Institute of Computer Engineering Technology

Coursework

Coursework	OOP DAY 04 - Swing GUI Coursework
Name	Burger Shop
Ass. Date	11th February 2024

Guidelines

- Refer to the Coursework Guidelines at the end to understand the specific guidelines to be followed when developing the project required.
- You should use your knowledge of JAVA Swing, and MVC design pattern to implement this coursework.
- Adhere to best practices for Java Swing development.
- Organize your code logically into packages and classes, keeping related functionality together.
- Follow consistent naming conventions for classes, variables, and methods to enhance code readability.
- All validations that have been mentioned in this document should be implemented in your program.

Case Study

The iHungry Burger shop, recently started in our city, it has a large number of transactions every day. The Burger Shop owner requires a system to manage orders. As a talented iCET student, they have given you the chance to make a system for them. (NOTE: Presented here is just a sample. You may create this GUI application in your own unique way.)

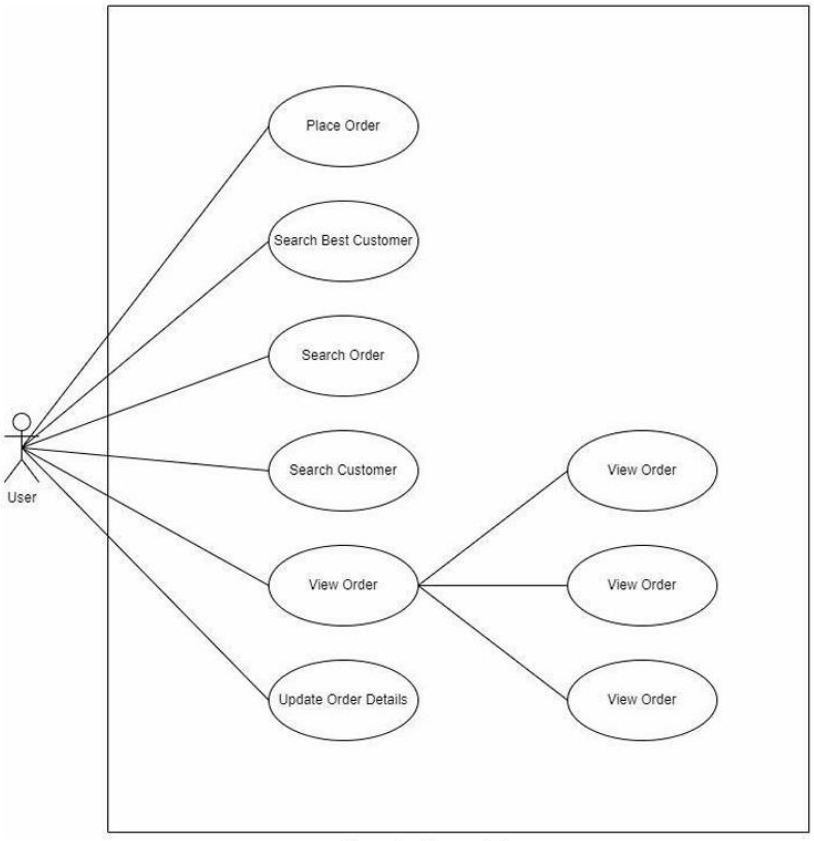

Figure 1 – Usecase Diagram

Requirements

You are supposed to create a Java application to manage a Burger Shop. In the application, you need to implement the following use cases.

When you run the application, you should come up with something similar to the following Graphical User Interface (GUI), where the user can select an option that they want to execute. This will be the Home Page of the application that you will be developing.

