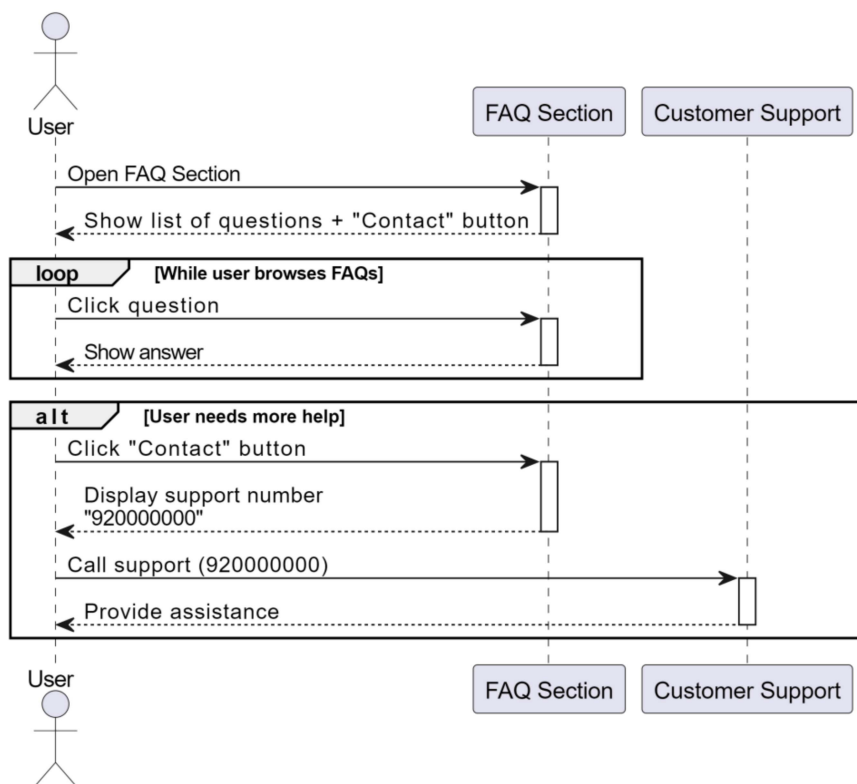
4.1.2 UC2

UC2 - New User Registration



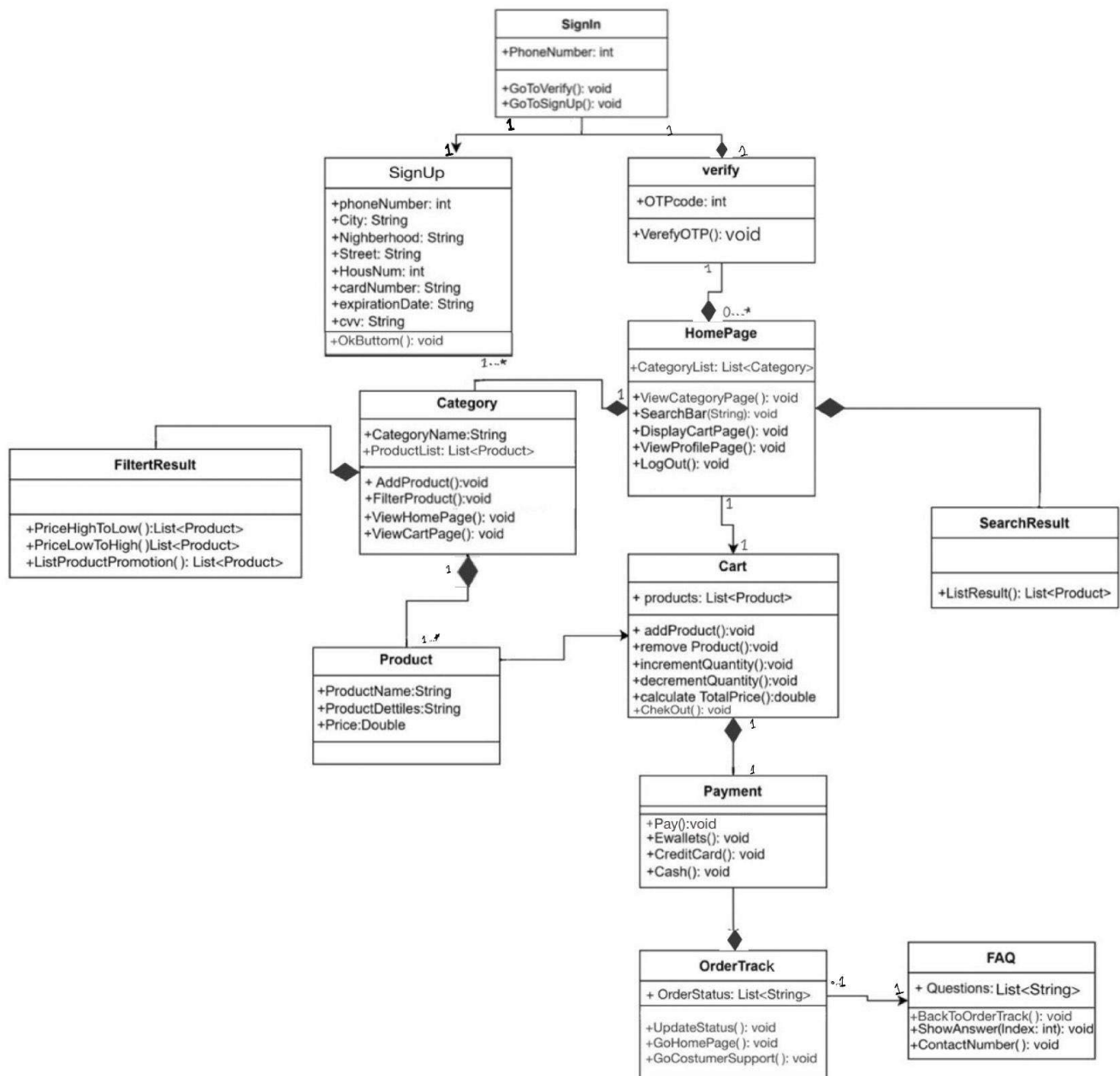
4.1.2 UC3

US<FAQs Section>



4.2. The System Structural Diagram

4.2.1 The Detailed Class Diagram “Software Artifact”



- *The Attributes and Methods description for each Class*

Class 1. SignIn

Attributes:

phone Number: int: The user's phone number for signing in.

Methods:

GoToVerify(): void:

This will allow the user to Navigate to the OTP verification page.

GoToSignUp(): void:

This will Redirect The users to the registration page.

Class 2. SignUp

Attributes:

phone Number: int: The user's phone number for registration.

City: String: The city of the user.

Neighbourhood: String: The neighbourhood of the user.

Street: String: The street of the user.

HousNum: int: The house number of the user.

cardNumber: String: The user's credit card number.

expirationDate: String: The expiration date of the credit card.

cvv: String: The CVV code of the credit card.

Methods:

OkButton(): Void:

This method saves the new user information and then navigate them to the SignIn page.

Class 3. Verify

Attributes:

OTPcode: int: The OTP code sent to the user for verification.

Methods:

VerifyOTP(): Void:

Verifies the OTP code entered by the user. If it's correct the user will be navigated to the home page, but if it's incorrect, the user will be asked to retype it.

Class 4. HomePage

Attributes:

Category List (): List< Category >:

List of Categories

Methods:

ViewCategoryPage(): void:

This method will navigate the user to the category page that they selected.

Search Bar (ProductName:String): void:

This will allow the user to type a product name into the search bar.

ViewProfilePage(): void:

This will allow the user to Navigate to the sign-up page.

Logout(): void:

This will allow the user to Log out and navigate them to the SignIn page.

DisplayCartPage(): void:

This will allow the user to go to the Cart page.

Class5. SearchResult**Attributes:**

None.

