

Software Requirements Specification
For
Store Management System (SMS)

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1. Preface

1.1 Document purpose

The purpose of this document is to provide a detailed and complete specification of the store management system (SMS).

First, there is an overview of the system in the first section the details will appear in the next sections.

1.2 Target users

- Customer: search for products and services, add products to the cart, remove products from the cart, purchase orders, and show history of all orders.
- Administrator: manage products (add new products and remove existing products) and control database.
- Delivery: deliver an order to the customer and show all orders.

1.3 Revision

Version	Author	Description	Date
0.1	B3B3	Initial	30-11-2023
0.2	B3B3	Use-Case Added	11-12-2023
0.3	B3B3	Class-Diagram Added	17-12-2023
0.4	B3B3	Sequence-Diagram Added	21-12-2023

2. Introduction

2.1 Purpose

Store system (SS) aims to automate the shopping process and find an easy way for customers to find their needs.

The system will achieve the following:

- Get customer's personal information (authentication)

- Help customers to find their needs.
- Help the manager control the work.
- Find solutions to improve customer service.
- Provide a way to deliver products to customers.
- Provide a payment when receiving service.

2.2 Scope

The Store Management System (SMS) is designed to automate and streamline the shopping process, catering to the needs of customers, administrators, and delivery personnel. The system encompasses the following key functionalities:

- Customer Management:
 - Capture and authenticate customer personal information for secure transactions.
 - Facilitate customers in searching for products and services.
 - Enable customers to add and remove products from the shopping cart.
 - Allow customers to place purchase orders and view their order history.
- Administrator Management:
 - Empower administrators to manage the product inventory.
 - Facilitate the addition of new products and removal of existing products.
 - Provide control over the database to ensure data accuracy and security.
- Delivery Management:
 - Enable delivery personnel to view and fulfill customer orders.
 - Provide a comprehensive view of all orders to streamline the delivery process.

2.3 Overview

The Store Management System (SMS) provides a centralized platform that seamlessly integrates various aspects of store operations. This includes customer interactions, product management, order fulfillment, and administrative control. The system aims to enhance the shopping experience by providing efficient tools for customers and administrators.

3. Glossary

3.1 Acronyms, Definitions, and Abbreviations

FOEHU: Faculty of Engineering, Helwan University.

B3B3: Team Name.

SMS: Store Management System.

SQLite3: Database Used in System.

4. System Users

4.1 Stockholder

- System Engineer (Developer)
 - Responsible for requirements gathering.
 - Responsible for development.
 - Responsible for deployment and support.
- Customer
 - Add products to the cart.
 - Confirm buying the orders in the cart.
- Delivery man
 - Delivery orders to customers.
 - Communicate with customers.

- Administrator
 - Add new products or remove existing products in store.
 - Set discounts for Palestinian and Egyptian products.
 - Treatment with customer feedback.

4.2 User Objective

- System Engineer (Developer)
 - Gain Experience in software engineering and development.
- Customer
 - Saving time and money on shopping.
 - Find easy ways to meet their needs.
- Delivery man
 - Get salary from delivering the orders.
- Administrator
 - He finds a more conformable way to control his store.
 - Find out leakage ear.

5. User Requirements Definitions

5.1 System Functions

1. Add products to categories.
2. Remove product.
3. Show all products.
4. Add to cart.
5. Remove from cart.
6. View all orders.
7. Login.
8. Registration.
9. Confirm the buying order/purchase orders.

10. Is the order delivered?

11. Deliver order.

5.2 Constraints

- User Authentication Constraint
 - Ensure secure user authentication within the desktop application.
- Data Security Constraint
 - Safeguard user data and sensitive information stored on the local machine.

6. System Architecture

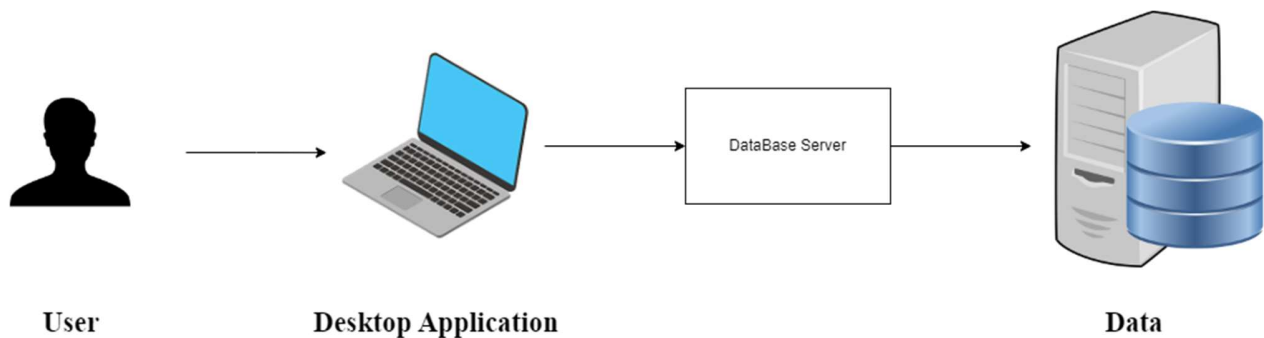


Figure 1: System Architecture

7. System Functional Requirements

7.1 Add product to categories

This function enables administrators to add new products to existing or new categories within the store with the following information:

- Main information about the product (name and price).
- The number of pieces of this product that will be added.
- If there is a discount on this product.
- The category to which this product belongs.

7.2 Remove product

This function allows administrators to remove a product from the store.

7.3 Show all products

This function allows administrators to access and show all product details in the store.

7.4 Add to cart

This function allows registered users to create an order for products with the following information:

- User identifier (email and id).
- Product identifier.
- Product category.
- Date of order.

If the user enters the add to cart button, it will go to the cart with other orders to confirm.

7.5 Remove from cart

This function allows registered users to remove a product from the cart frame.

7.6 View all orders

This function allows registered users to view all past orders that he/her make in the store.

7.7 Login

This function enables users to log into the system with the valid following information:

- Email.
- Password.

If the user enters the right email and password, then the main window will appear to him.

7. 8 Registration

This function allows users to register for a new account in the system with the following information:

- Email.
- Password.
- Address.
- Password.
- Gender.

If the user enters a unique email with correct information, he will be successfully added to the database.

7. 9 Confirm the buying order/ purchase orders

This function allows users to confirm all orders they make in the cart, and they will get the orders they make in the cart frame in the application.

7. 10 Is the order delivered

This function allows users to check the status of their orders to determine if they have been delivered.

If the order is delivered successfully, then it will appear to the user in the orders window.

7. 11 Deliver Order

This function allows delivery to confirm the delivered option of the user's order.

8. Interface Requirements

8.1 User Interface

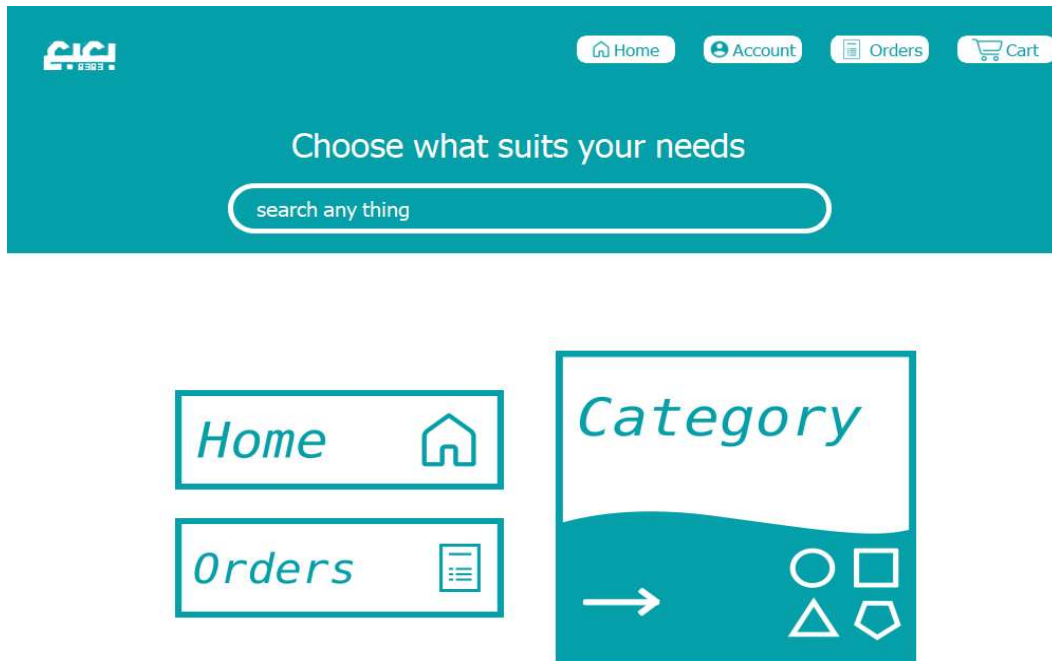


Figure 2: Home page for customer.