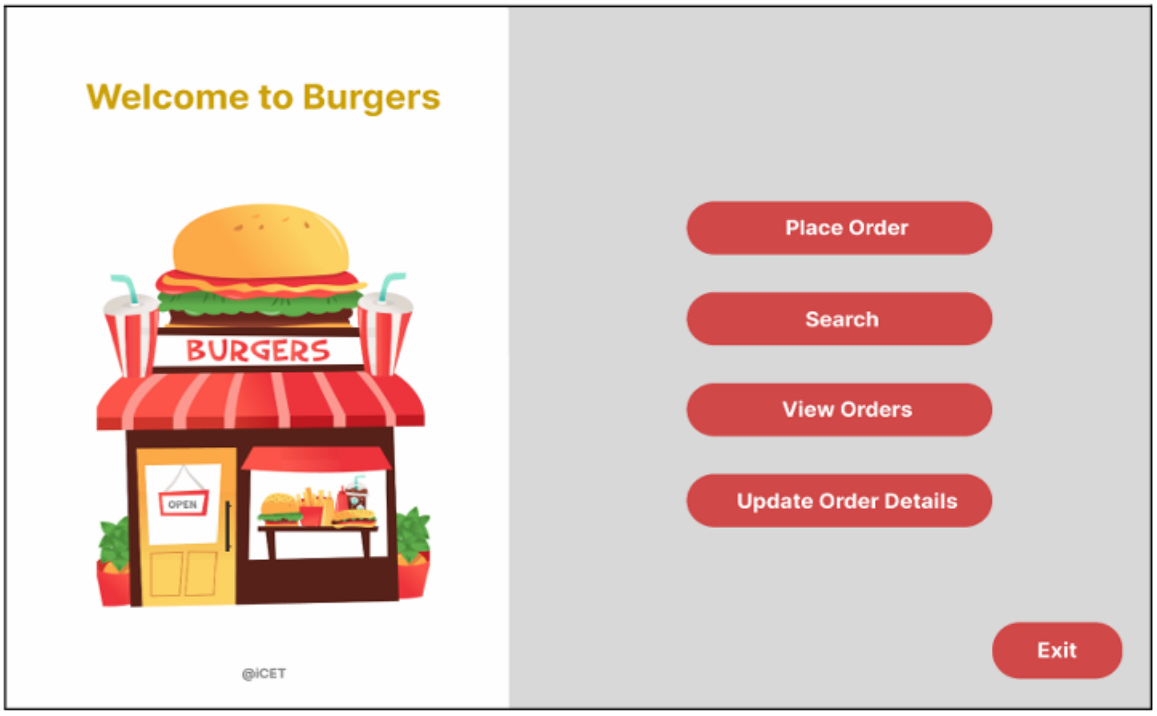

Figure 2 – Home Page of the iHungry Burger Shop Management System

01. Place Order

The system keeps five details related to the Place Order. They are Order ID, Customer ID,Customer Name, Burger Quantity, and Order Status.

- OrderID – TheOrderIDshould be generated by the system and the Order ID should start with 'O' followed by 3 numbers. When the user selects the Place Order option on the home page, the Place Order window will be loaded. The order ID should be generated by the system and the user should place the order under that ID. Order ID cannot be generated randomly and the next Order ID should be generated according to the last Order ID. Order ID can not be repeated.

- Customer ID– The system should generate the Customer ID, which must begin with the letter 'C' followed by three digits. The user must place their order under the specific Customer ID generated by the system. The system must ensure that Customer IDs are not randomly generated to avoid duplicates and that it will not repeat any Customer IDs.

- Burger Quantity- The user should input the Burger Quantity. Any value greater than 0 can be input as Burger Quantity.

- OrderStatus - There are 3 order statuses. They are PREPARING, DELIVERED, CANCELLED.After entering the details, the system should display the NET Total. The quantity entered by the user should be multiplied by the value of the Burger and the total value should be calculated and displayed by the system. (The value of the Burger is Rs.500/= and it is constant).

