



PineApple

Version 1.0.2

UML Specification and UI Design Document

GroupB2

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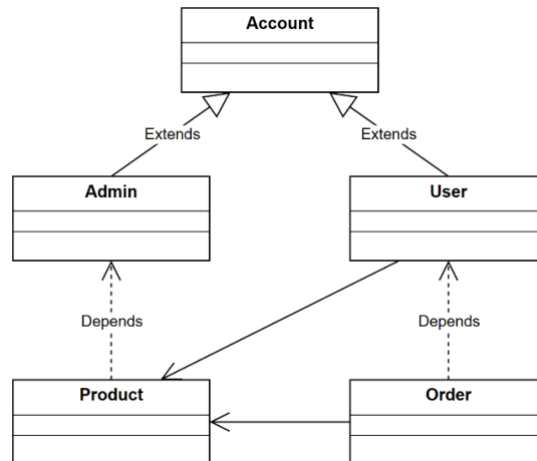
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1 UML DESIGN

Below is the overall class diagram structure of PineApple. The details will be separately discussed as two components:

1.1 Admin, Account and Product

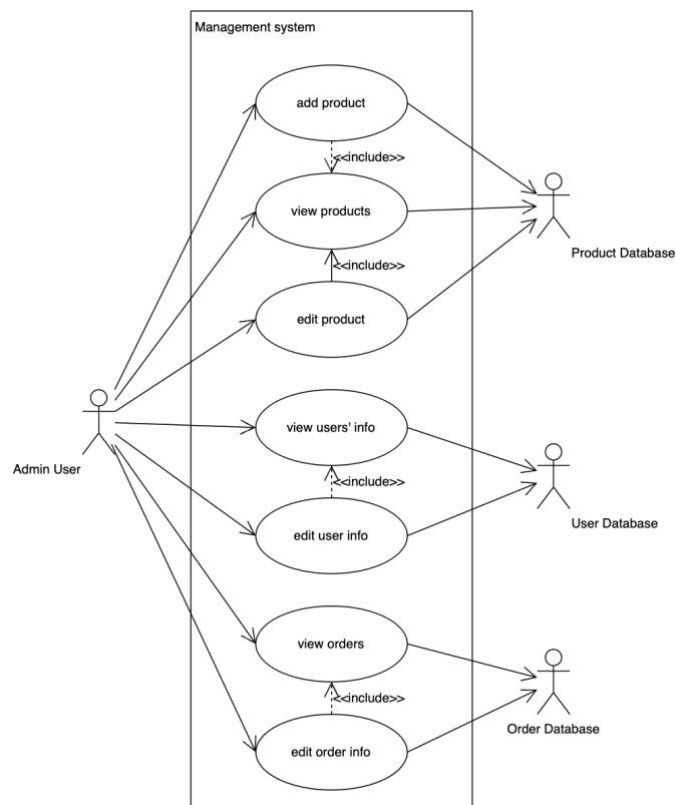
1.2 User and Order.