Methods:

ListResult(): List<Product>:

Returns a list of products that match the search criteria.

Class 6. Category**Attributes:**

CategoryName: String:

The name of the category.

Methods:

ViewProduct(): List<Product>:

This will display a list of products in the category.

AddProduct(): void:

This will allow the user to add a new product to the cart.

FilterProduct(): void:

This will allow the user to go to the FilterResult page and filter the products within the category.

ViewHomePage(): void:

This will allow the user to Navigate to the homepage.

ViewCartPage(): void:

This will allow the user to Navigate to the cart page.

Class 7. Product

Attributes:

ProductName: String:

The name of the product.

ProductDettilles: String:

The details of the product.

Price: Double:

The price of the product.

Methods:

None.

Class 8. Cart**Attributes:**

products: List<Product>:

A list of products in the cart.

Methods:

addProduct(): void:

This will allow the user to go to the home page and add a new product to the cart.

removeProduct(): void:

This will allow the user to Remove a whole product from the cart.

incrementQuantity(): void:

This will allow the user to Increment the quantity of a product in the cart.

decrementQuantity(): void:

This will allow the user to Decrement the quantity of a product in the cart.

calculateTotalPrice(): double:

This will calculate the total price of all products in the cart.

CheckOut():Void:

Thise method will navigate the user to the payment page.

Class 9. FilterResult**Attributes:**

None.

Methods:

PriceHighToLow(Price): List<Product>

Returns a list of products filtered by high to low price.

PriceLowToHigh (Price): List<Product>:

Returns a list of products filtered by low to high price.

ListProductPromotion(Promotion): List<Product>:

Returns a list of products filtered by promotion.

Class 10. Payment

Attributes:

None.

Methods:

Ewallets(): void:

This will allow the user to pay by Processes payment using e-wallets.

CreditCard(): void:

This will allow the user to pay by Processes payment using a credit card.

Cash (): void:

This will allow the user to pay by Processes payment using cash.

Pay(): void:

This method will complete the user payment and go to order tracking.

Class 11. OrderTrack

Attributes:

OrderStatus: List<String>:

Methods:

UpdateStatus(): void:

Displays the status of the order.

GoHomePage(): void:

Navigates to the homepage.

GoCustomerSupport() void:

Navigates to the FAQ page.

Class 12. FAQ

Attributes:

Questions: List<String>:

A list that stores frequently asked questions in the form of strings.

Methods:

ShowAnswer(Index: int): void

This will allow the user to view the answer of the selected question.

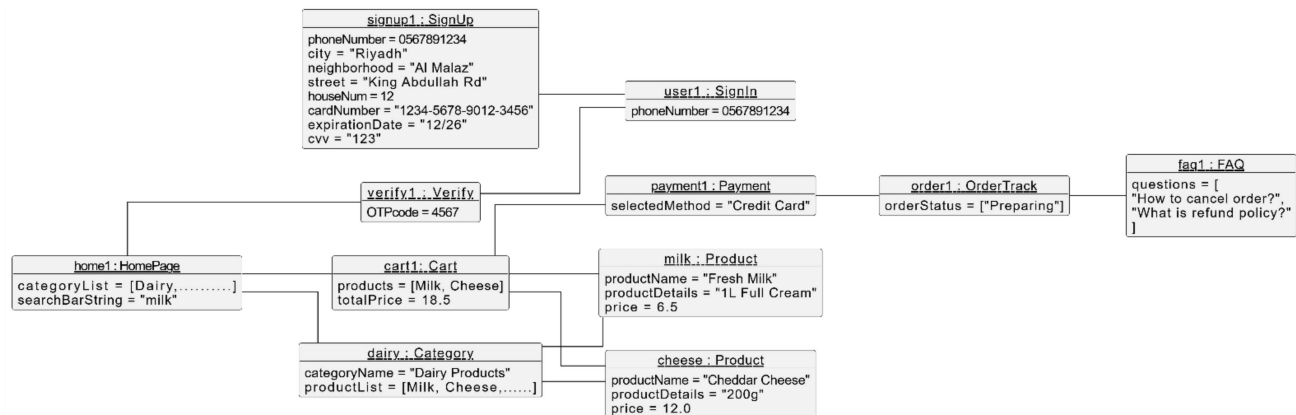
ContactNumber(): void

Shows the contact support number.