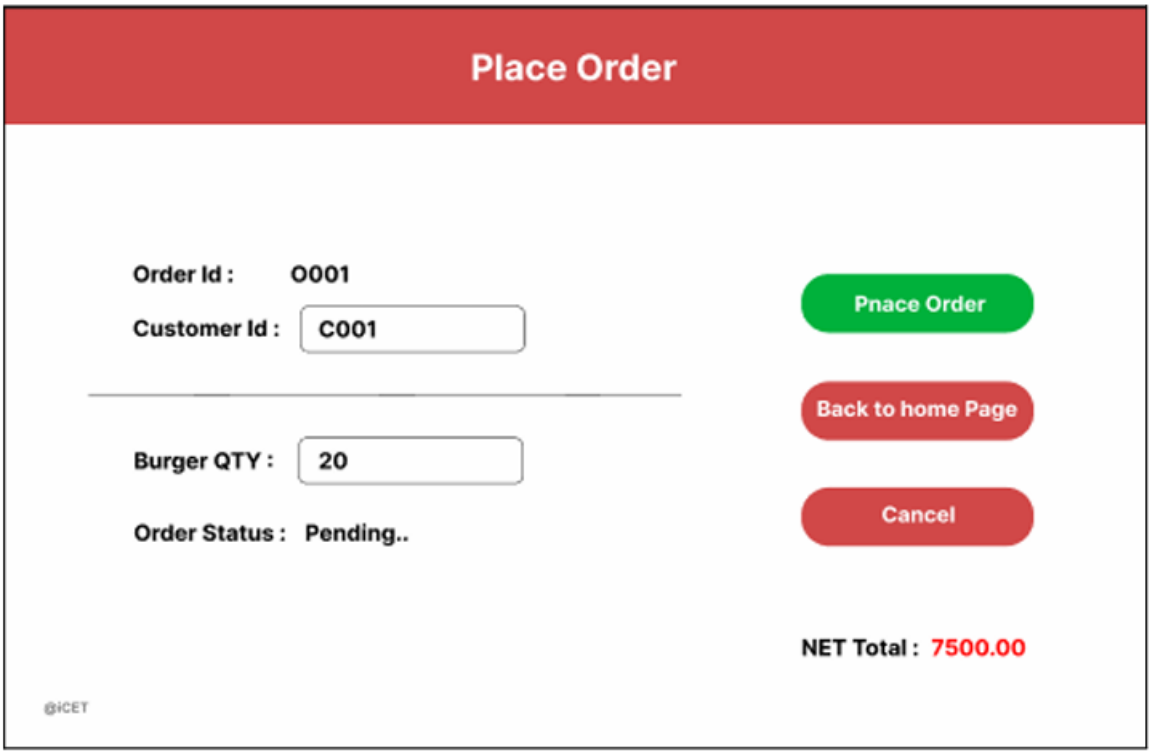

Figure 3 – Place Order

02. Search Best Customer

This displays all the Customers' total purchases presented in descending order. The best customer table is displayed in Figure 5. It should prompt whether the user wants to stay in here or go back to the main menu.

Figure 5 – Search Best Customer

03. Search Order

With this option, the user can view Order details. First, the user needs to enter a valid Order ID. After the user enters the Order ID, the system should search if this Order ID already exists.