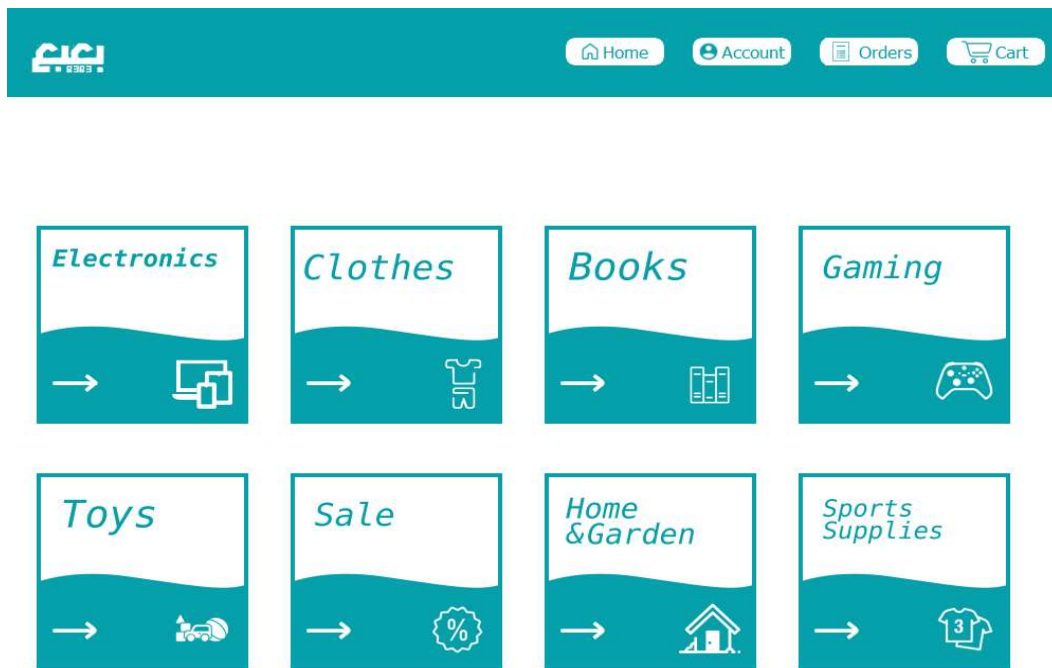


Figure 3: Categories page for customers.

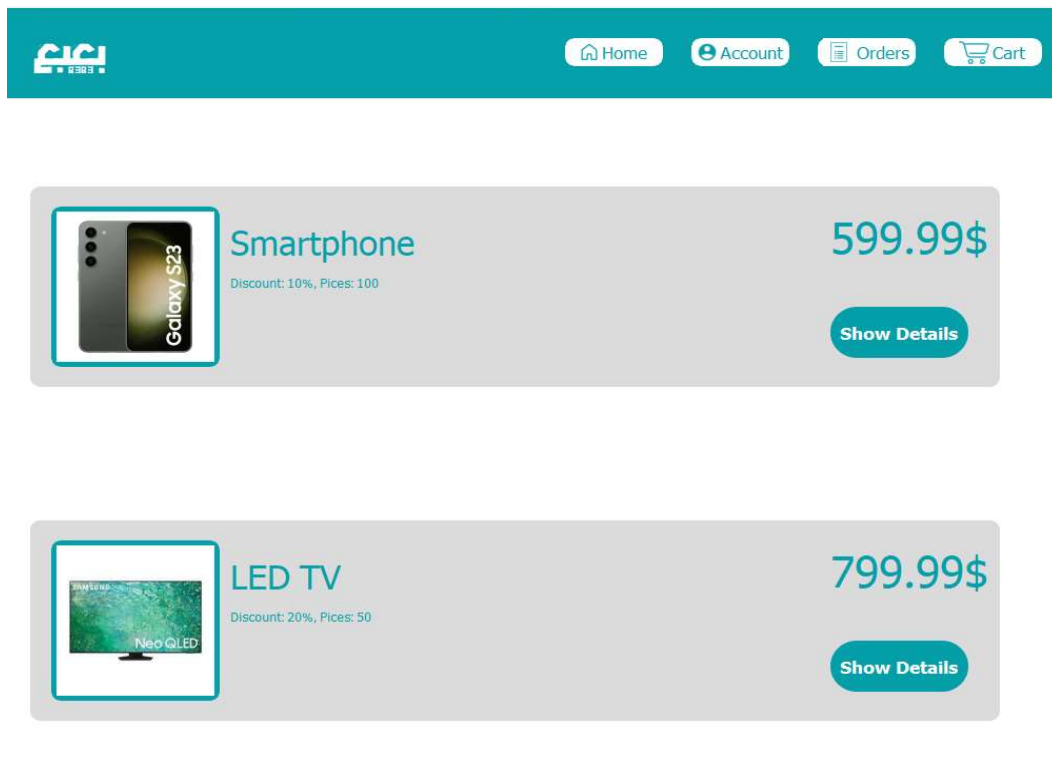


Figure 4: Each category page.

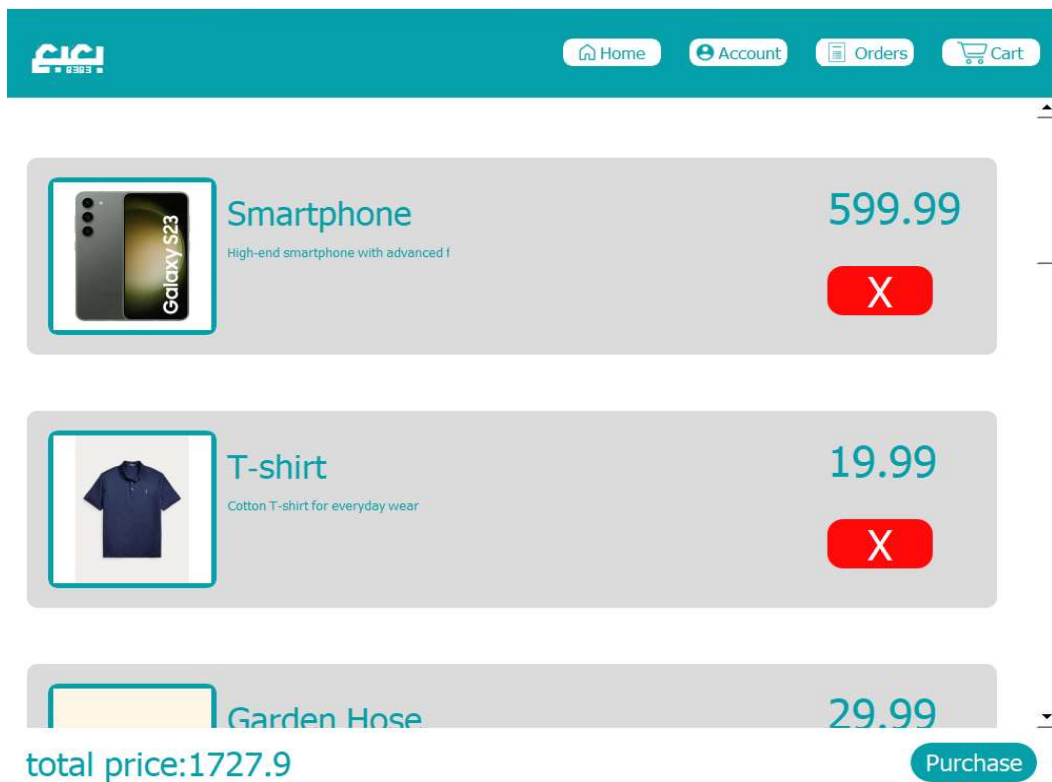


Figure 5: Cart page for customer.

