

# USER MANUAL

by Alexandra Goh (29796431)

## Main Menu

You have three options: enter either “1”, “2”, or “3” to perform the respective functionalities.

### 1. Login (enter “1”):

- You can log in as either an existing customer (that was randomly generated) or an admin.
- Customer (to access Customer Menu):
  - **Username:** go to users.txt and select any ‘user\_name’ of your choice.
  - **Password:** password123
- Admin (to access Admin Menu):
  - **Username:** admin\_one
  - **Password:** password1
- If username or password is incorrectly entered, you will need to enter “1” to login again as it will return the error message “Invalid username or password. Try again.”.

### 2. Register as customer (enter “2”):

- **Enter username:** must contain only letters (upper- or lowercase) and underscores - no numbers. It must be at least 5 characters long. You cannot enter a username that already exists.
- **Enter password:** must contain at least one letter (upper- or lowercase) and one number – no symbols. It must be at least 5 characters long (can be longer).
- **Enter email:** must be in the format [username@domain.com](#) (domains accepted are .com, .net, .org, .edu, .gov and .int only).
- **Enter mobile:** must be exactly 10 digits long, and must start with either ‘04’ or ‘03’. Can only consist of numbers.
- If successfully registered, you should see “Registration successful!” and be able to successfully log in.
- If registration failed, you should see a relevant error message on which attribute was submitted in the incorrect format. Example: “Mobile number should be exactly 10 digits long.”

### 3. Quit (enter “3”):

- Program will terminate with message “Exiting program...”

## Customer Menu

### 1. Show profile (enter “1”):

- This will print out your customer details in one line.

### 2. Update profile (enter “2”): attributes that you can update are as listed below

- **Username:** enter “1” and follow the username rules as outlined in Main Menu: bulletpoint 2

- **Password:** enter “2” and follow the password rules as outlined in Main Menu: bulletpoint 2
- **Email:** enter “3” and follow the e-mail rules as outlined in Main Menu: bulletpoint 2
- **Mobile:** enter “4” and follow the mobile rules as outlined in Main Menu: bulletpoint 2

### 3. Show products (enter “3” or “3 keyword”):

- If you enter “3 keyword”: this will print out the list of products containing that keyword if available.
- If you enter just “3”:
  - **Enter keyword:** enter the keyword of products that you wish to find
- If available in the Products file, it will print out the list of products containing that keyword.
- If not available, it will return the error message “No products found with keyword = 'xxx'.”

### 4. Show history orders (enter “4”):

- **Enter page number for order list:** enter the page number of the order list you wish to see.
  - One page will contain a maximum of 10 orders.
- This will return a list of orders only for the customer that you are logged in as, along with the page number you entered and total pages.
  - If you want to navigate to the previous page, enter “p”.
  - If you want to navigate to the next page, enter “n”.
  - If you want to quit and go back to the Customer Menu, enter “q”.
- If you enter a page number larger than the number of total pages, this will return an error message “Invalid page number: please enter a page number from 1 to {total pages}.”
- If you enter “0” as page number when there are orders, this will return an error message “Invalid page number: please enter a page number from 1 to {total pages}.”
- If the customer you are logged in as do not have any orders placed (e.g., newly registered customer), total pages will be 0.
  - If you try to show history orders, it will display an error message “Invalid page number: you have no orders placed yet”.

### 5. Generate all consumption figures (enter “5”):

- This will generate a monthly consumption figure for the respective customer you are logged in as (i.e. sum of order price for 12 different months) and display the message “Consumption figure generated for {user\_id}! Check data/figure folder.”
- Proceed to check “generate\_single\_customer\_consumption\_figure.png” in data → figure folder.
- If you are logged in as a newly registered customer, you won’t have any orders placed.
  - If you attempt to generate this figure, it will return the error message “Customer {user\_id} has not placed any orders yet.”

### 6. Get product using product id (enter “6”):

- **Enter product ID:** enter the product ID of the respective product you wish to find.

- If product ID is valid, this will display details of the product you wanted to find.
- If product ID is invalid, this will display the error message “No products found with product ID = 'xxx'.”

**7. Logout (enter “7”):**

- This will take you back to the Main Menu.

## **Admin Menu**

**1. Show products (enter “1”):** you can choose to show products either by list or by keyword.

- **Show products by list (enter “1”):** enter page number for product list you wish to see
  - If you enter “0” or any number above 7500, error message “Invalid page number: please enter a page number from 1 to 7500” will be displayed.
  - Otherwise, it will display a list of products as per the page number you entered. Maximum number of products that can be shown per page is 10 items.
    - If you want to navigate to the previous page, enter “p”.
    - If you want to navigate to the next page, enter “n”.
    - If you want to quit and go back to the Admin Menu, enter “q”.
- **Show product by keyword (enter “2”):** enter keyword of product(s) you wish to see
  - If available in the Products file, it will print out the list of products containing that keyword.
  - If not available, it will return the error message “No products found with keyword = 'xxx'.”

