

User Manual – E-Commerce System

1. Main Menu

Functions:

(1) Login – Log into the system using a username and password

- We called method `mainMenu` of `IOInterface`

- We receive user's input by calling method `getUserInput` of `IOInterface` and assign it to an array of `String`.

- If user enter "1", we create a new `User` and assign it with the method `login` in `UserOperation`. We put those steps in a while loop so that if user enter incorrectly, he/she will have to enter it again.

(2) Register: Allows a new user to create a **Customer** account.

- If user enter "2", we called the method `register` in `CustomerOperation` class. If it returns true, which means user successfully registered his/her account, otherwise he/she will be notified that the account is failed to register and he/she will be moved back to main menu

- ☐ **Username** must be unique and follow the validation

- ☐ **Password** must meet criteria (e.g., length, complexity)

- ☐ **Email** must be valid format (e.g., example@mail.com)

- ☐ **Mobile** must be valid digits only (starts with 03,04 and 10-digits long)

(3) Quit: If user enter "3", the JVM will be closed.

Role-based redirection:

- **Admin** → goes to Admin Interface
- **Customer** → goes to Customer Interface

2. Admin Menu (Admin Only)

You can select an option by entering a number from 1 to 8.

Functions:

(1) Display product list

We pass a `List<Product>` (including all of products in a page) to `showList` in `IOInterface`. After showing the page, we receive input of user, if user enter 'n', we show next page; if user enters 'p', we show previous page; if user enter 'b', we bring user back to the admin menu. User can enter product ID or product keyword to search for products.

Features:

- 'n': Next page
- 'p': Previous page
- 'b': Back to menu
- ...: View details of products which have the same ID or contains the keyword

(2) Add users (customers)

We ask user to enter the name,password, email and mobile. Next, we pass those inputs to the method register in CustomerOperation. If that method returns true, we notify that the account has been successfully added and ask the admin if he/she wants to add more user, if not, admin can enter 'b' to back to the adminMenu,otherwise, enter 'n' to add next.

Validation Failures:

- Empty or malformed email/phone/name/pass.
- Password,name,email,phone not meeting criteria.
- Duplicate username

(3) Display customer list

We pass a List<User> (including all of customers in a page) to showList in IOInterface. After showing the page, we receive input of admin, if admin enter 'n', we show next page; if admin enters 'p', we show previous page; if user enter 'b', we bring admin back to the admin menu. Admin can enter customer ID to view the exact customer with that ID.

Features:

- 'n': Next page
- 'p': Previous page
- 'b': Back to menu
- u_###: View details of specific customer by ID

Validation:

- If ID not found:

(4) Display order list

We pass a List<Order> (including all of orders in a page) to showList in IOInterface. After showing the page, we receive input of admin, if admin enter 'n', we show next page; if admin enters 'p', we show previous page; if user enter 'b', we bring admin back to the admin menu. Admin can enter customer ID to view orders of that customer.

Features:

- 'n': Next page
- 'p': Previous page
- 'b': Back to menu

- u_###: View orders of specific customer by ID

(5) Generate test data (10 users, 50–200 orders each)

we use the method generateTestData in orderOperation class to create 10 random users with 50-200 random orders.

Interaction:

- 'n': Generate more
- 'b': Go back to main menu

(6) Generate all statistical figures: generate 4 charts and save them to data/figure

We use 4 method generate in productionOperation (. generateCategoryFigure, generateDiscountFigure, generateLikesCountFigure, generateDiscountLikesCountFigure

(7) Delete all data

7. Remove Data

Command: Enter 7

Options:

1. Remove one customer
2. Remove all customers
3. Remove one product
4. Remove all products
5. Remove one order
6. Remove all orders
7. Go back

Validation:

- If the ID does not exist:

(8) Logout: Go back to mainMenu

Error Handling and Special Cases

- **Invalid Menu Input:**
- **Empty Lists:**

3. Customer Menu (After Login)

Functions:

(1) View account/profile information: Displays detailed customer information

(2) Update profile (email, mobile, etc.)

Steps:

- Enter the number for the field you want to update.
- You'll be prompted to enter the new value

After Each Update:

You will be asked:

Press 'n' for a next update, 'b' to go back

(3) View products or search by keyword : Displays all available products with keyword filtering.(user can enter product's id or keyword to search for products)

Valid Input:

- 3 keyword → shows all products which contain the keyword
- 3 → show all products

(4) View order history

Navigation:

- 'n': Next page
- 'p': Previous page
- 'b': Back to main menu

If no orders:

====The list is empty!====

(5) Generate all consumption figures

Generates and displays 3 charts and save them to data/figure

- ☐ Total consumption of all customers
- ☐ Your personal consumption
- ☐ Top 10 bestselling products

(6) Logout: returns to main menu