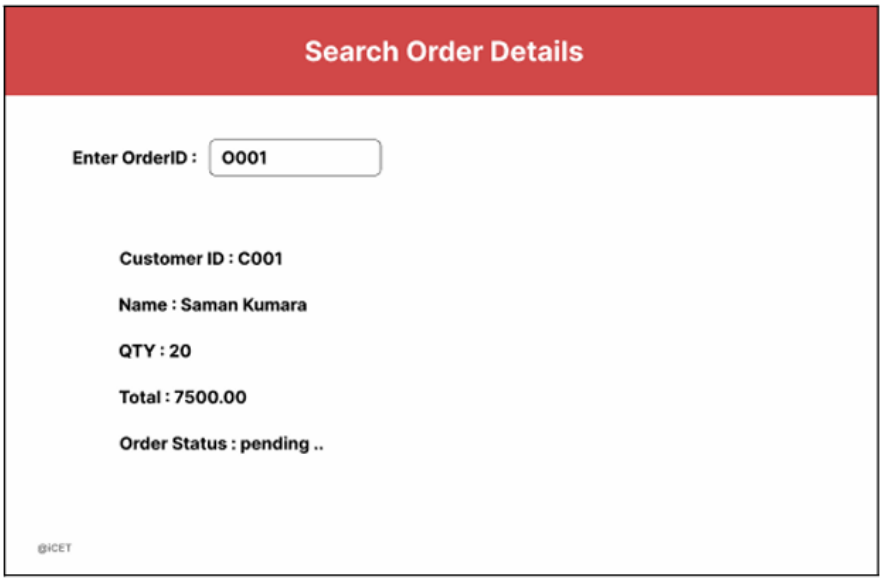

Figure 6 – Search Order

04. Search Customer

With this option, the user can view Customer details. First, they need to enter a valid Customer ID. Then a comprehensive detailed table should be displayed. It should contain all the details of the orders placed by that Customer. Once the information has been displayed, the user should be prompted whether to continue seeking Customer details or go back to the main menu.

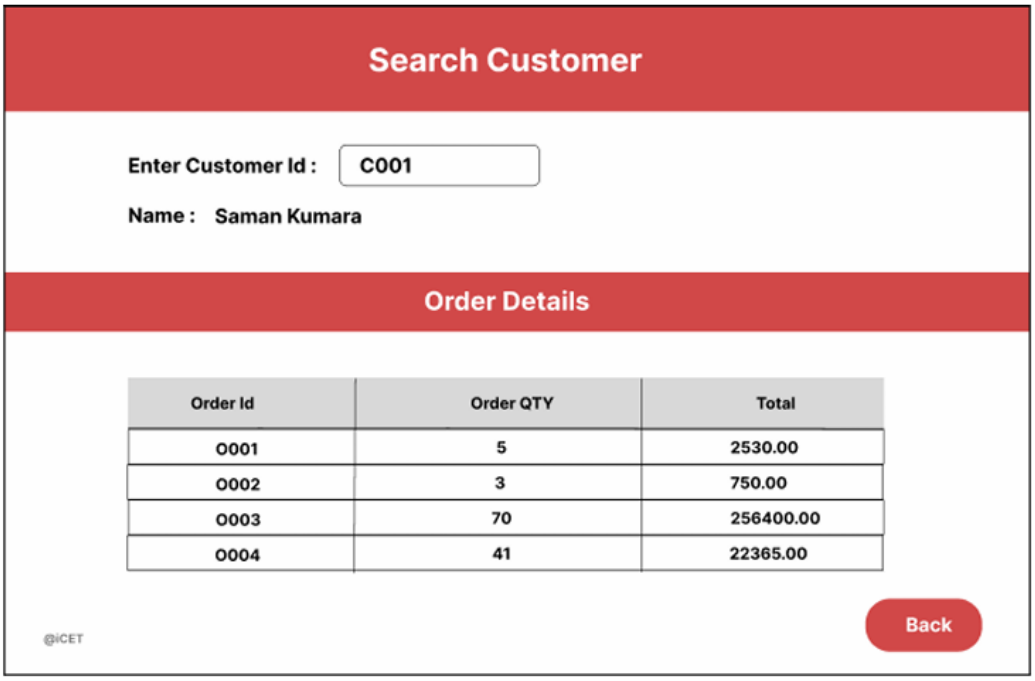

Figure 7 – Search Customer

05. View Orders

With this option, the user can view Order details under the 3 order categories. If the user enters 1, the user can view the Order details of Delivered Order(figure 11), If the user enters 2, the user can view the Order details of Preparing Order(figure 12) If the user enters 3, the user can view the Order details of the Canceled Order(figure 13). Just like above, in the end, it should prompt whether the user wants to stay here or go back to the main menu.