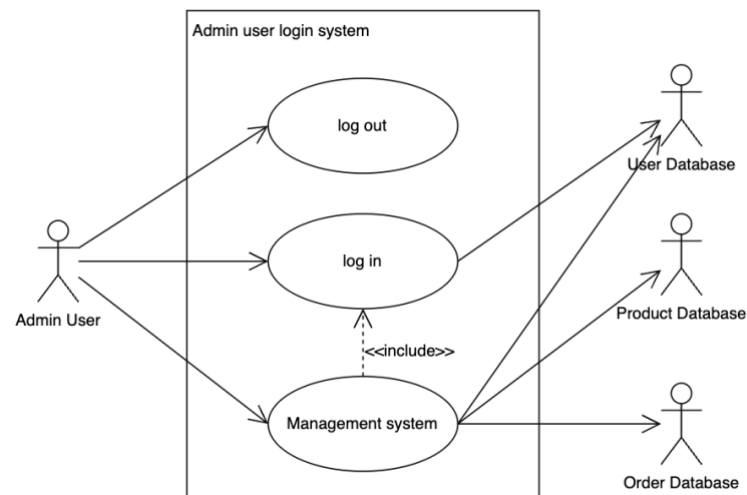


1.1 Component: Admin, Account and Product

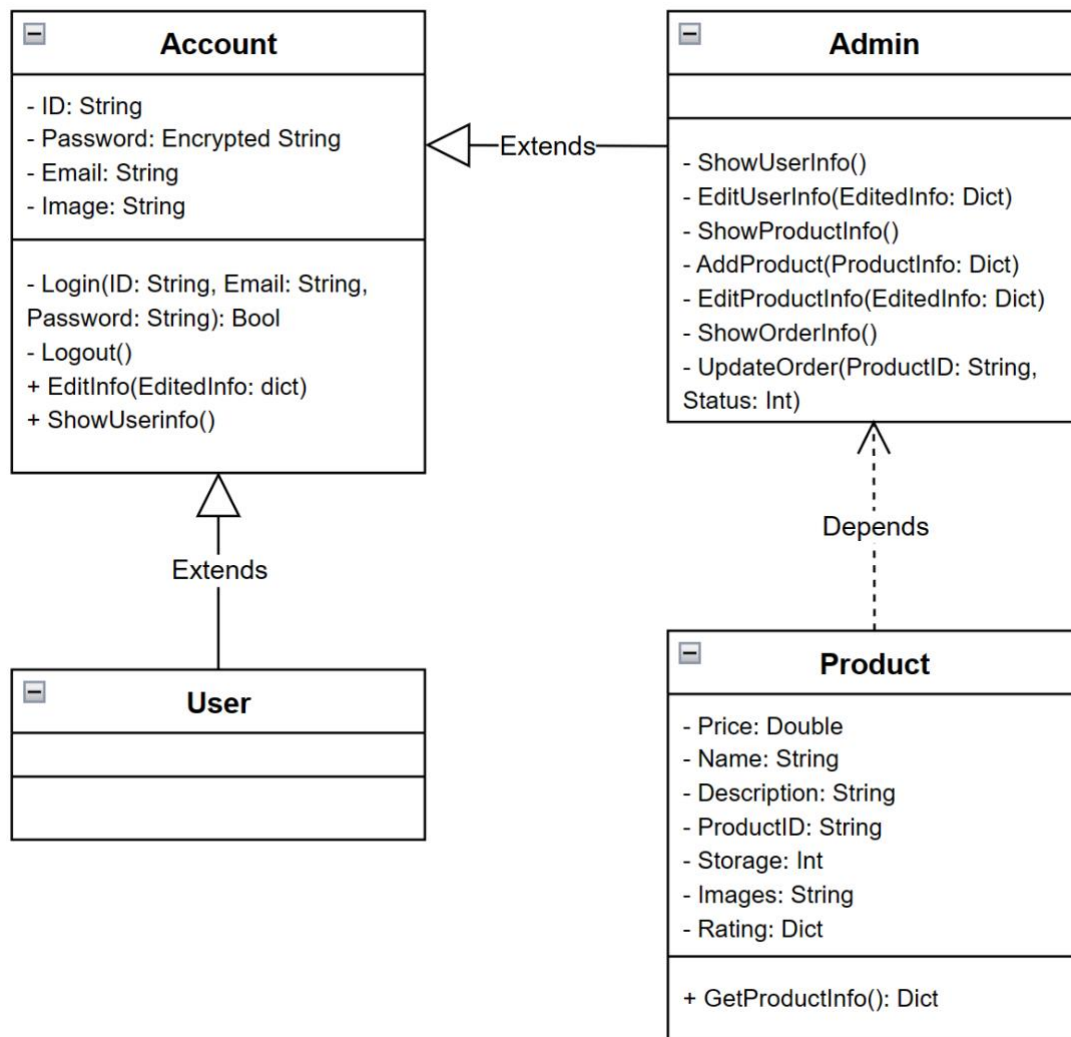
1.1.1 UMLs

1.1.1.1 Use-case Diagram

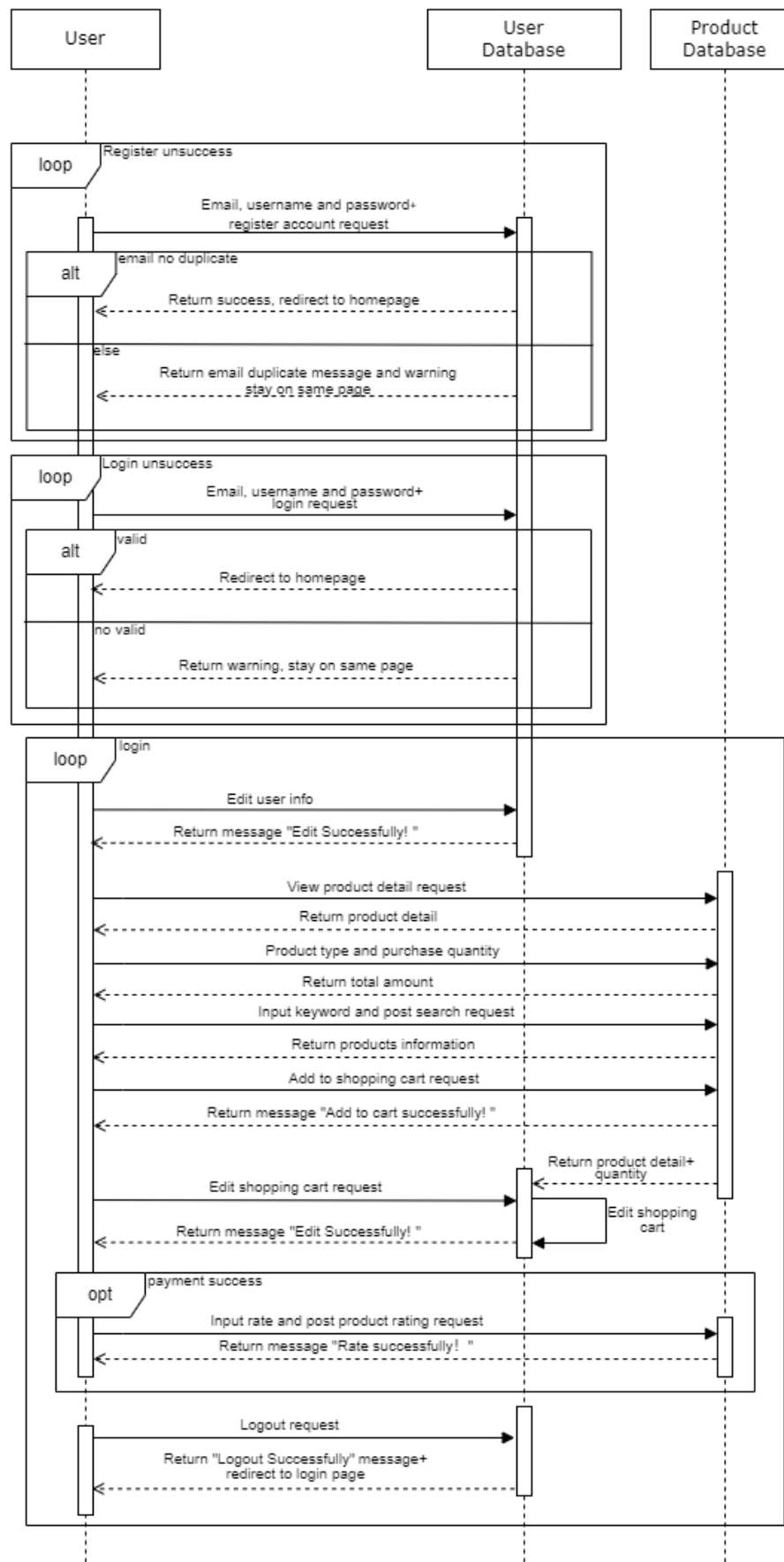


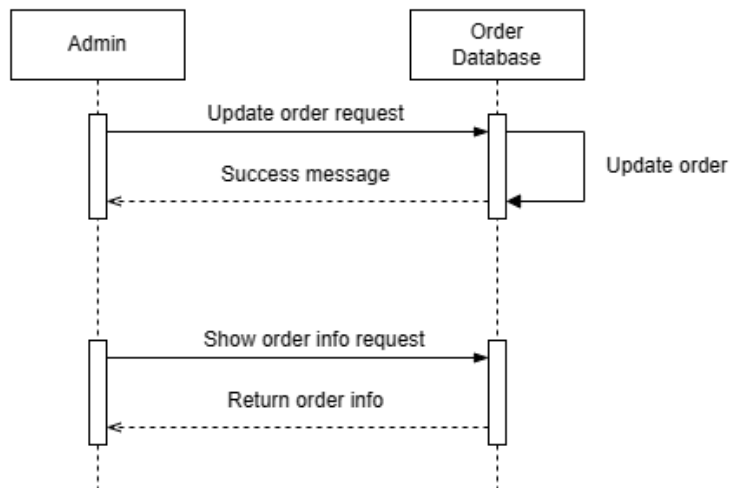
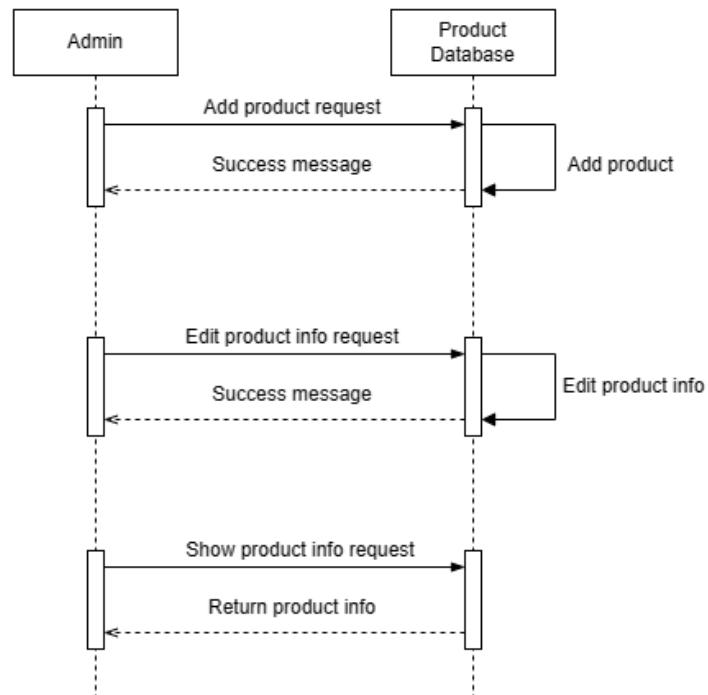
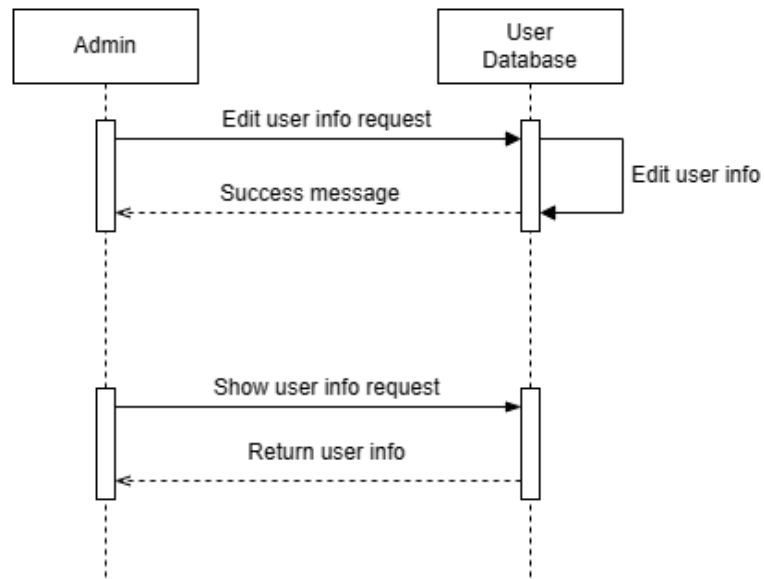