BackToOrderTrack (): void:

Navigates to the OrderTrack.

4.2.2 The object Diagram



4.3. System Architecture and design

4.3.1 The System Architectural Style

- **The System Organization**

For Salla Plus, we adopted a Client-Server Architecture. This architectural style is ideal for systems requiring continuous and reliable access to stored data such as documents and inventory records. The server side hosts a storage subsystem responsible for maintaining this persistent data. It also manages incoming client requests, processing them as needed and responding with relevant data or actions. Client-server architecture allows for high scalability, supporting multiple clients simultaneously while ensuring controlled and secure access to shared services. Additionally, placing some components of execution close to the user on the client side can significantly improve system responsiveness and efficiency. This approach also maintains user autonomy, as each client operates independently within the shared framework.

- **Data Flow Model**

We implemented an Object-Oriented Model. This model supports our need for modularity, reusability, and abstraction. It structures the system as a collection of loosely coupled objects with clearly defined interfaces. Each object encapsulates both data and behaviour, facilitating a seamless integration of application logic with database operations. Object-oriented modelling provides key benefits like inheritance, encapsulation, and polymorphism, enabling efficient system development and maintenance. It simplifies how we represent and connect real-world entities in the system, making the architecture more intuitive and scalable.

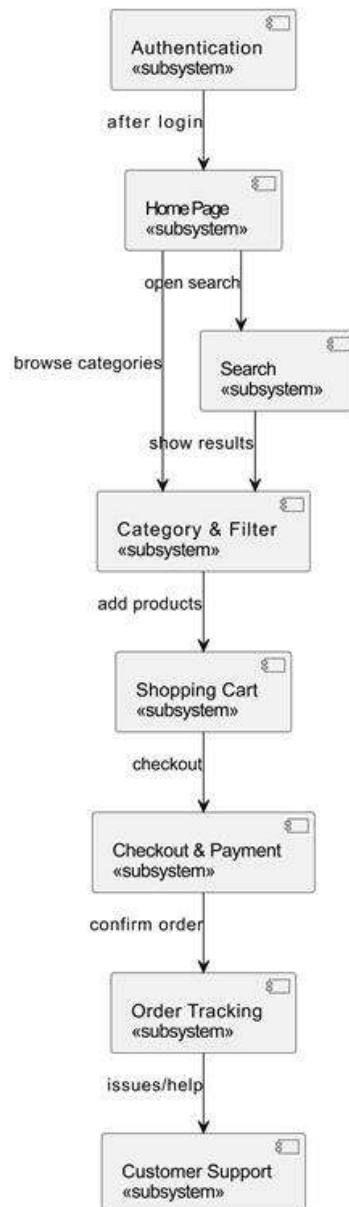
- **Control Model**

We utilized an Event-Driven Model. In this control structure, the system responds dynamically to external events—

such as user interactions (e.g., button clicks or form submissions)—that dictate the flow of the application. Each event is linked to a specific handler that performs the necessary operations based on the event's context. This model aligns well with the interactive nature of Salla Plus, where user actions trigger various functions like browsing inventory, submitting orders, or updating records. The event-driven approach allows for real-time responsiveness and flexible control flow management.