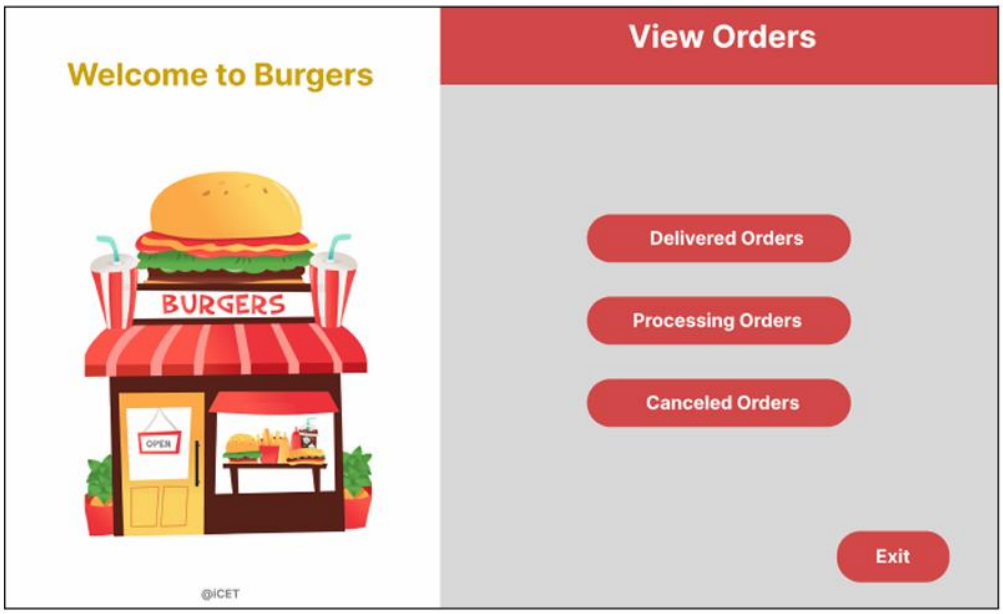

Figure 8 – Home Page of View Order List

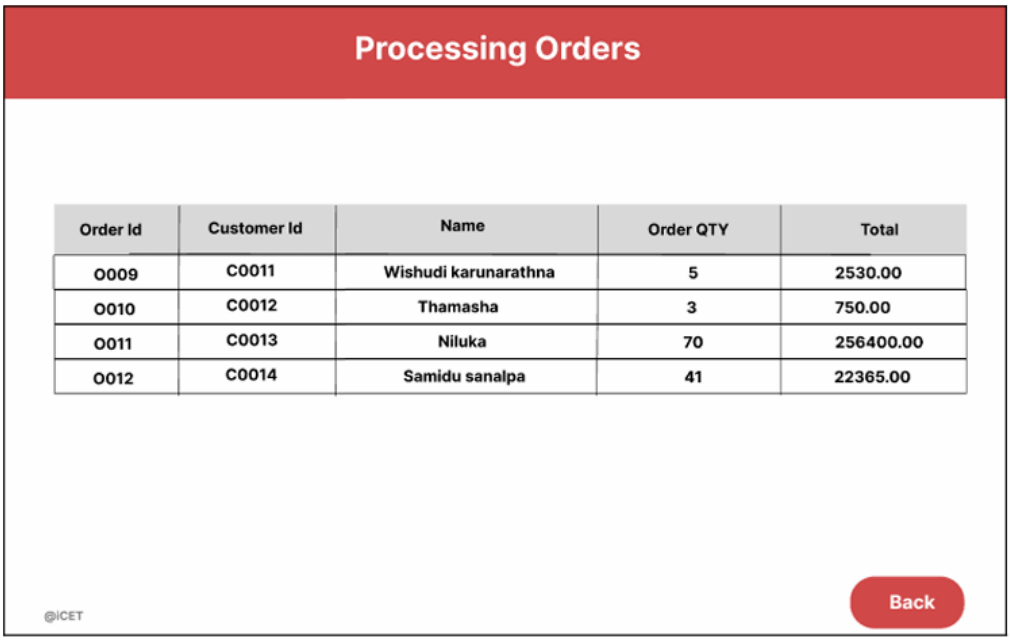

Figure 10 – Preparing Order list

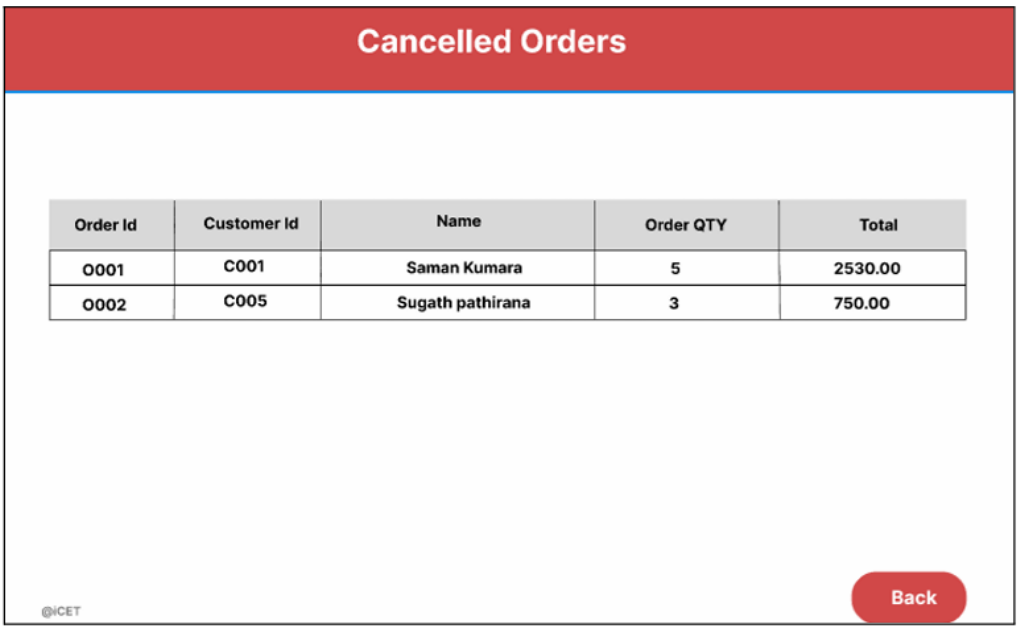

Figure 11 – display canceled Order list

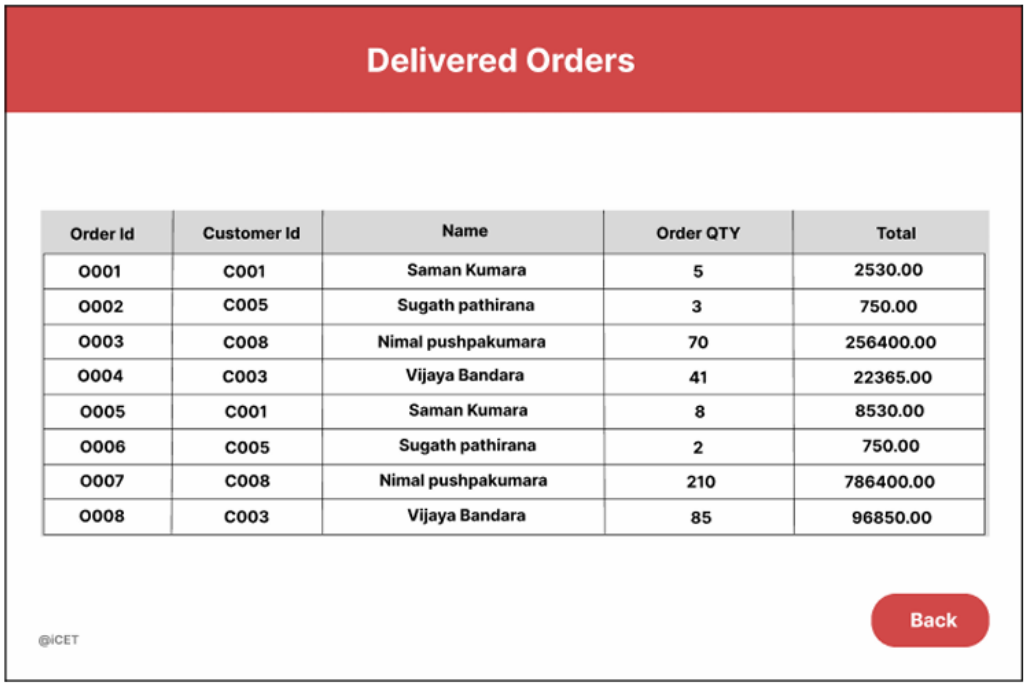

Figure 9 – Delivered Order list

06. Update Order Details