1.1.1.2 Class Diagram



1.1.1.3 Sequence Diagram





1.1.2 Functionality

This module provides functions related to admin and product management. The Account classes is the parent of both Admin and User Classes, containing the login information such as account ID, password, and registered email, as well as login/logout functions. Admin Class extends Account Class, with extra features including the functionality to view and edit the information of users and product items, implemented in the methods “ShowUserInfo”, “EditUserInfo”, “ShowProductInfo”, “EditProductInfo”, and “AddProduct”. The Admin Class can also view and update the status of the order by calling “ShowOrderInfo” and “UpdateOrder”.

Each Product Class represents a certain purchasable product on our website, containing photos, name, descriptions, price and storage for display, a product ID for identification, a rating dictionary with user IDs as keys and ratings as values, and an attribute getter function to retrieve the info. The Product Class depends on Admin Class, as each product item is created in the function “AddProduct” of the Admin Class.

1.1.3 Procedures and Functions

Account Class

Function	Description
Login	Users can login with user ID/email and password. If valid, redirect to homepage. If not, pop an invalid message on the Login Page.
Logout	Destroy the client session and redirect to Login Page.
EditInfo	Edit the user’s information such as user ID and password. The User Database will be updated correspondingly.
ShowUserInfo	Get the user’s information from the User Database and show it on the screen.

Admin Class

Function	Description
ShowUserInfo	Show information of users for the admin. The function overrides the same function in Account class to display all user information.
EditUserInfo	Edit the user information. The function helps the admin to edit the user information by accepting an edited information dictionary.
ShowProductInfo	Show information of products for the admin. The function will call the GetProductInfo function in Product Class to return the dictionary.

AddProduct	Add product information. The function helps the admin to add a new product to the database by accepting an information dictionary.
EditProductInfo	Edit the product information. The function helps the admin to edit the product information by accepting an edited information dictionary.
ShowOrderInfo	Show information of order for the admin. The function will call the GetOrderInfo function in Order Class to return the dictionary.
UpdateOrder	Update the status of a specific order. The function will call the UpdateStatus function in Order Class. This helps the admin to update the status of a specific order by accepting a Status int and an OrderID string.

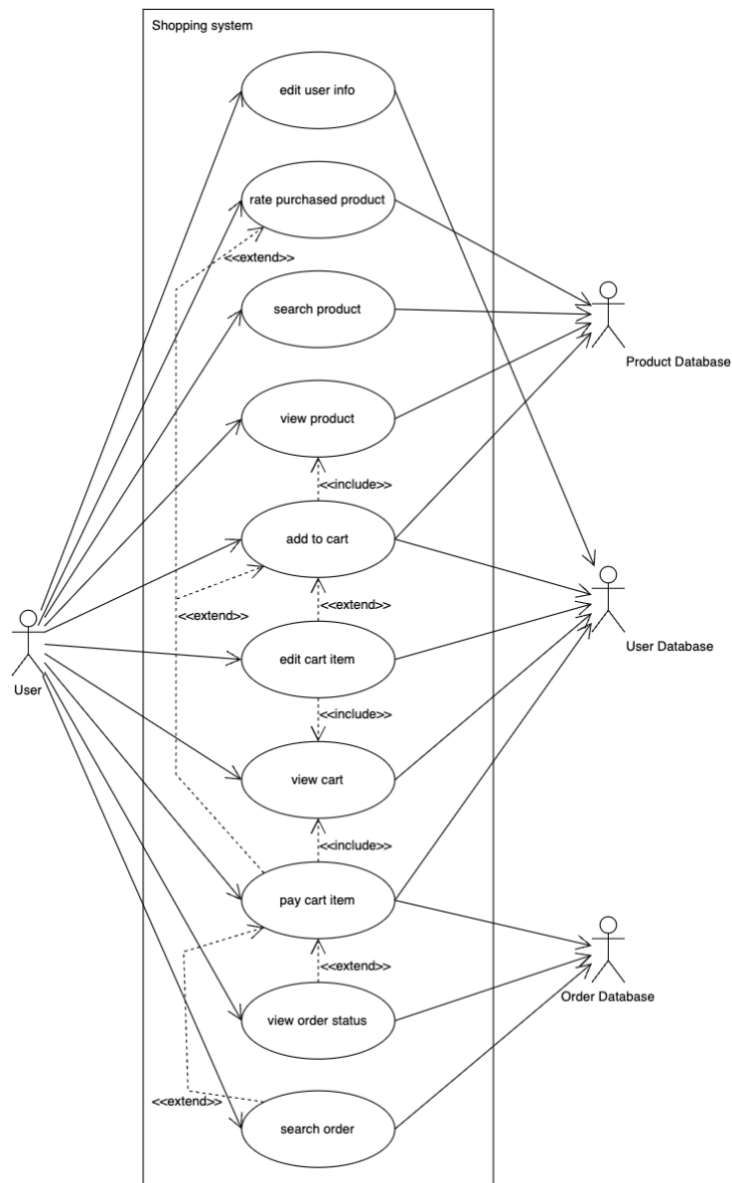
Product Class

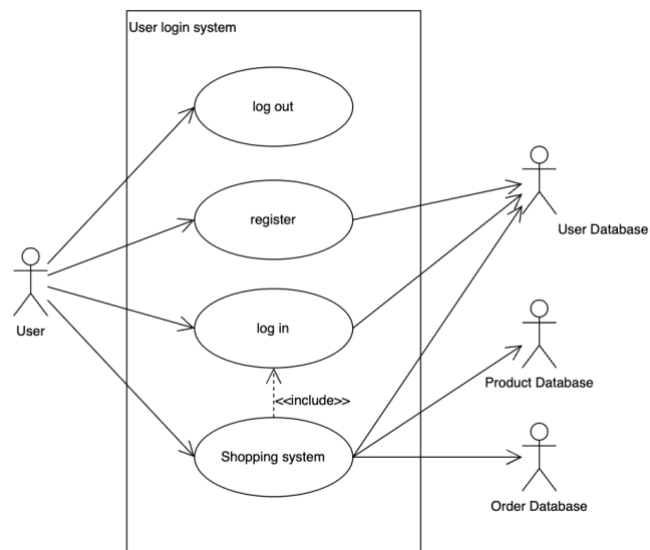
Function	Description
GetProductInfo	Get the information of product from Product Database. The function will return a dictionary that contains all the attributes of the Product Class.