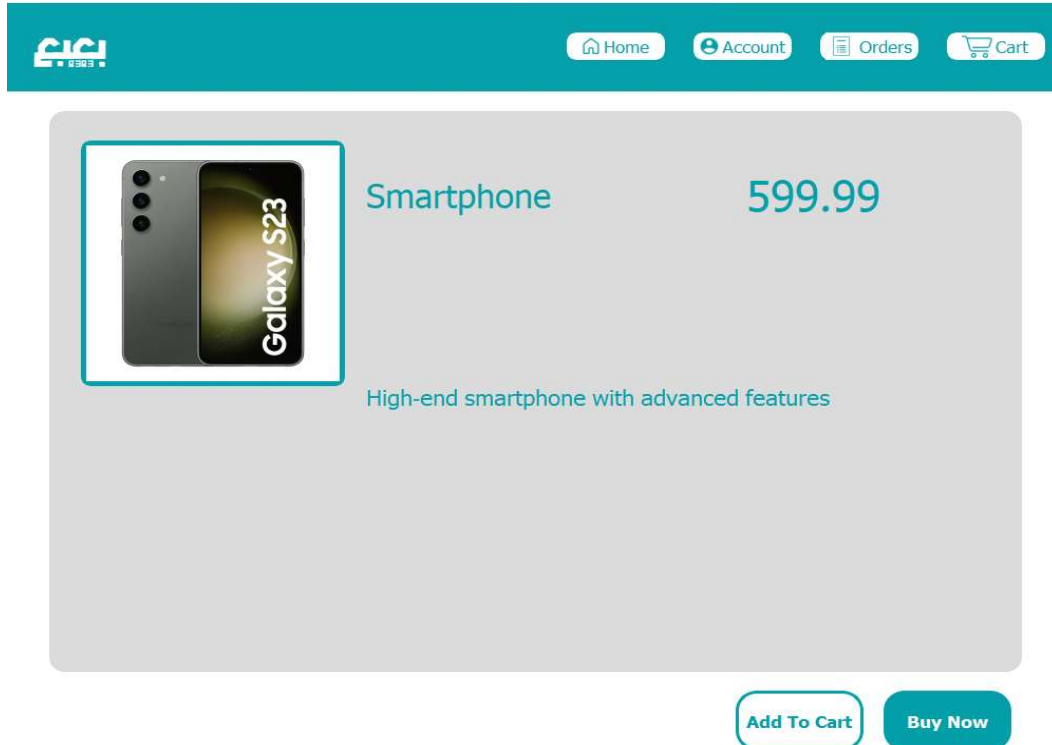
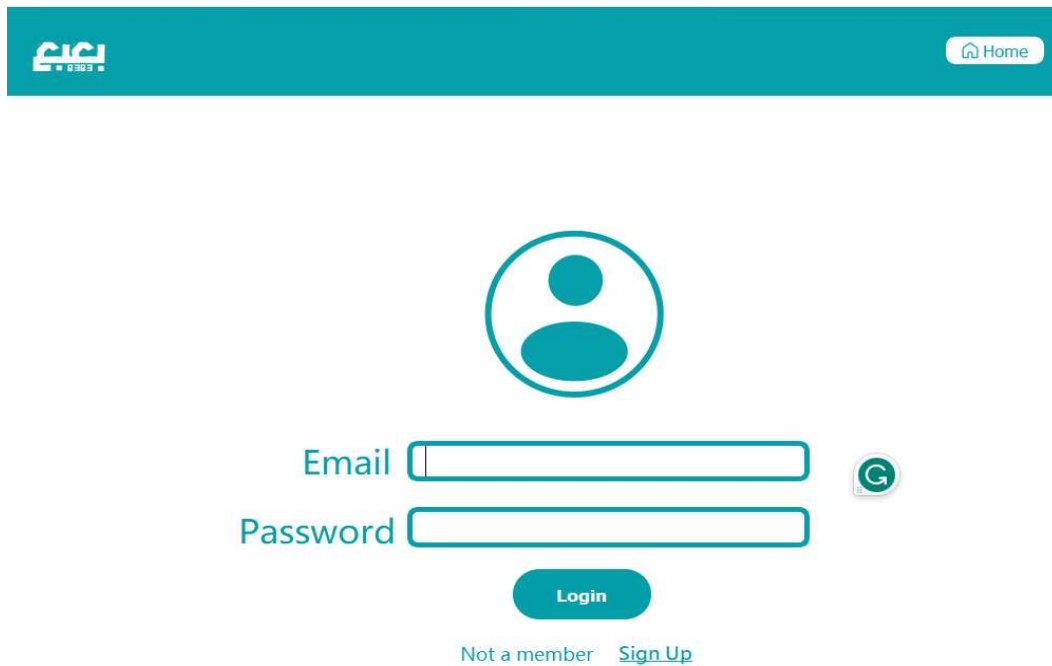


Figure 6: Each product page.



The login page features a teal header with the 'CICI' logo on the left and a 'Home' button on the right. The main content area is white. At the top center is a teal circular icon representing a user profile. Below it are two input fields: 'Email' and 'Password'. To the right of the 'Email' field is a green circular icon with a white 'G'. Below the 'Password' field is a teal 'Login' button. At the bottom, there is a link 'Not a member' followed by a teal 'Sign Up' button.

CICI

Home

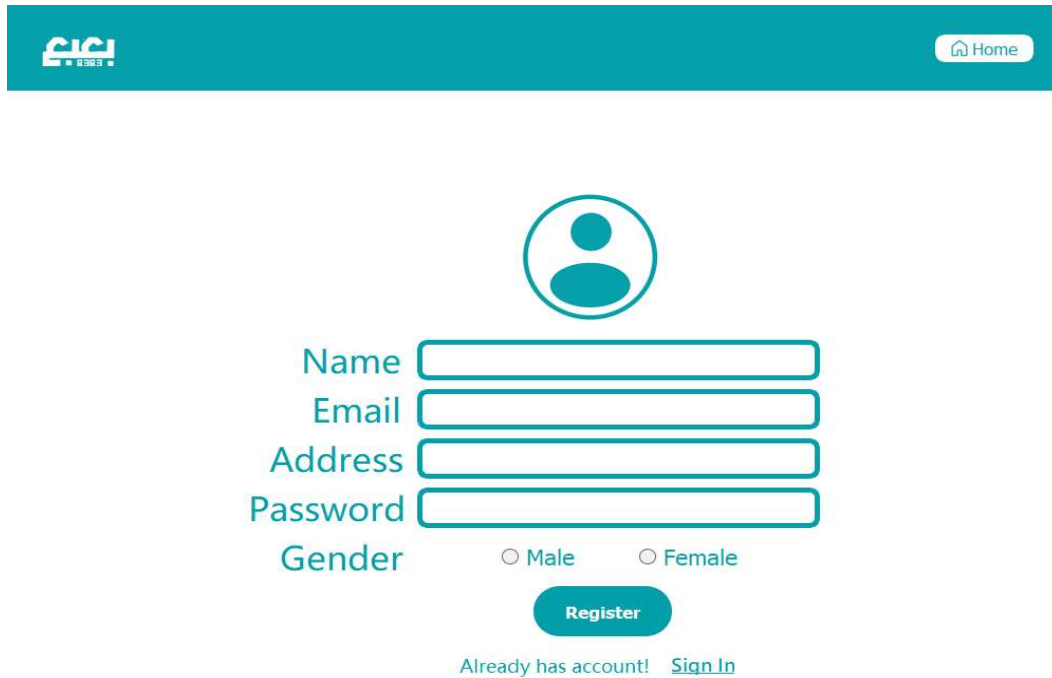
Email

Password

Login

Not a member [Sign Up](#)

Figure 7: Login page.



The registration page features a teal header with the 'CICI' logo on the left and a 'Home' button on the right. The main content area is white. At the top center is a teal circular icon representing a user profile. Below it are four input fields: 'Name', 'Email', 'Address', and 'Password'. Below these fields is a 'Gender' label with two radio buttons: 'Male' and 'Female'. Below the radio buttons is a teal 'Register' button. At the bottom, there is a link 'Already has account!' followed by a teal 'Sign In' button.