4.1.2 Identifying the Subsystems

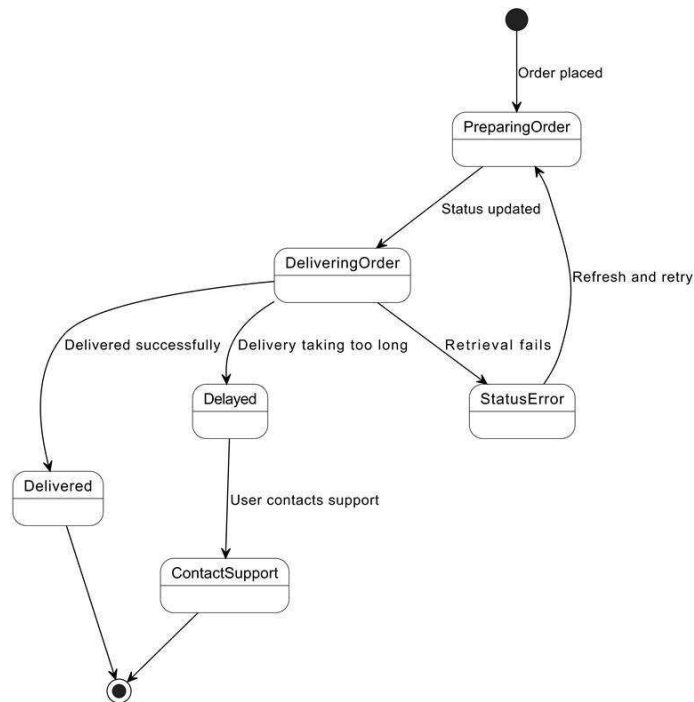
Salla Plus - Clean Subsystem Diagram



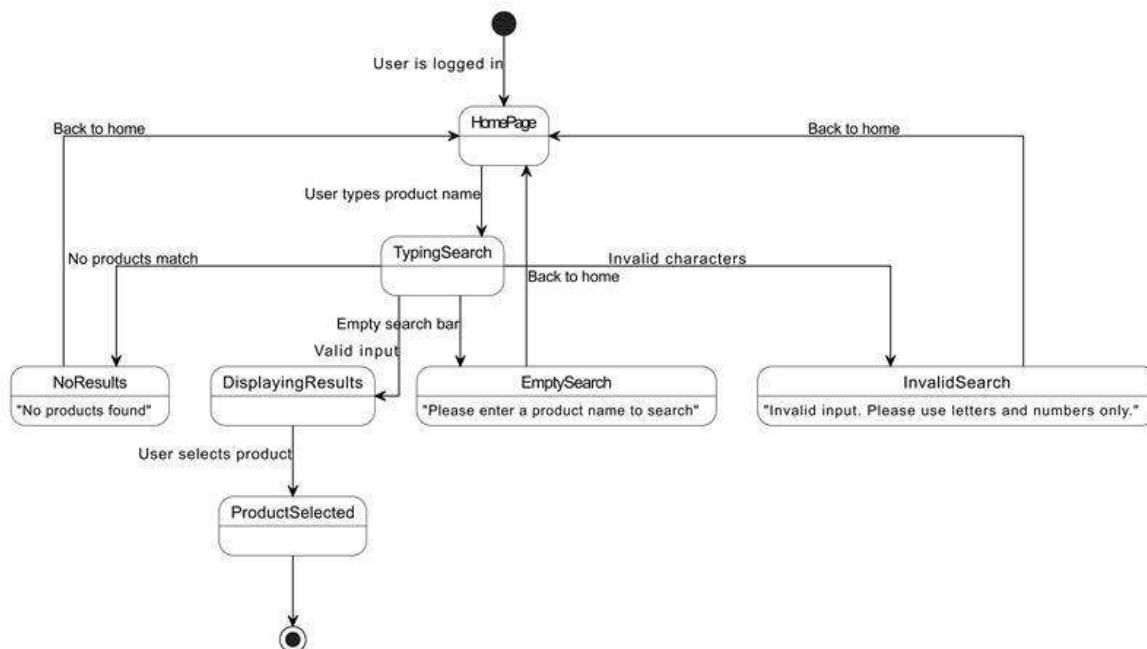
4.4. The System Behavioral Diagrams

4.4.1 The State Diagram

Tracking order state diagram