1.2 Component: User and Order

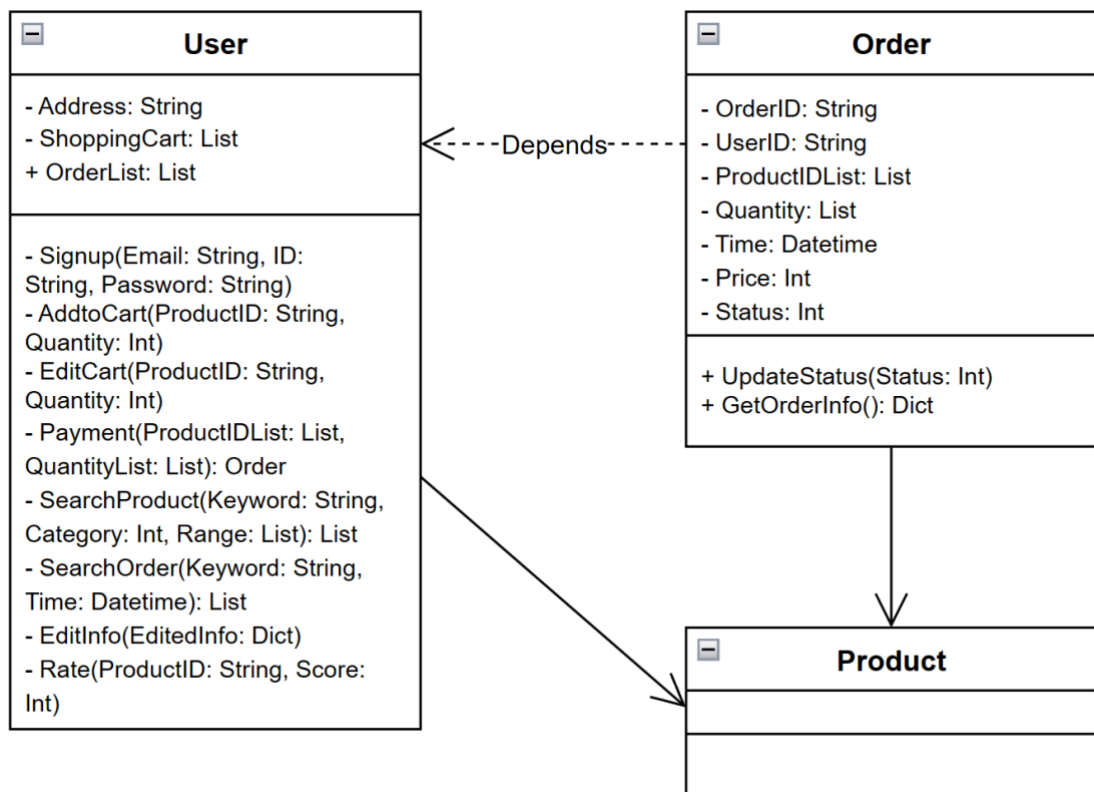
1.2.1 UMLs

1.2.1.1 Use-case Diagram

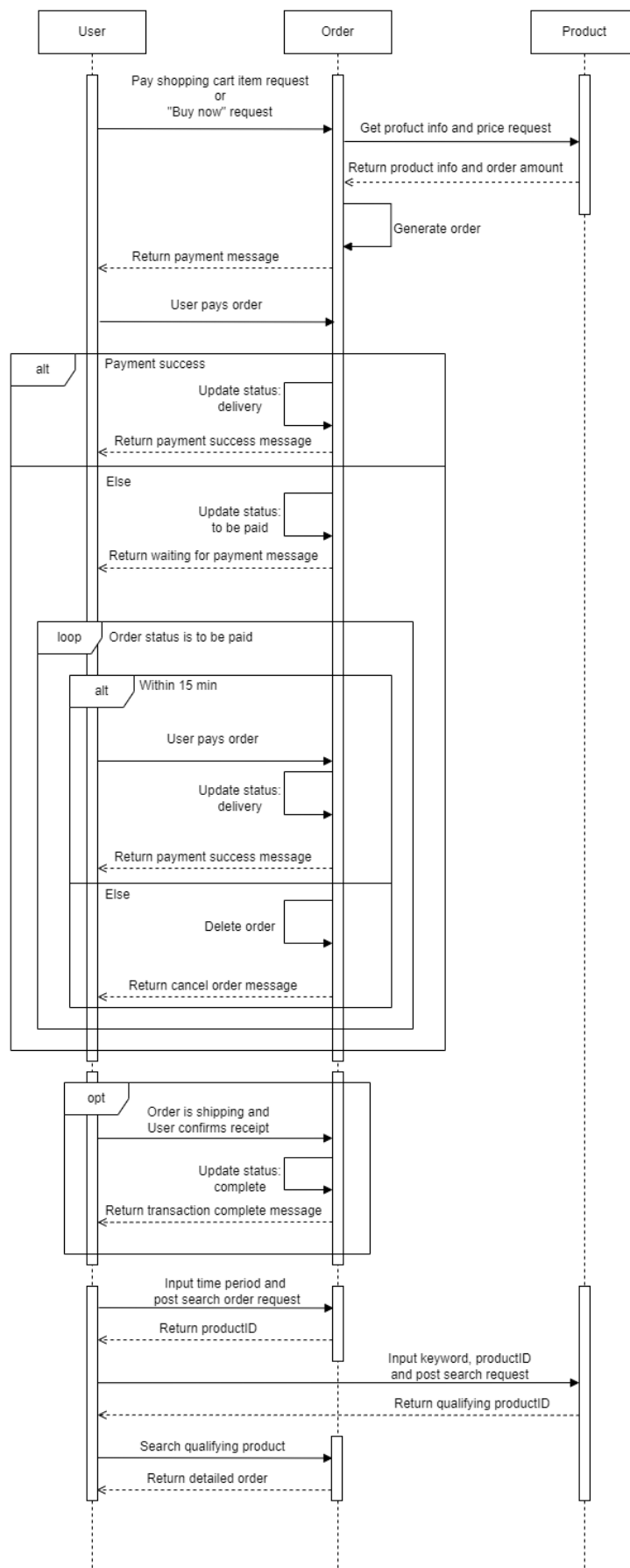




1.2.1.2 Class Diagram



1.2.1.3 Sequence Diagram



1.2.2 Functionality

This module provides functions related to users and users' operations of searching products and placing orders. The User Class extends the Account Class. To satisfy product searching functionality, the User Class can "Search" and "AddtoCart", and has a "ShoppingCart" that is a list of added products (specifically the reference to product). To make purchases, the User Class can first edit its "Address" attribute in "EditInfo" function, and then "Payment" to create orders and store them in the "OrderList". After the order is finished, the User Class can "SearchOrder" and "Rate" each purchased product.

The Order Class contains the product ID list, user ID, order ID for identification, the quantity, payment time, price for detailed payment information, and a status to track whether the order is paid/processing/delivering/completed. The Order Class has a method "UpdateStatus" to update its status attribute and an attribute getter to retrieve info.