With this option, the user can update previously added Order Details. First, the user needs to find the Order that should be updated via Order ID (Invalid Order ID's should be handled like previously). Order Details can be updated only in preparing orders. If that order is already Delivered or Cancelled, it should display to the user as below. Figure 14–Update Order (Warning– already delivered order)

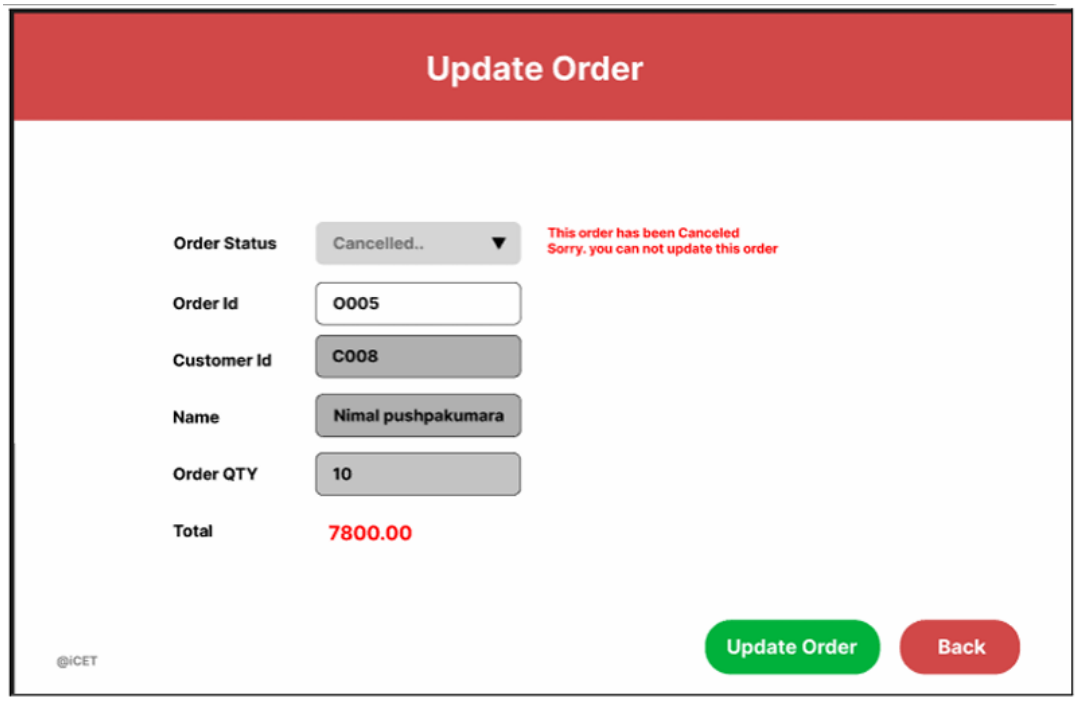

Figure 12 – Update Order (Warning – already cancel order)

Once the user has entered a valid Order ID,the current details should be displayed, which are the Customer ID, Customer name, Quantity, Order Value and Order status. After the Order Details are displayed, the system should confirm if the user wants to update Order Quantity or Order status.