CICI

Home

Name

Email

Address

Password

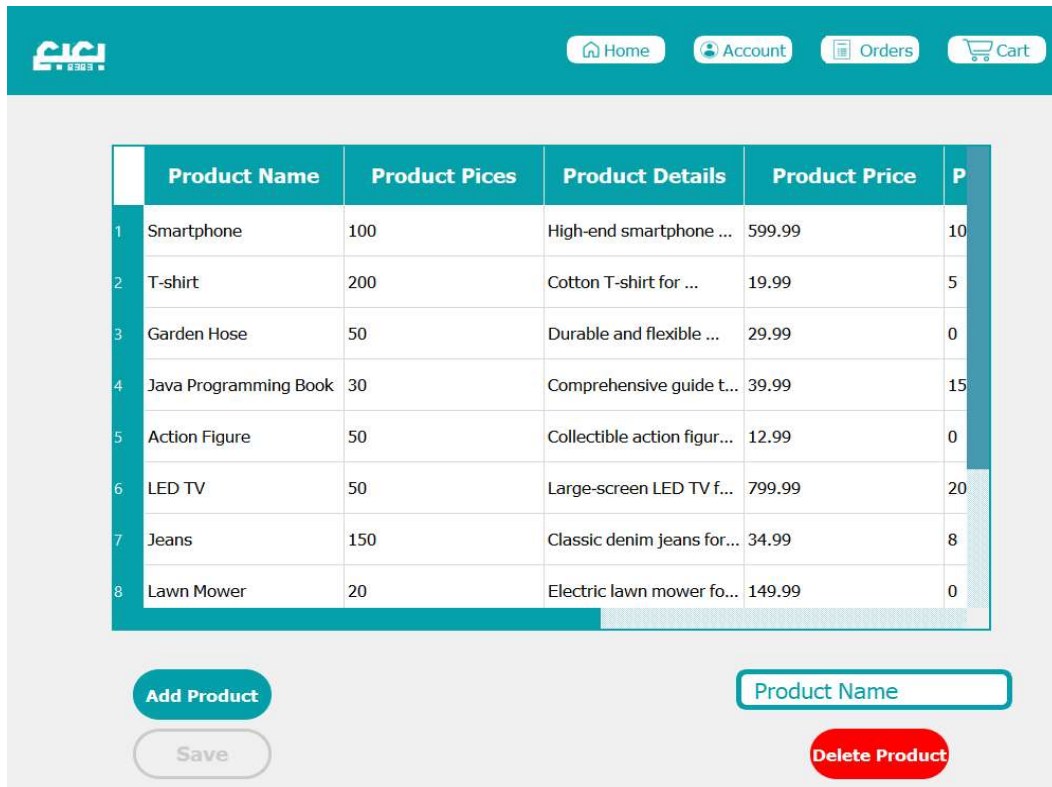
Gender

☐ Male ☐ Female

Register

Already has account! [Sign In](#)

Figure 8: Registration page.



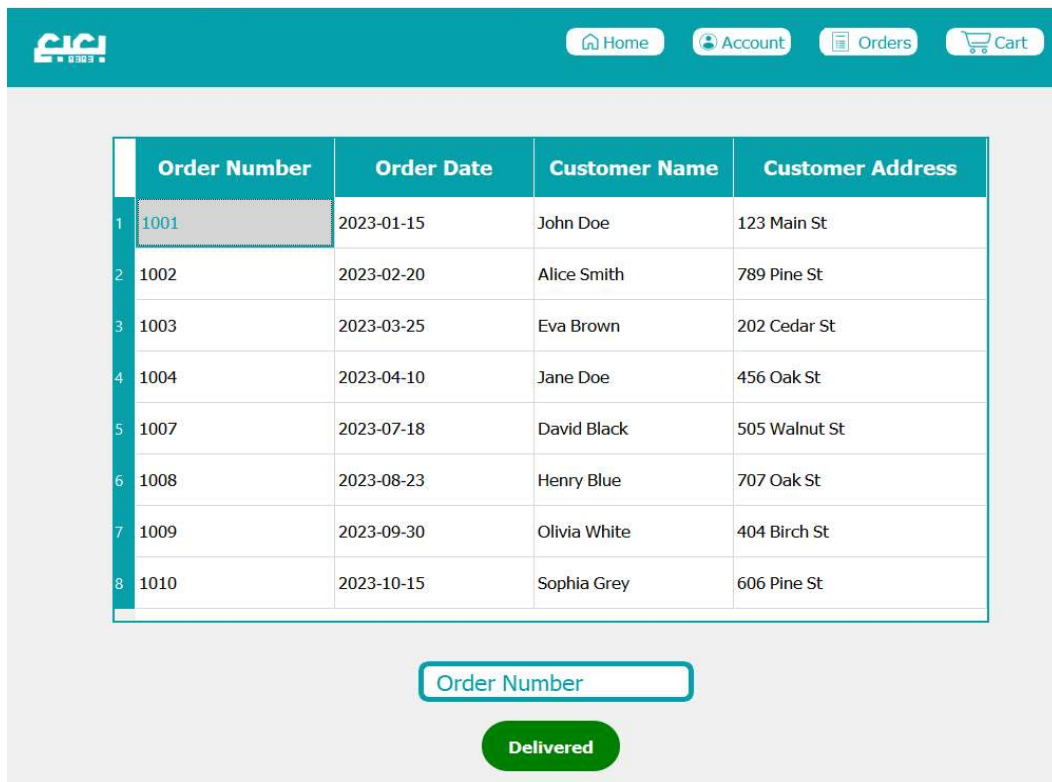
The Admin page features a teal header with navigation links: Home, Account, Orders, and Cart. Below the header is a table with 6 columns: an index column, Product Name, Product Pices, Product Details, Product Price, and a P column. The table contains 8 rows of product data. Below the table are three buttons: 'Add Product' (teal), 'Save' (light gray), and 'Delete Product' (red). There is also a text input field labeled 'Product Name'.

	Product Name	Product Pices	Product Details	Product Price	P
1	Smartphone	100	High-end smartphone ...	599.99	10
2	T-shirt	200	Cotton T-shirt for ...	19.99	5
3	Garden Hose	50	Durable and flexible ...	29.99	0
4	Java Programming Book	30	Comprehensive guide t...	39.99	15
5	Action Figure	50	Collectible action figur...	12.99	0
6	LED TV	50	Large-screen LED TV f...	799.99	20
7	Jeans	150	Classic denim jeans for...	34.99	8
8	Lawn Mower	20	Electric lawn mower fo...	149.99	0

Buttons: Add Product, Save, Delete Product

Input field: Product Name

Figure 9: Admin page.



The Delivery page features a teal header with navigation links: Home, Account, Orders, and Cart. Below the header is a table with 4 columns: an index column, Order Number, Order Date, Customer Name, and Customer Address. The table contains 8 rows of order data. Below the table is a text input field labeled 'Order Number' and a green 'Delivered' button.

	Order Number	Order Date	Customer Name	Customer Address
1	1001	2023-01-15	John Doe	123 Main St
2	1002	2023-02-20	Alice Smith	789 Pine St
3	1003	2023-03-25	Eva Brown	202 Cedar St
4	1004	2023-04-10	Jane Doe	456 Oak St
5	1007	2023-07-18	David Black	505 Walnut St
6	1008	2023-08-23	Henry Blue	707 Oak St
7	1009	2023-09-30	Olivia White	404 Birch St
8	1010	2023-10-15	Sophia Grey	606 Pine St

Input field: Order Number

Button: Delivered

Figure 10: Delivery page.

8.2 Software Interface

Database access using SQLite3 server.

9. Non-functional Requirements

9.1 Performance Requirements

The desktop application should respond to user interactions quickly.

9.2 Reliability Requirements

Ensures that the application is consistently available, minimizing disruptions for users.

9.3 Usability Requirements

The user interface should adhere to industry usability standards and guidelines.

9.4 Security Requirements

All information about users must be hidden from all except the administrator.