1.2.3 Procedures and Functions

User Class

Function	Description
Signup	This function aims to provide an interface for new user to create an account using their email, username and password. Once complete, redirect to the Login Page.
AddtoCart	Add product information to the User Database. This function allows the user to add their wanted product to the shopping cart in the User Database.
EditCart	Edit the product already in the User Database (delete amount or add amount). This function allows the user to add their shopping cart in the User Database.
Payment	Users buy the items in the shopping cart and get an order. This function will return a new order object to the Order Database. Once payment success, redirect to Order Page.
SearchProduct	Users can search for a product by inputting keyword, category, and price range. The system will then give back a list of products satisfying the inputted requirements.
SearchOrder	User can search for orders by inputting keyword, time limit. The system will then give back a list of orders satisfying the inputted requirements.
EditInfo	Users can edit their personal information like username, password, address, etc. after login.
Rate	Users can rate products after purchase.

Order Class

Function	Description
UpdateStatus	The Admin User can change the shipping status (stored as an integer) of orders accordingly to paid, shipping and delivered.
GetOrderInfo	Export the information of an order as a dictionary to users or the Admin User for viewing.

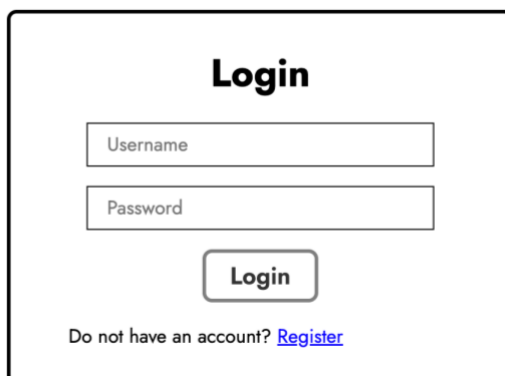
2 UI DESIGN

2.1 View-Authentication

2.1.1 Description of the View

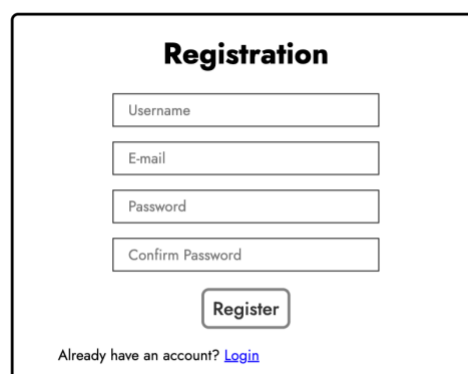
The PineApple website can only be loaded and shown after the user has logged in, so the first page users will see when they access PineApple is the Login Page as shown below. Users can input their usernames and corresponding passwords through two input boxes and then click on the “Login” button to get to PineApple’s Homepage. If the user is new to PineApple and doesn’t have an account, he can click on the blue “Register” link to get to the Registration Page, in which users can set their usernames and passwords. Specifically, to complete the registration, the user will also have to provide an e-mail address and double-confirm the set password. After finishing these, the user can click on the “Register” button and get back to the Login Page for login. Moreover, if a user already has an account but accidentally gets to the Registration Page, the blue “Login” link can always get him back to the Login Page.

2.1.2 Screen Images



The Login page features a title "Login" at the top. Below it are two input fields: "Username" and "Password". A "Login" button is positioned below the password field. At the bottom, there is a link: "Do not have an account? [Register](#)".

Figure 1: Login Page



The Registration page features a title "Registration" at the top. Below it are four input fields: "Username", "E-mail", "Password", and "Confirm Password". A "Register" button is positioned below the "Confirm Password" field. At the bottom, there is a link: "Already have an account? [Login](#)".

Figure 2: Registration Page

2.2 View-Homepage

2.2.1 Description of the View

At the top of the Homepage is a navigation bar which will also appear at the top of most PineApple's UI pages. It is composed of a PineApple logo, a search box, a shopping cart icon, and an account icon. Clicking on the PineApple logo will lead the user to the Homepage. Clicking on the search button after entering something in the search box will jump to the Search Page. The shopping cart icon will lead to the user's shopping cart. When the user places the mouse on the account icon, the icon will rotate 90 degrees and give a drop-down list containing two buttons: "Information", which is linked to the Personal Info Page, and "Log out", which will log out of the current account and return to the Login Page. In the main body of the Homepage, there is a window in which the user can slide left or right to view different products. Below are some recommendations for trending items. At the bottom is a footer with our logo and some contact information.

2.2.2 Screen Images

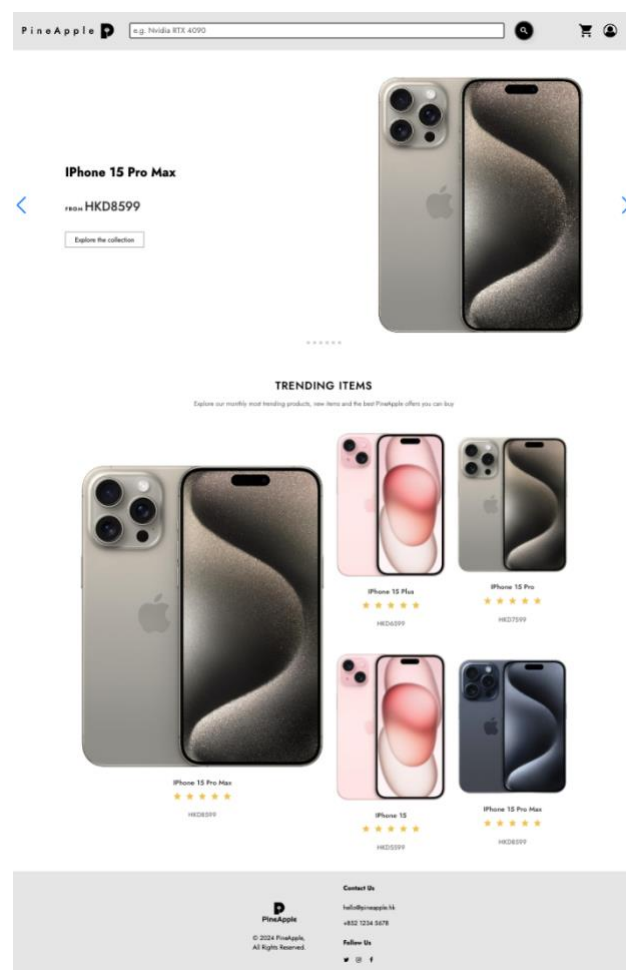


Figure 3: Homepage

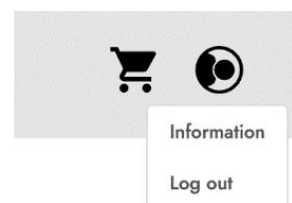


Figure 4: Account icon

2.3 View-Personal Info Page

2.3.1 Description of the View

The personal info page (Figure 5) consists of a search box and a list of functions. The functions include “Login & Security,” “Your Address,” and “Your Orders.” Users can click to access the corresponding function. The search box can lead the user to the product detail page of the product they input after clicking the search button.

By clicking the ‘Login & Security’ function, we can access the account information management page (Figure 6), in which users can edit their information (Name, Email, and Password). By clicking the ‘Your Account’ user can go back to the Personal Info Page (Figure 5).

By clicking the “Your Address” function, users can get to My Addresses Page (Figure 7), in which user can edit their address information. Users can add their new address information by clicking the “Add New Address” button (Figure 7).

By clicking the “Your Orders” function, users can go to the Check Order Page (Figure 12).