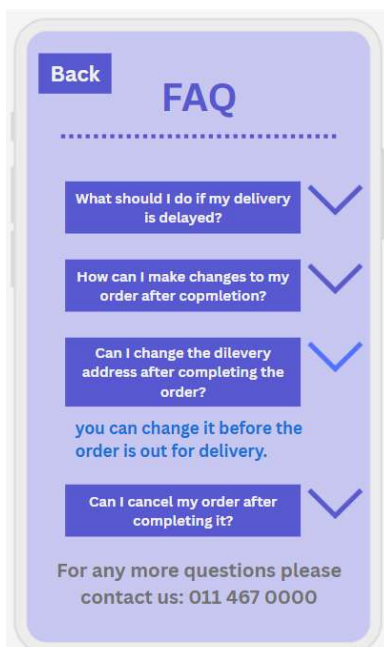
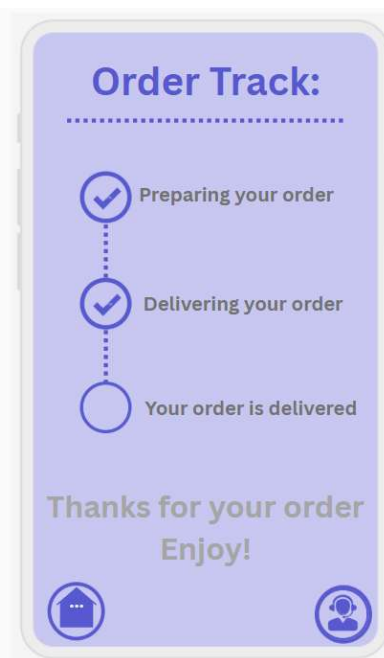
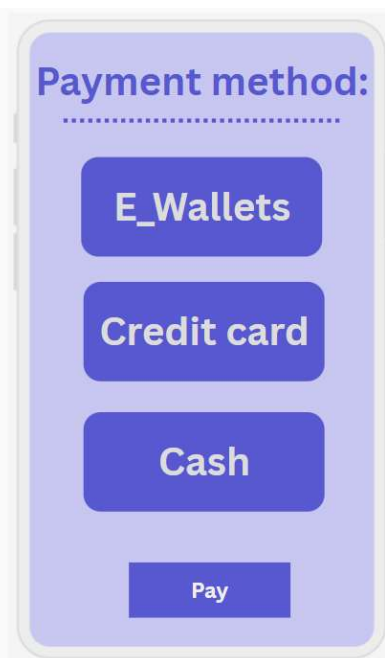
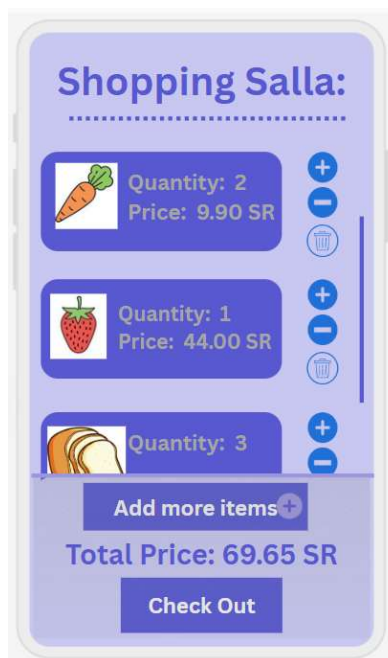
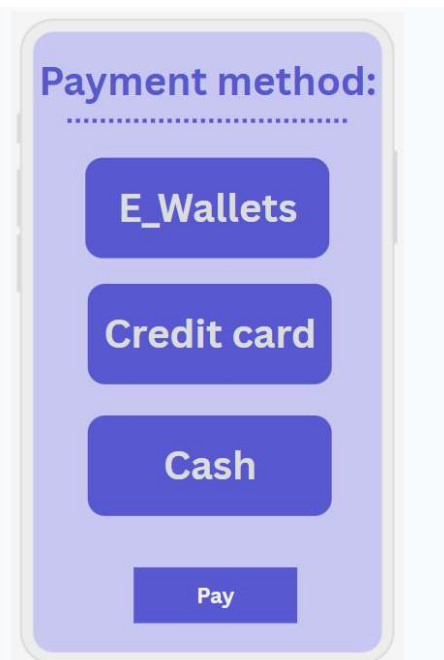
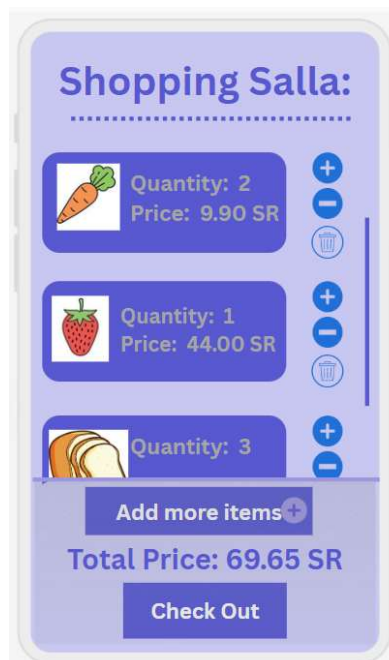
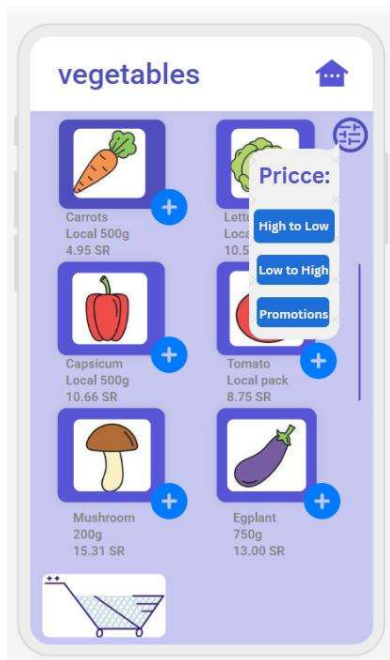