10. System Models and Diagrams

10.1 Use-Case Diagram

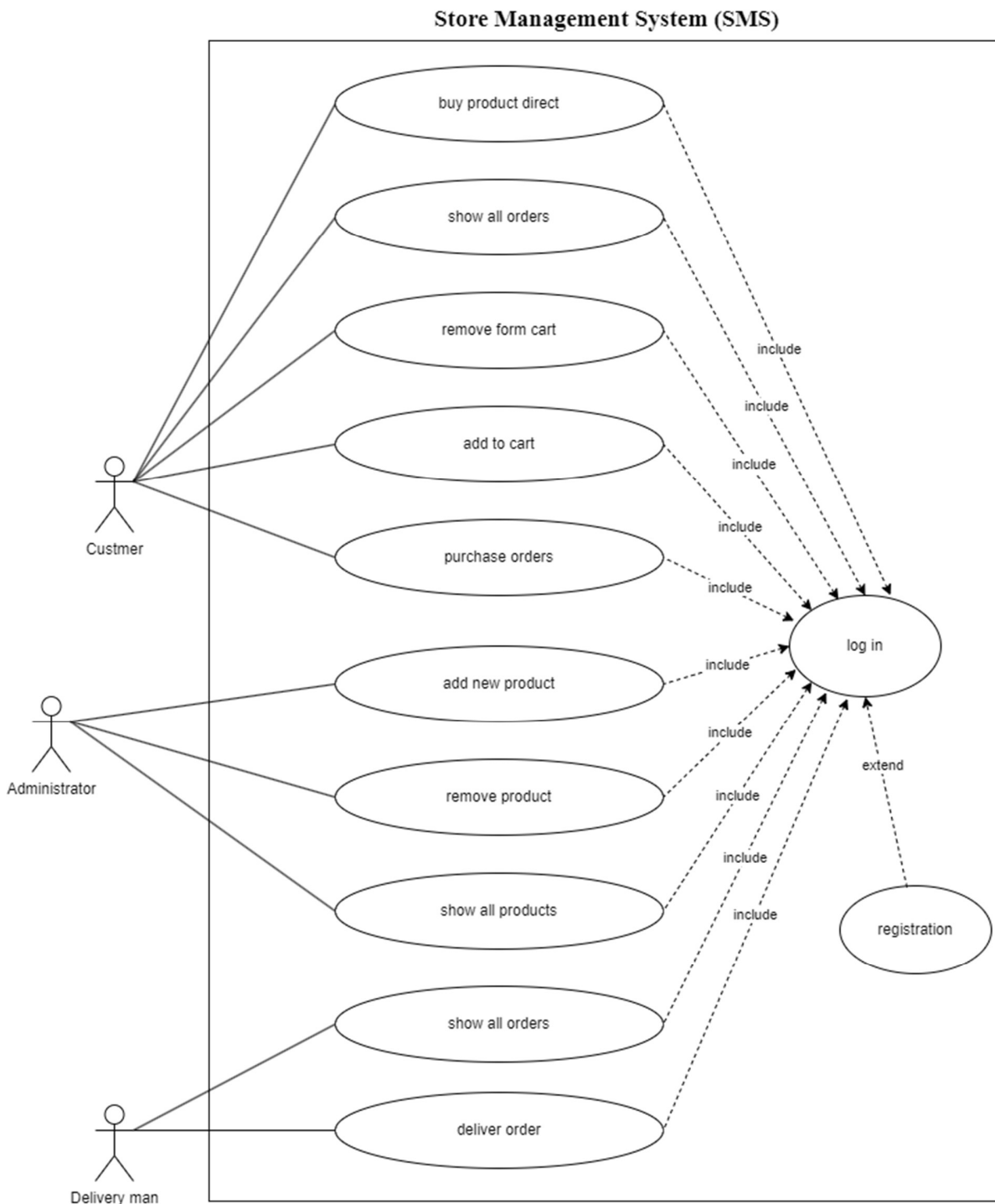


Figure 11: Use Case Diagram

10.2 Class Diagram

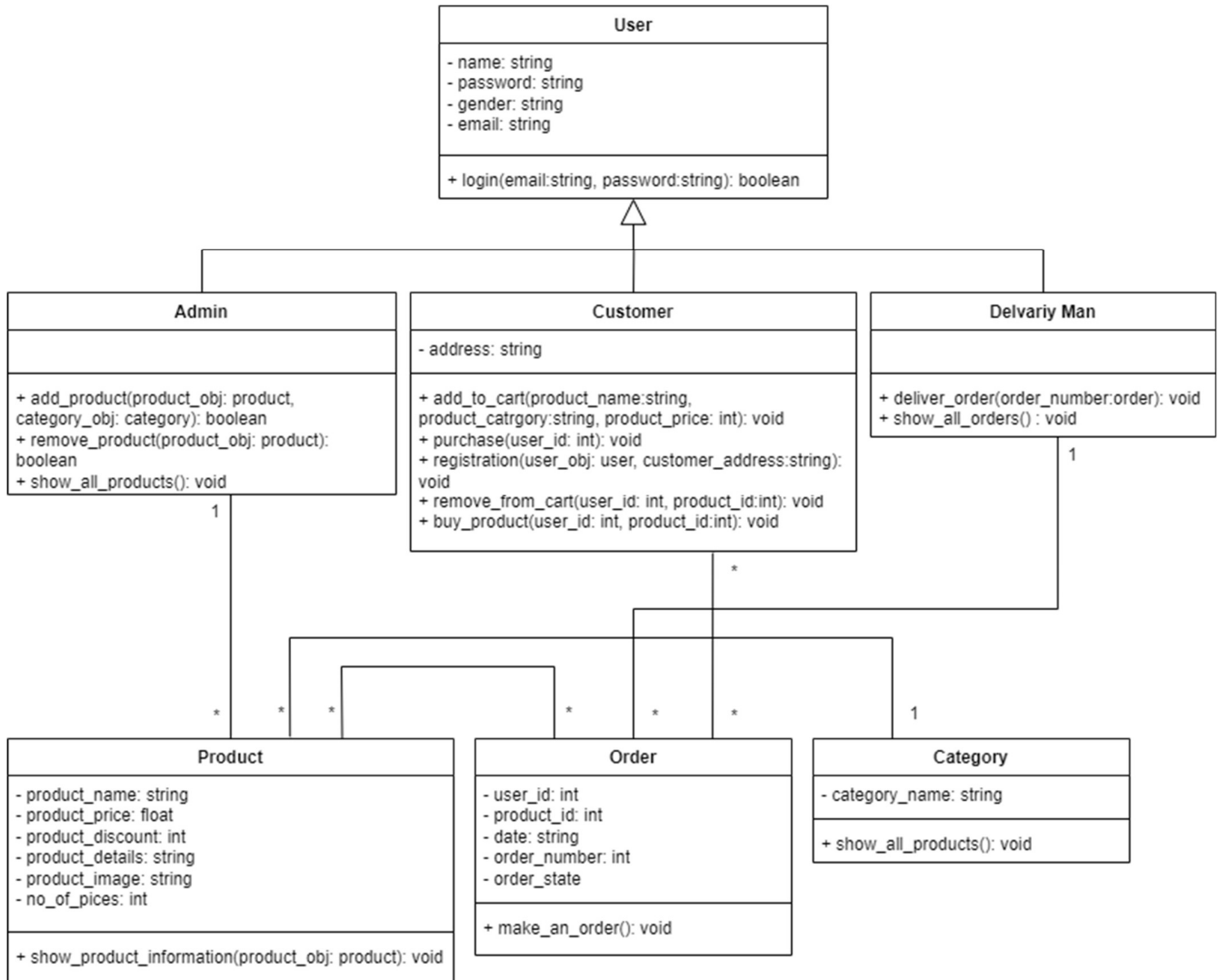


Figure 12: Class Diagram

10.3 ER Diagram