2.3.2 Screen Images

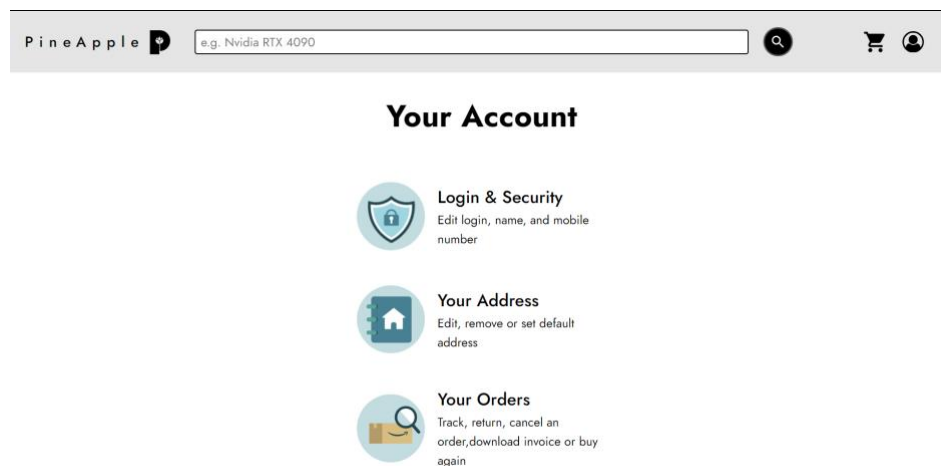


Figure 5: Personal Info Page

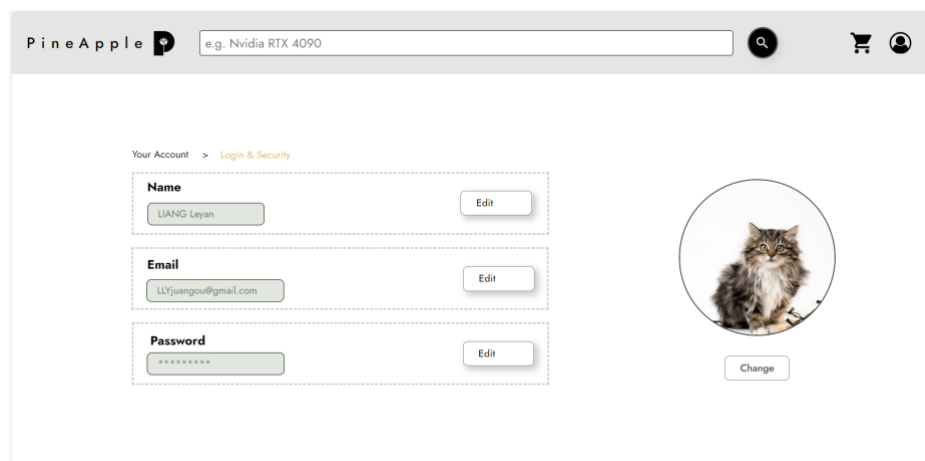


Figure 6: Login & Security Page

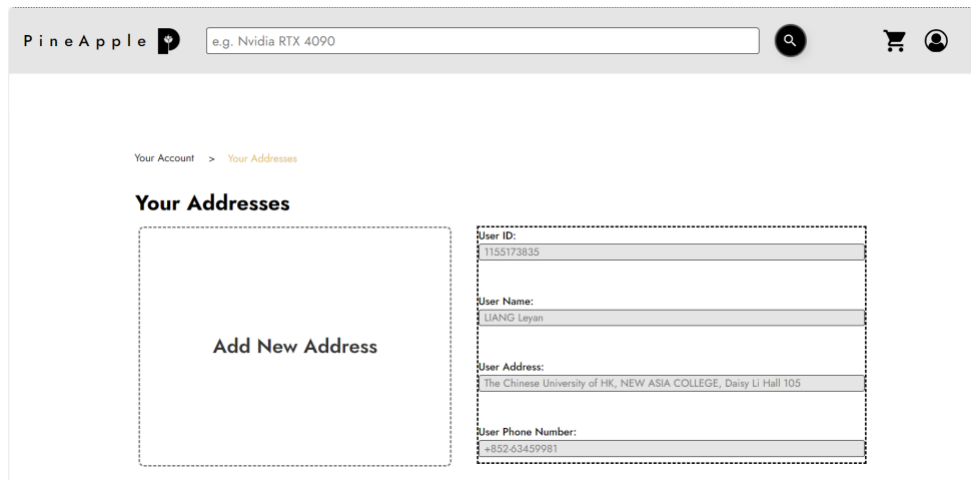


Figure 7: My Addresses Page

2.4 View-Search Page

2.4.1 Description of the View

When users enter the keyword to search for the desired products in the Homepage, they will redirect to the Search Page. In Search Page (Figure 8.1), if users want to change the search keyword, they can simply enter another keyword in the search bar. In order to filter the desired search results, users can use the select box to sort the results in different ways, such as price, sales volume or rating, etc. In addition, users can also limit the category of products in another select button. If users have limits on the price of products, they can enter a price range to limit the search system and press the “Go” button to display the results. After getting the search results, users can click on different products to get more detailed information.

If the number of products that meet the requirements exceeds the display range, users can click the page number button (Figure 8.2) to choose to view more products on different pages.

2.4.2 Screen Images

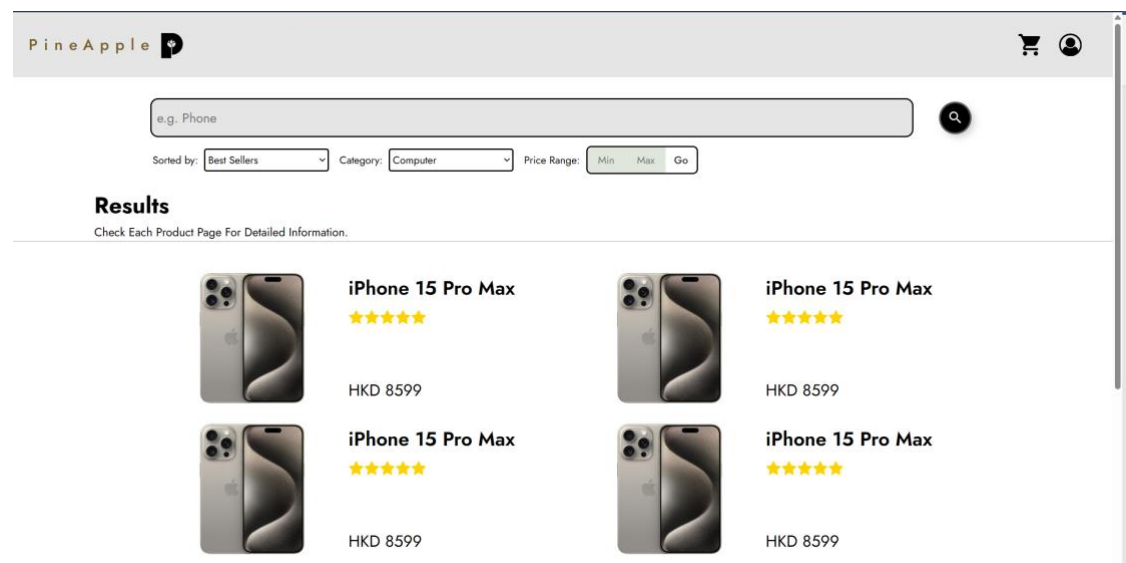


Figure 8.1: Search Page

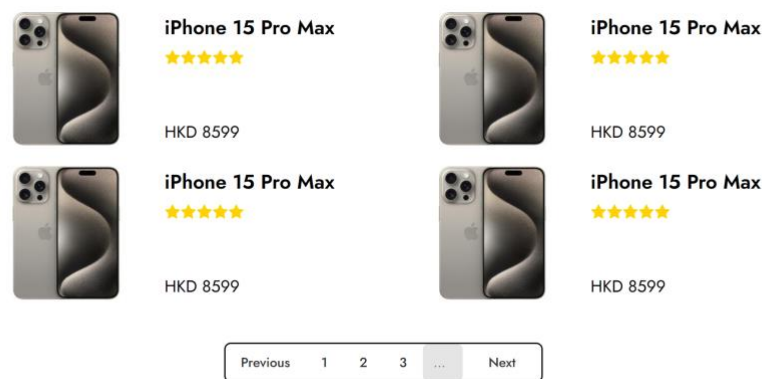


Figure 8.2: Search Page (scroll down)

2.5 View-Product Detail Page

2.5.1 Description of the View

The product detail page consists of a search box and a list of functions. The functions include selecting the type and the amount of the product. After selecting the type and amount the user wants then, the user can click the 'BUY NOW' button to get to the check order page or the 'ADD TO CART' button to get to the shopping cart page.