**2. Add customers (enter “2”):** you can add a new customer.

- Enter username: follow the username rules as outlined in Main Menu: bulletpoint 2
- Enter password: follow the password rules as outlined in Main Menu: bulletpoint 2
- Enter email: follow the e-mail rules as outlined in Main Menu: bulletpoint 2
- Enter mobile: follow the mobile rules as outlined in Main Menu: bulletpoint 2
- New customer should be successfully added to users.txt file if all attributes are entered correctly with message “New customer {username} added!”.
  - If you miss out entering any of the above, the program will prompt you for that respective attribute until you enter something.
  - If any of your inputs for the above are incorrect, you should see a relevant error message on which attribute was submitted in the incorrect format. Example: “Password needs to be at least 5 characters”.

**3. Show customers (enter “3”):**

- **Enter page number for customer list:** this will display a list of customers for the relevant page you entered.
  - If you want to navigate to the previous page, enter “p”.
  - If you want to navigate to the next page, enter “n”.
  - If you want to quit and go back to the Admin Menu, enter “q”.
  - Maximum number of customers displayed per page is 10.

- If you enter "0" or a page number greater than the total number of pages available, error message "Invalid page number: please enter a page number from 1 to {total pages}" will be displayed.

**4. Show orders ("enter 4"):**

- **Enter page number for order list:** this will display a list of orders for the relevant page you entered.
  - If you want to navigate to the previous page, enter "p".
  - If you want to navigate to the next page, enter "n".
  - If you want to quit and go back to the Admin Menu, enter "q".
  - Maximum number of orders displayed per page is 10.
  - If you enter "0" or a page number greater than the total number of pages available, error message "Invalid page number: please enter a page number from 1 to {total pages}" will be displayed.

**5. Generate test data ("enter 5"):** this will randomly generate 10 new customers (stored in users.txt) and also randomly generate 50-200 orders for each new customer (stored in orders.txt). Products data remains the same.

**6. Generate statistical figures ("enter 6"):** this will generate the following figures below and store them in data → figure folder.

- Category figure (generate\_category\_figure.png): bar chart showing total number of products for each category.
- Discount figure (generate\_discount\_figure.png): pie chart showing proportion of products by discount range
- Likes Count figure (generate\_likes\_count\_figure.png): bar chart showing total likes count for each category.
- Discount vs. Likes Count figure (generate\_discount\_likes\_count\_figure.png): scatterplot showing relationship between likes count and discount for all products.
- All Customers' Consumption figure (generate\_all\_customers\_consumption\_figure.png): line graph showing consumption of 12 different months for all customers. This graph may take awhile to generate, so kindly be patient.
- All Top 10 Best Sellers figure (generate\_all\_top\_10\_best\_sellers\_figure.png): bar chart showing top 10 best-selling products based on orders. This graph may take awhile to generate, so kindly be patient.

**7. Delete all data ("enter 7"):** all data from users.txt (except admin details), products.txt and orders.txt will be deleted. You are then given two options:

- **Regenerate all customers/orders/products data:** this will randomly generate test data for new customers and new orders to be added (same as bullet point 5 in admin menu) and also extract all products data to be included in products.txt again.
- **Log out and exit program completely:** this will cause admin account to log out and end the program.

**8. Delete customer using customer id (enter "8"):**

- **Enter customer ID to delete:** enter the customer ID of the customer you wish to delete. If successful, you should see the messages "Customer with customer ID = u\_xxx successfully deleted!" and "Orders containing customer ID = u\_xxx also successfully

deleted!" because all orders relating to that customer will be deleted from orders.txt file.

- If customer ID does not exist, error message "No customer existing with customer ID = u\_xxx" will be displayed.

**9. Delete order using order id (enter "9"):**

- **Enter order ID to delete:** enter the order ID of the order you wish to delete. If successful, you should see the message "Order with order ID = o\_xxx successfully deleted!".
- If order ID does not exist, error message "No order existing with order ID = o\_xxx" will be displayed.

**10. Delete product using product id (enter "10"):**

- **Enter product ID to delete:** enter the product ID of the product you wish to delete. If successful, you should see the messages "Product with product ID = xxx successfully deleted!" and "Orders containing product ID = 1671872 also successfully deleted!" because all orders relating to that product will be deleted from orders.txt file.
- If product ID does not exist, error message "No product existing with product ID = xxx" will be displayed.

**11. Logout (enter "11"):**

- This will take you back to the Main Menu.

\*\* If you enter anything other than the numbers shown in the respective menu, it will return the error message "Invalid option: enter using only the numbers in the menu" or "Invalid page number".

\*\* If you enter an empty input for any of the above methods, it will take you back to the respective menus you were previously in (Main Menu, Customer Menu, or Admin Menu) and display the error message "You did not enter anything".