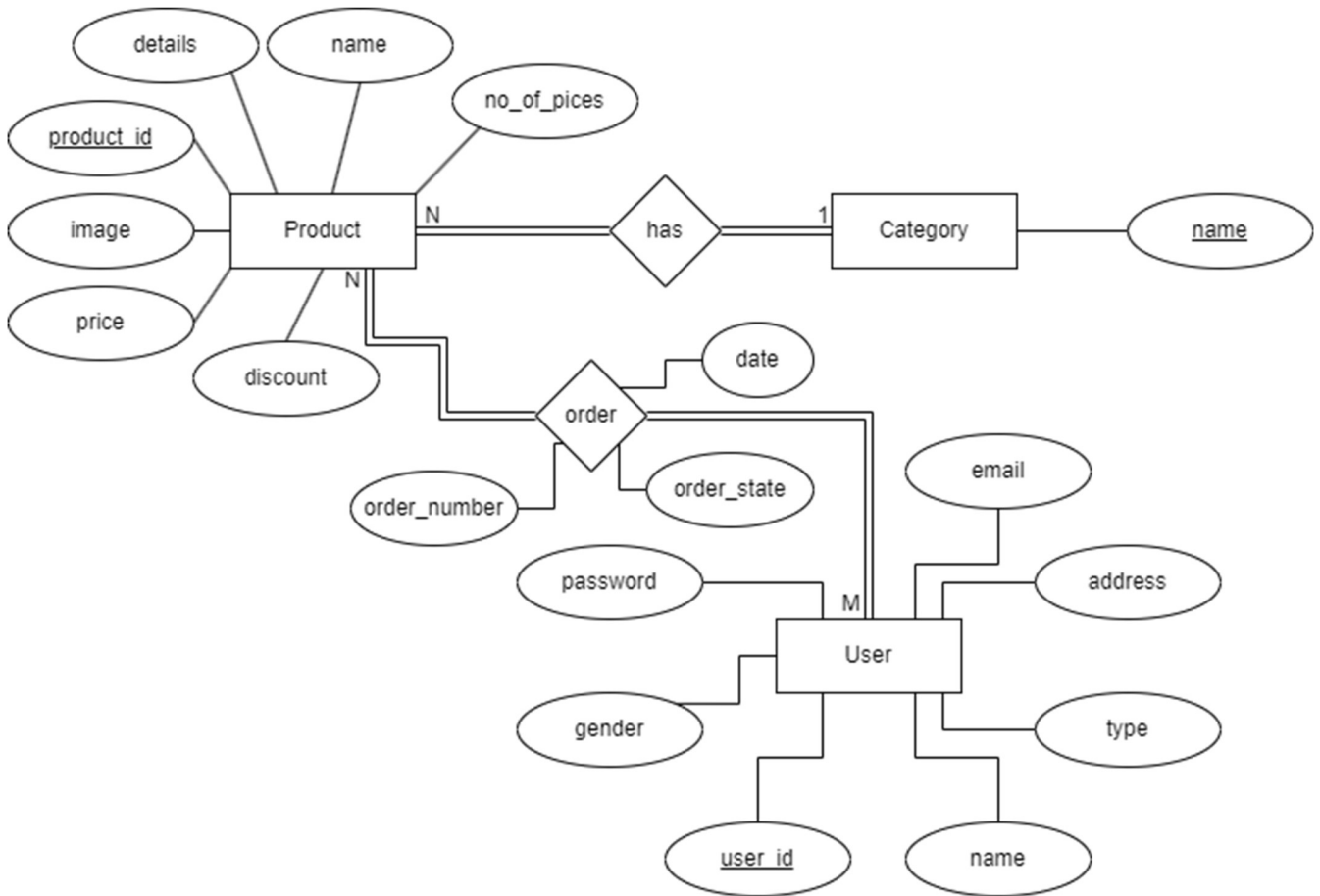


Figure 13: ER Diagram

10. 4 Sequence Diagram

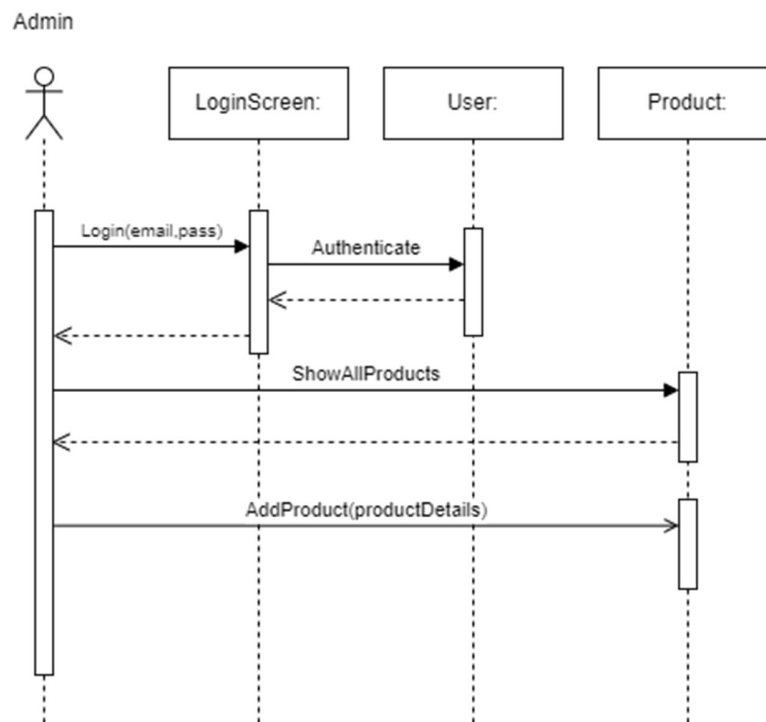


Figure 14: Scenario1 of admin interaction

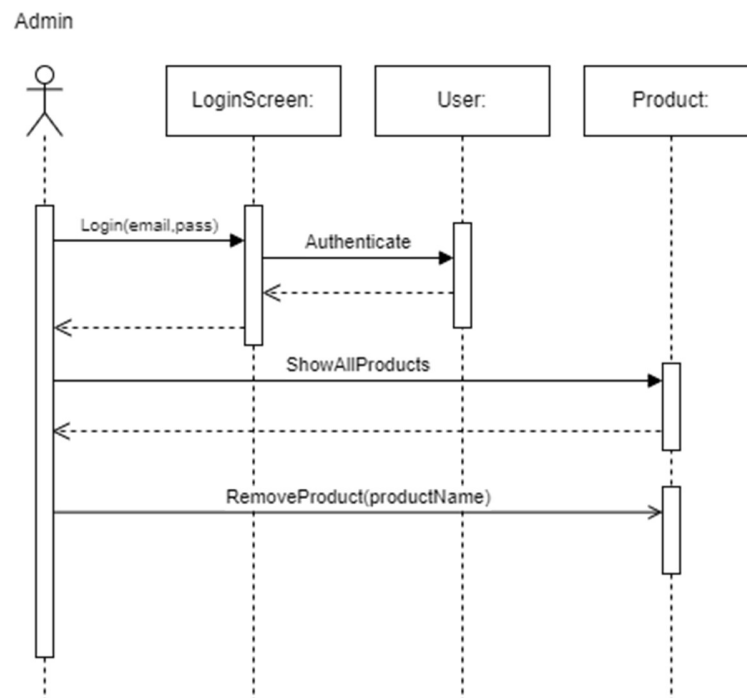