2.5.2 Screen Images

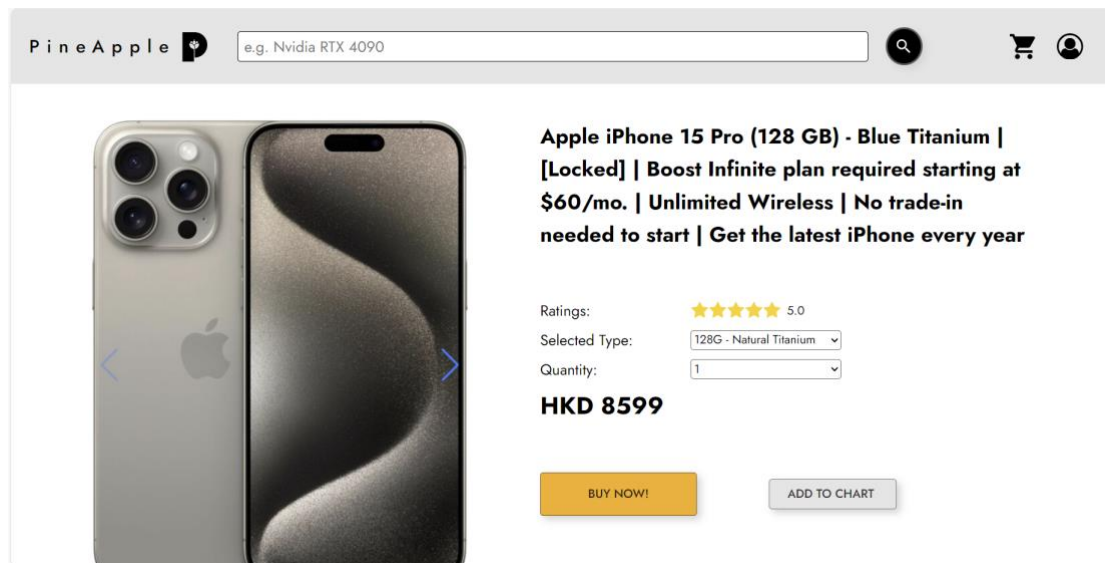


Figure 9: Product Detail Page

2.6 View-Shopping Cart Page

2.6.1 Description of the View

After the users click the shopping cart icon, they will redirect to the Shopping Cart Page. In the Shopping Cart Page (see Figure 10), users can manage the products added to the shopping cart. If users want to purchase duplicate products, they can change the quantity of items in the quantity bar. If users do not need some products, they can remove them from the shopping cart by clicking the “Delete” button on the right.

After users select the products to be paid for with the check button on the left, the users can see the current total number of items and the total price in the bottom right corner. After users has confirmed the quantity and price, they can simply click the "Proceed to Checkout" button to go to the Payment Page.

2.6.2 Screen Images

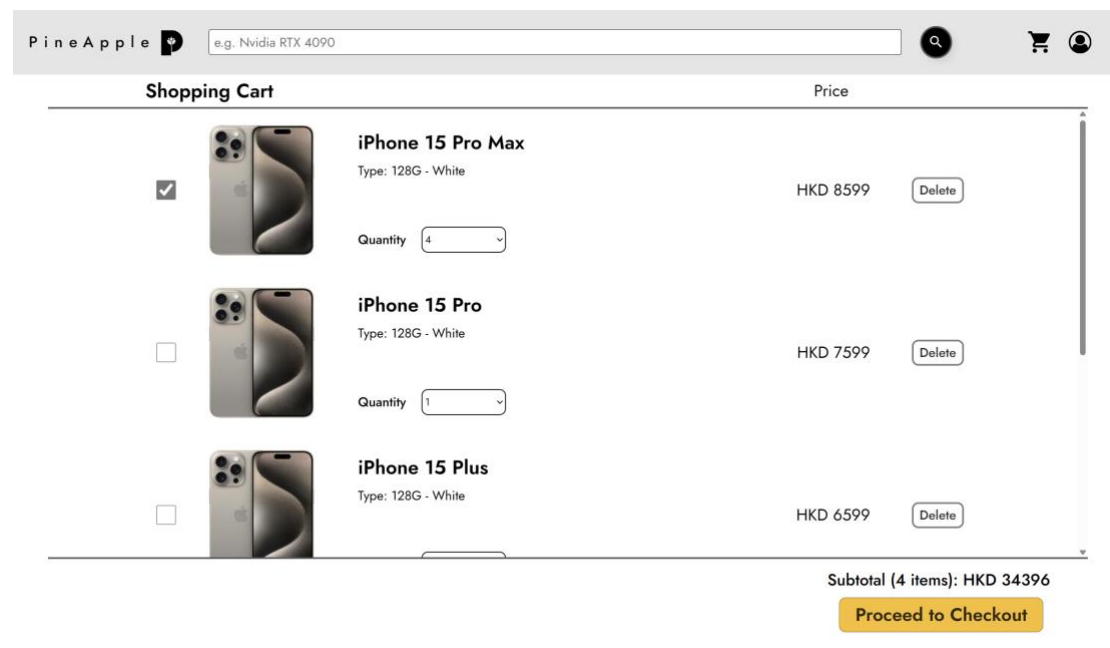


Figure 10: Shopping Cart Page


2.7 Payment Page

2.7.1 Description of the View

The header of the Payment Page (Fig. 11) contains a PineApple logo, a check out heading and a label showing the purchase quantity. On the left side of the page, there are three sections that ask the user to confirm the shipping address, payment method and purchased product. Users can click the “change” button to change the shipping address and payment method. At the bottom left and top right, there are payment buttons and privacy notice. When the user clicks the button, the order will be paid.

2.7.2 Screen Images


The screenshot displays the PineApple Checkout page for a single item. The page is divided into three main sections: 1. Shipping address, 2. Payment method, and 3. Review items and shipping. The shipping address is Changwen LUAN, CUHK, UC College, Chan Chun Ha Hostel 605, Shatin, New Territories, HK. The payment method is Master Card, with the billing address being Changwen LUAN, TaijwanLe. The item being reviewed is an Unlocked Android PineApple Phone I15 PROMAX 5G Cell Phone with 12GB+512GB Deca Core Dynamic Island and Titanium Design Smart Phones 6.8" HD Screen 48MP+108MP Camera 6800 mAh Long Battery Dual SIM Phone (Blue), priced at HKD 169.99. The delivery date is 20/03/2024. A sidebar on the right contains a 'Place your order in HKD' button, a note about redirection to Master Card, the payment total of HKD 169.99, and a link to the privacy notice and conditions of use. The bottom section of the main area also includes a 'Place your order in HKD' button, the payment total, and a note about redirection to Master Card, along with a link to the privacy notice and conditions of use.