Search state diagram



The User Interface Design We used Uizard and Canva





4.6. The Design of Tests

4.6.1 Unit Testing

TC-ID	Description	Test Data / Input	Expected Output	Pass/Fail Criteria	Comments
TC-01	Tests if the system allows valid users to log in	valid phone Number and OTP	Takes the user to the homepage	Pass if the user is able to log in and view the home page screen	-
TC-02	Tests if the system allows invalid users to log in	invalid or empty phone Number and OTP	Error: Display "Incorrect input Try again"	Pass if user is not able to log in	-
TC-03	Test if the system allows a new user to sign up	Valid mobile, address, card info	Takes the user to login page	Pass if the user entered valid input	-
TC-04	Test invalid user sign up	Empty/invalid mobile, missing address	Error: Display 'Invalid input'	User cannot sign up	-
TC-05	Test if the System shows the category	Click category	Display category list	Pass if category page appears	-
TC-06	Test search with valid product name	"milk"	List of matching products	Correct products are shown	-
TC-07	Test search with invalid/empty input	"" or "@#!"	Error or 'No products found'	Appropriate error displayed	-
TC-08	Test adding product to cart	Select product and click '+'	Product appears in cart	Cart updates correctly	-
TC-09	Test incrementing product quantity	Click '+' in cart	Quantity increases	Updated quantity displayed	-
TC-10	Test if the system allows the user to add new product to the cart	Click "Add new product +"	Navigate to the home page	Pass: Navigate to the home page	-
TC-11	Test decrementing product quantity	Click '-' in cart	Quantity decreases	Updated quantity displayed	-
TC-12	Test removing	Click trash icon	Product removed	Cart updates correctly	-