Figure 15: Scenario2 of admin interaction

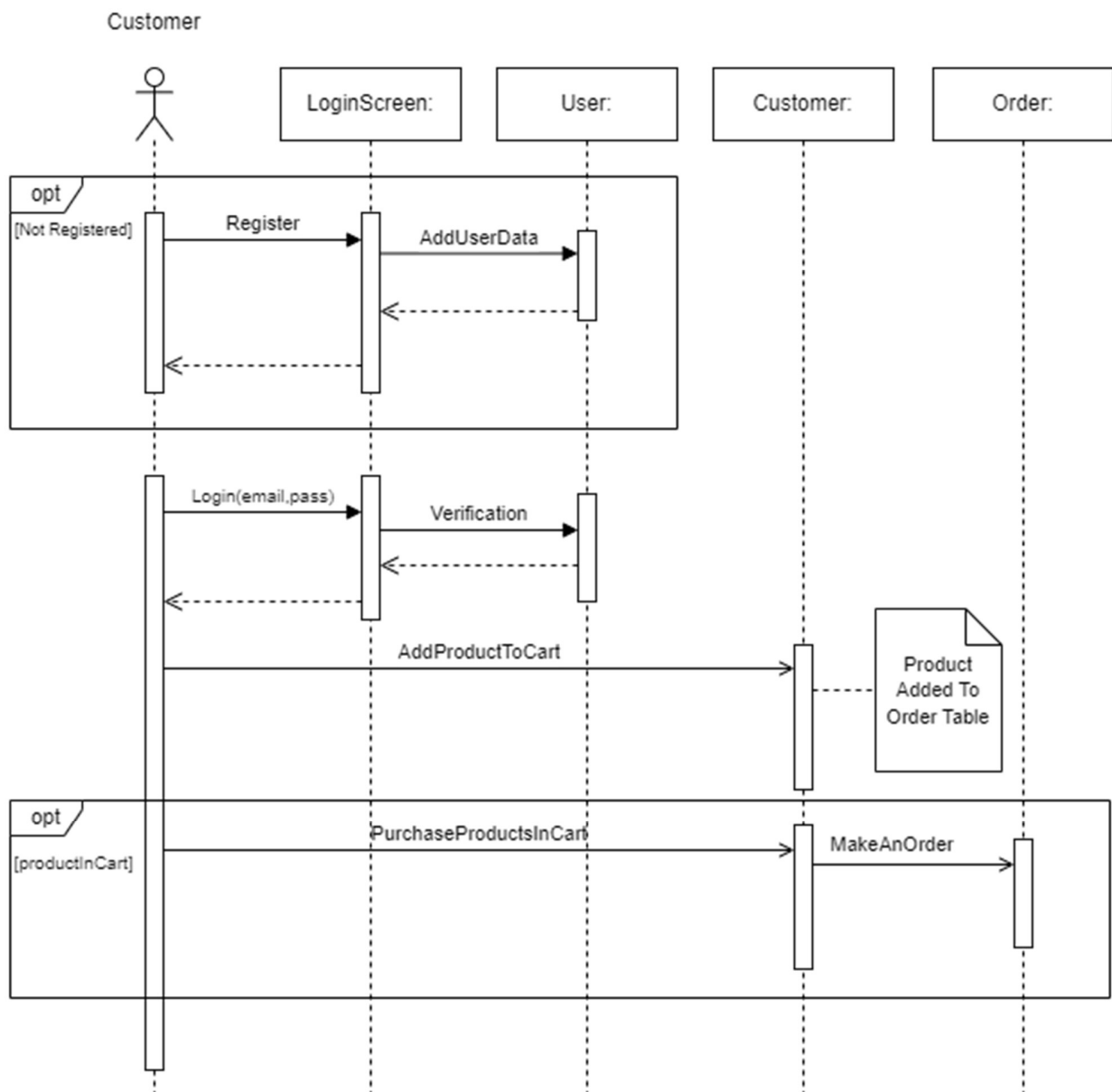


Figure 16: Scenario1 of customer interaction

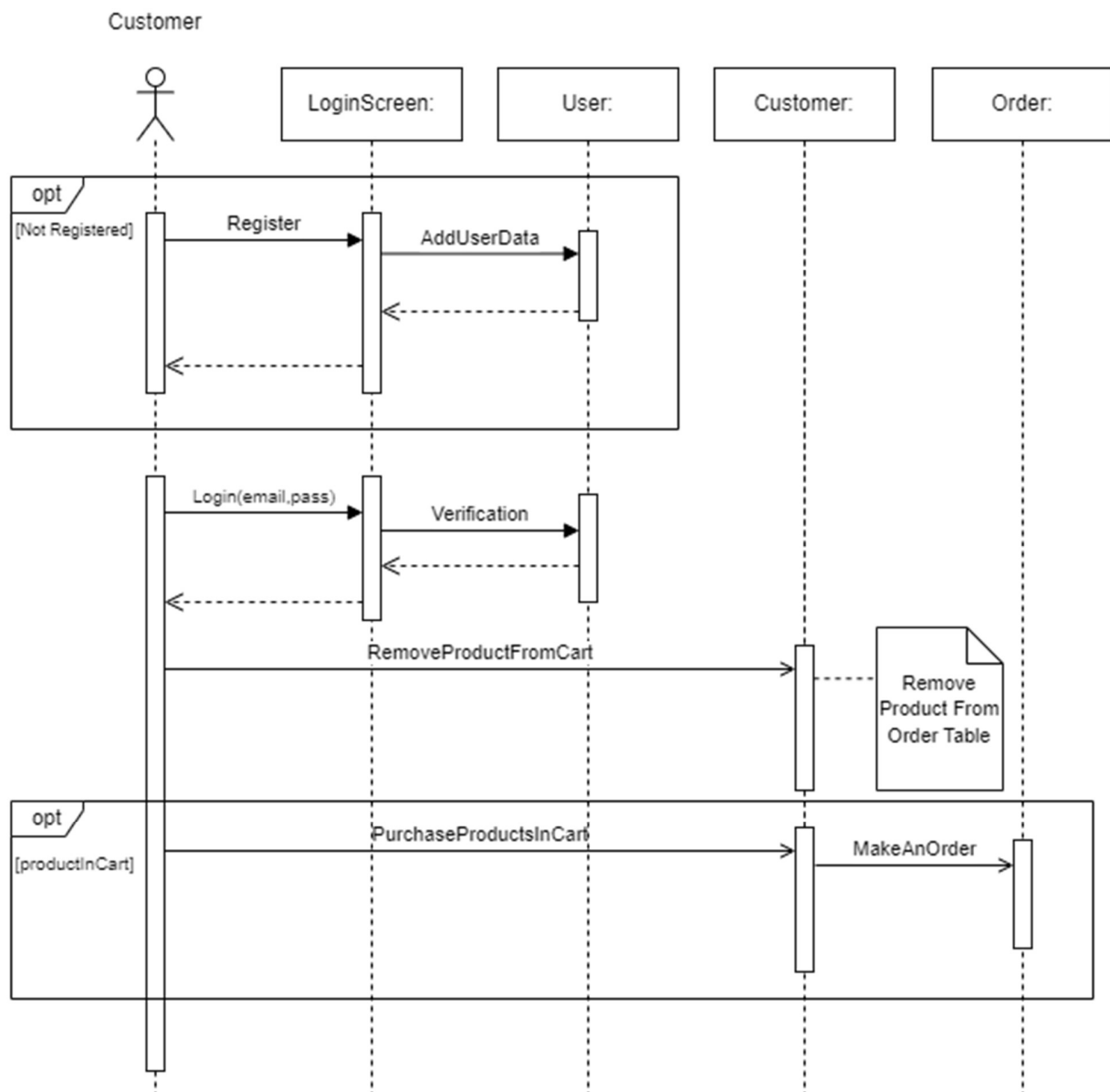


Figure 17: Scenario2 of customer interaction

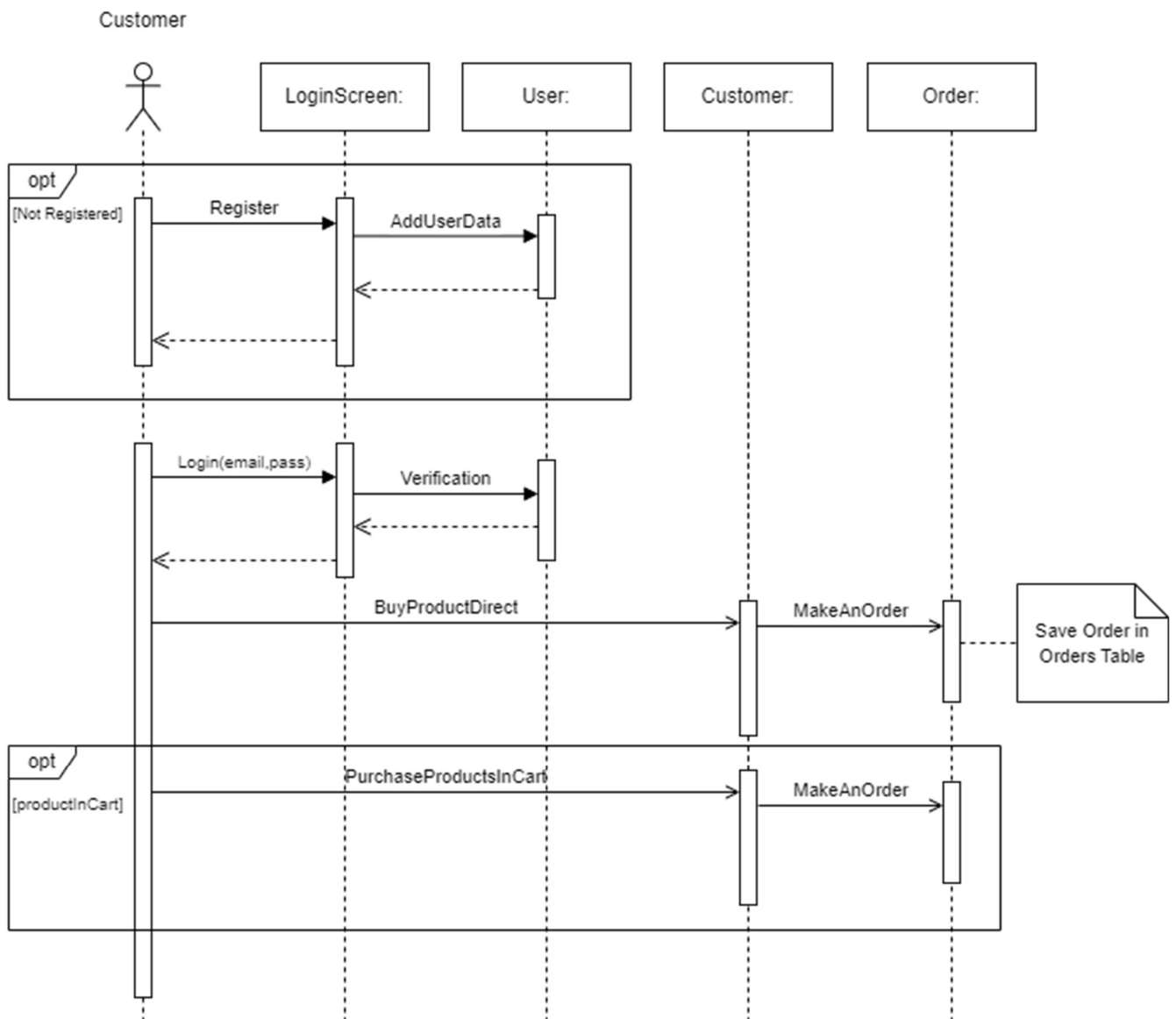