PineApple  Checkout (1 Item)

1 Shipping address Changwen LUAN
CUHK, UC College, Chan Chun Ha Hostel 605
Shatin, New Territories, HK [change](#)
[Add delivery instructions](#)

2 Payment method Master Card
Billing address: Changwen LUAN, TaijwanLe [change](#)

3 Review items and shipping
Delivery: 20/03/2024

 Unlocked Android PineApple Phone I15 PROMAX 5G Cell Phone with 12GB+512GB Deca Core Dynamic Island and Titanium Design Smart Phones 6.8" HD Screen 48MP+108MP Camera 6800 mAh Long Battery Dual SIM Phone (Blue)
HKD 169.99
Qty: 1

[Place your order in HKD](#) **Payment Total: HKD 169.99**

You'll be securely redirected to Master Card to complete this transaction

By placing your order you agree to PineApple's [privacy notice](#) and [conditions of use](#)

Figure 11: Payment Page

2.8 Check-Order Page

2.8.1 Description of the View

At the top of the Check-Order Page (Fig. 12), there is a search bar for searching orders and a navigation bar to redirect to orders with different statuses. Below the redirecting bar is a (paginated) huge table of orders. By clicking the selection box, users can query orders for a selected time period. Each order item has several fields, including product icon, product information, and four redirecting buttons. When the user clicks the “view your item” button, the website will redirect to the Product Info Page. The remaining buttons also allow users to implement corresponding functions.

2.8.2 Screen Images

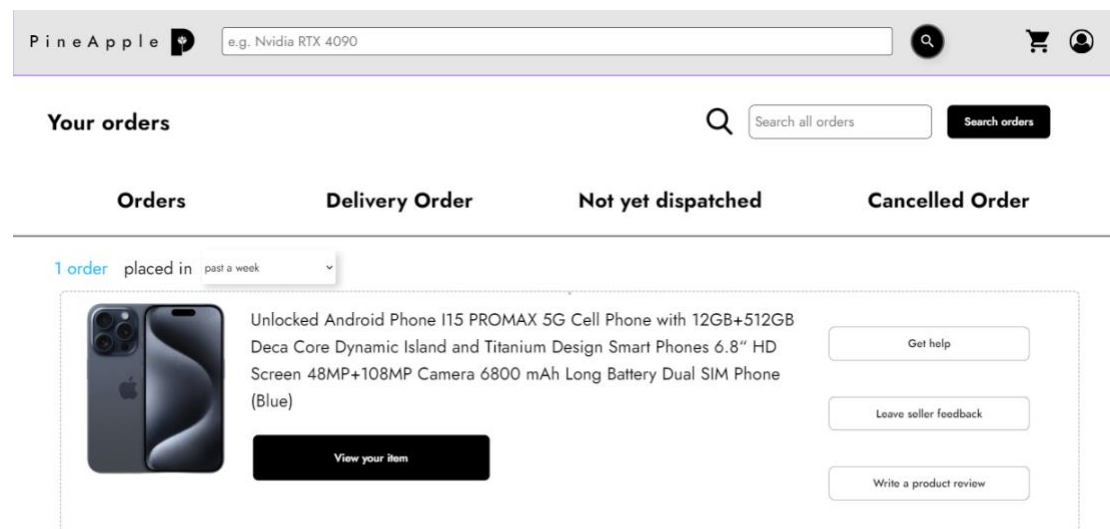


Figure 12: Check-Order Page

2.9 Admin Page

2.9.1 Description of the View

In the main page of Admin Page, the admin can choose to list user information or product information. Fig.13 shows the appearance of user info list, with product info page looking similar. There is a search bar for searching with user ID, username, etc., below which is a list of user info items. In each item, the ID, photo and username are shown, and the admin can choose to delete the item or edit its info. After clicking “Edit” button, the admin can edit each information belonging to the user/product instance. Fig.14 shows the appearance of the User Editing Page, and the Product Editing Page also looks similar. In this page, all the info related to the user/product instance is shown in a json file, which the admin can directly edit. After editing, the admin can click “Validate and Save” to validate whether the modification is grammatically correct and save the changes. Then clicking “Back” could return.

2.9.2 Screen Images

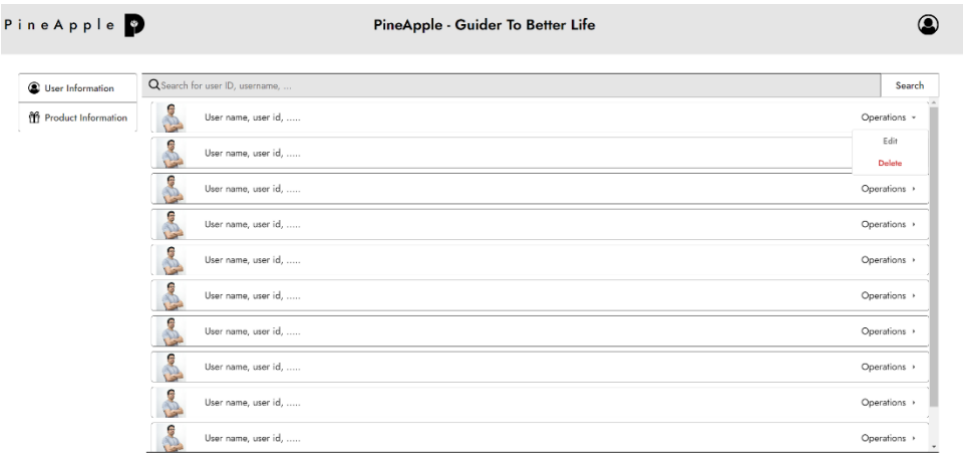


Figure 13: User Info List Page

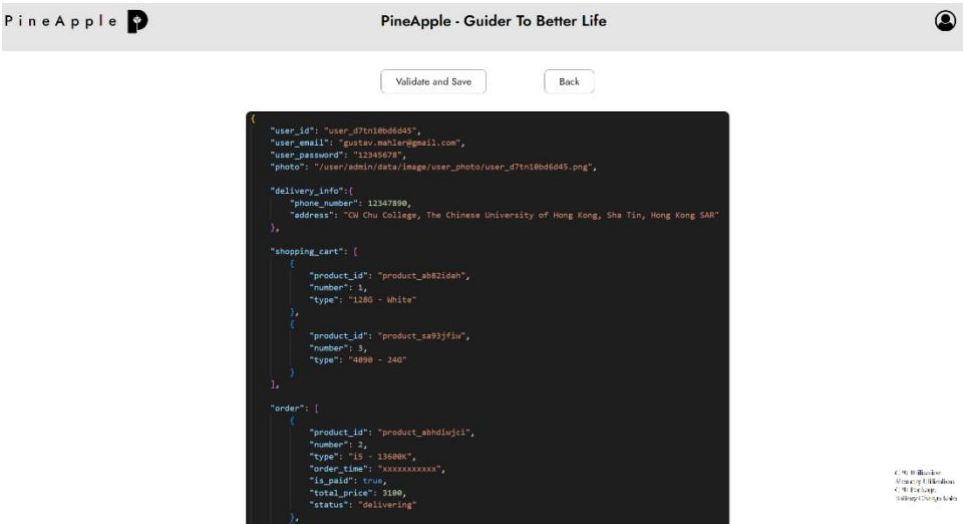


Figure 14: User Info Editing Page