	product from cart				
TC-13	View product details	View product list	Show details	Details correctly displayed	-
TC-14	Navigate to category	Click category	Category page opens	Correct navigation	-
TC-15	Click home button	Home icon click	Return to home page	Correct screen shown	-
TC-16	Filter High to Low	Select filter	Sorted product list	Correct order	-
TC-17	Filter Low to High	Select filter	Sorted product list	Correct order	-
TC-18	Filter Promotions	Select Promotions	Show promotional items	Correct filtered list	-
TC-19	Checkout navigation	Click Checkout	Go to payment page	Payment screen shown	-
TC-20	Pay by credit card	Valid card info	Payment successful	Transaction completes	-
TC-21	Pay by e-wallet	Choose e-wallet	Payment successful	Transaction completes	-
TC-22	Pay by cash	Choose cash	Payment successful	Accepted and processed	-
TC-23	Track order	View tracking	Status updates shown	Real-time status info available	-
TC-24	Delayed delivery	Simulate delay	Delayed status shown	Delay handled correctly	-
TC-25	Logout	Click logout	Return to login	Session ends	-
TC-26	View profile	Click profile	Navigate to profile in sign up page	Correct screen shown	-
TC-27	Update profile	Edit and save	Profile updated	Changes saved	-
TC-28	Open FAQ	Click support icon	FAQ page displayed	Page opens	-
TC-29	Expand FAQ answer	Click arrow	Answer shown	Content loads	-
TC-30	View support contact	Go to contact	Show support number	Number displayed	-
TC-31	Back to tracking from FAQ	Click Back	Navigate to OrderTrack	Correct navigation	-

4.6.2 Integration Testing

ITC-ID	Description	Test Data / Input	Expected Output	When is it Considered Pass/Fail	Comments
TC-32	Login & OTP verification	Phone number + OTP	Redirect to homepage	If login and OTP success	-
TC-33	SignUp &	New user	User logs in	If redirection	-

	Login	info		and login succeed	
TC-34	Search & Product details	Search 'milk'	Product details list	If product shown correctly	-
TC-35	Cart & Checkout	Add items → Checkout	Open payment page	Correct data passed	-
TC-36	Payment & Order Tracking	Complete payment	Show Order Track	Tracking starts post-payment	-
TC-37	FAQ & Order Tracking	Click 'Back' from FAQ	Order Track page	Navigation successful	-
TC-39	Filter & Filter Results	Chose filter type	Filtered product list	Filter applied correctly	-
TC-39	Profile & DB update	Edit profile	Saved in DB	DB reflects changes	-
TC-40	Category & Cart	Add product from category	Product in cart	Correct product added	-

4.6.3 Acceptance Testing

Customer Scenario:

A user places an order through the Salla Plus app. The delivery arrives on time, but after checking the items, the user decides they want to return one of the products. The reason could be a change of mind, incorrect item, or the product was damaged. The user looks through the app for a “Return” or “Refund” option, but finds that no such feature is available. The only support available is the FAQ page, which does not include any information about returns. The user becomes frustrated and considers avoiding the app in future purchases due to the lack of post-delivery support.

Issues and Suggested Fixes:

Issue	Suggested Fix	Linked Requirement
No return or refund option in the system	Implement a "Return/Refund" feature allowing users to request a return with reason and get refund options	New functional requirement: REQ-45 - Return Management System

Validation Steps:

- Test Return Request Feature:
 - User clicks "Home page" > Selects Last order icon> Clicks "Return Item"
 - Pass: System opens a form to submit return reason and item
 - Pass: System confirms the request and informs user order track page of processing timeline
- Test Missing Return Option:
 - User tries to return an item through existing app
 - Fail: No option available for returns

conclusion:

In conclusion, "Salla Plus" presents a valuable opportunity for investment in the growing online grocery market. By offering a user-friendly platform, diverse product range, competitive pricing, and exceptional customer service, "Salla Plus" has the potential to become a leader in the digital shopping space. With strong market demand and a clear business model, this app is poised for success and growth.

Reference:

Some features were inspired by the Ana Ninja app, available at <https://ananinja.com/sa/ar/privacy-policy>.