Figure 18: Scenario3 of customer interaction

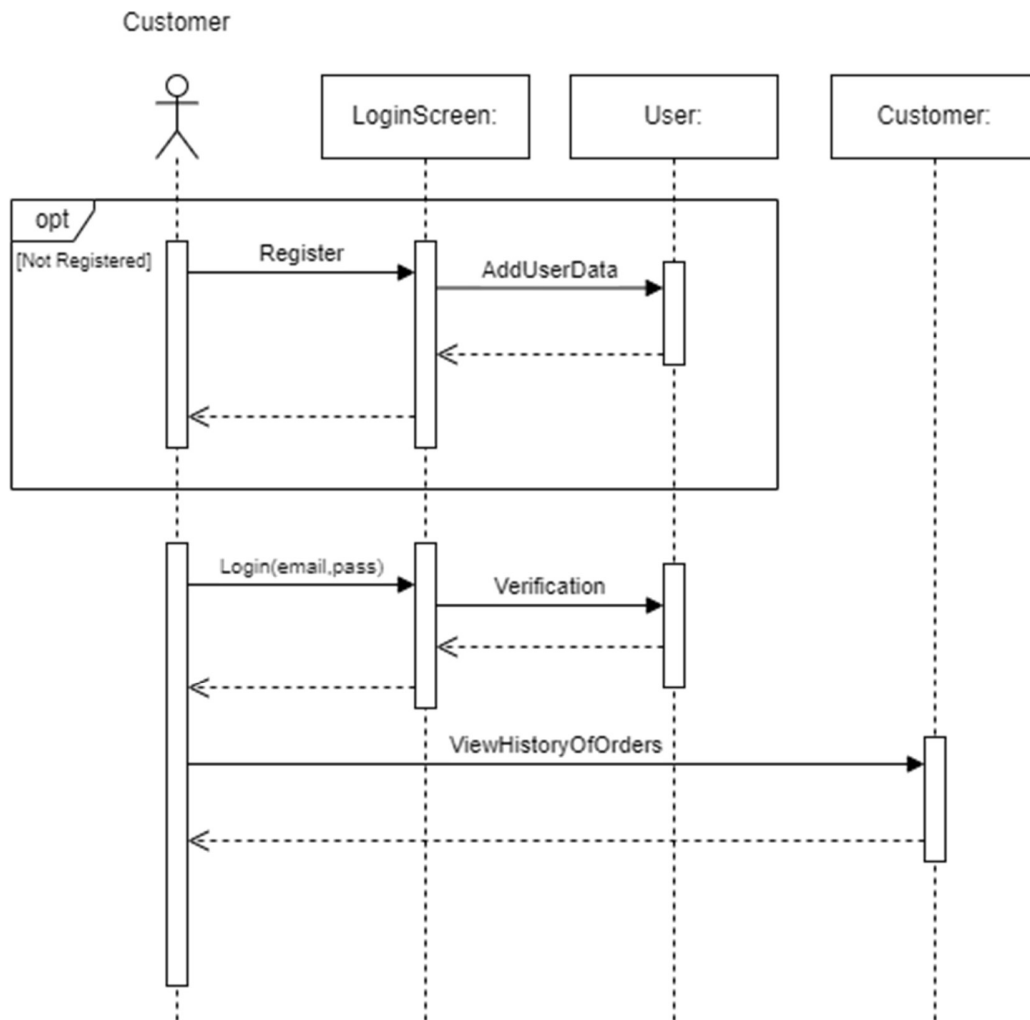


Figure 19: Scenario4 of customer interaction

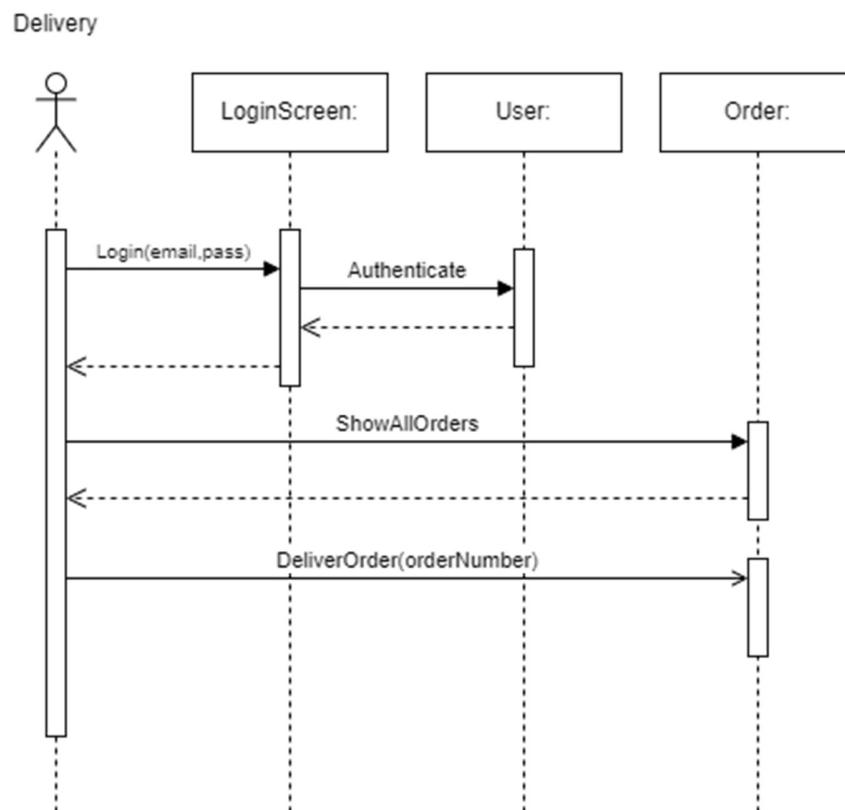


Figure 20: Scenario1 of delivery interaction