If the user selects Quantity(1), prompt the window related to the Quantity and user can update Burger Quantity. Then it prompts for new Order quantity. The quantity should be validated here. Once the update has been done successfully, display the new Order Quantity and it should prompt whether to continue updating or go back to the main menu.

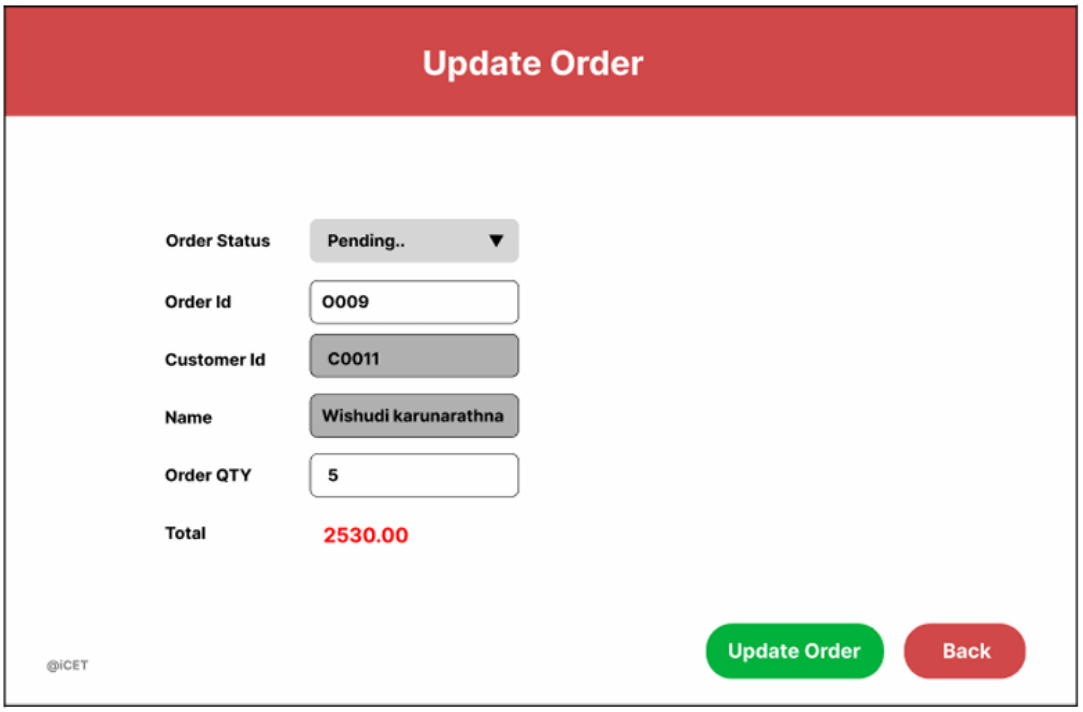

Figure 14 – Quantity Update (successful)

If the user selects Status(2), it prompts the window related to the Order Status and the user can update the Order Status. Then it prompts for the new Order Status. Once the update is done successfully, display the new Order Status and it should prompt whether to continue updating or go back to the main menu.

Time frame and Submission Process

Date	Required Options
On or before 11.00 PM Thursday 15th February, 2024	➢ Place Order ➢ Search Order ➢ Update Order ➢ Search Customer
On or before 11.00 PM Sunday 18th February 2024	➢ Search Best Customer ➢ View Order

- Please submit your completed Java Swing Coursework to the iCET LMS platform before this deadline.
- When submitting your completed Java Swing Coursework, kindly upload the Java file to the LMS WITHOUT making any changes in the file name.