

# L&R<sup>2</sup> Bakery Inventory System

## Introduction

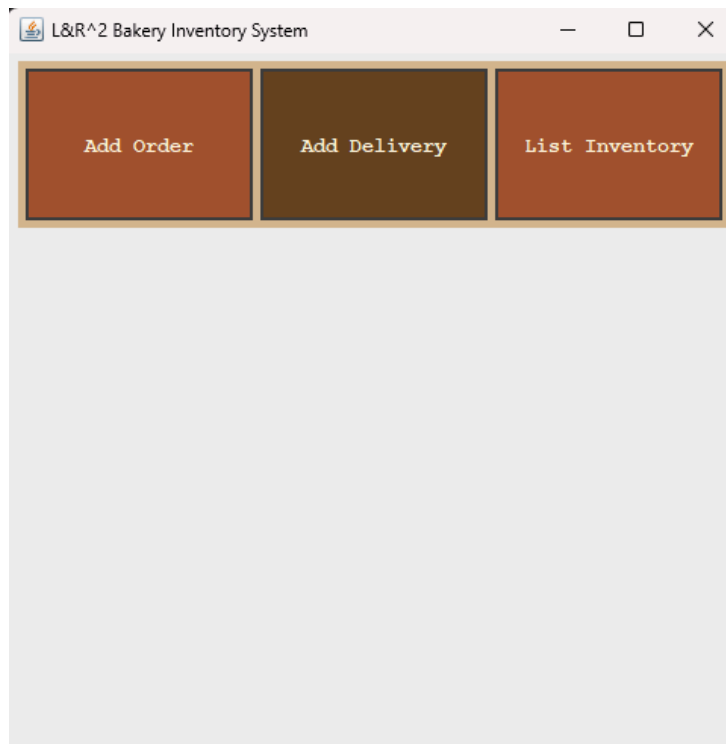
Welcome to the L&R<sup>2</sup> Bakery Inventory System!

This system helps manage the inventory of various bakery products, including adding new orders, deliveries and managing the inventory through a simple graphical user interface (GUI). This document will guide you through the different sections and functionalities of the system.

## System Overview

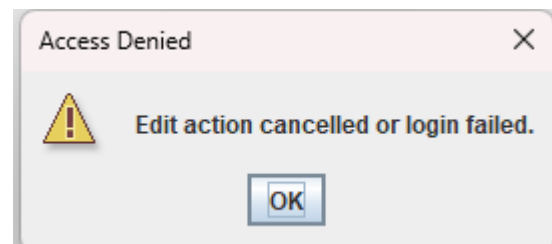
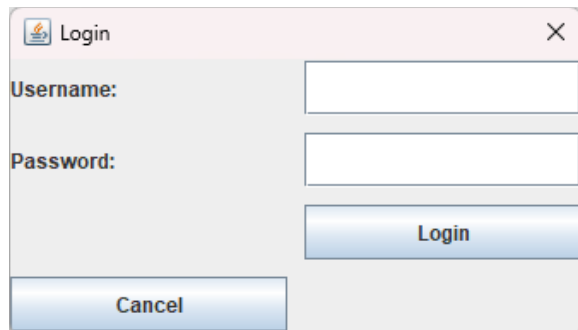
The system allows users to:

1. **View Inventory:** The inventory of bakery items can be accessed and updated.
2. **Add Orders:** Orders can be placed and processed.
3. **Add Deliveries:** Deliveries to restock inventory can be entered.
4. **Save Data:** Changes made to the inventory and orders are saved to files for persistence.  
(Data is saved Automatically whenever changes are made)



## Security Features

- Login Feature for Editing Items
  - A login dialog was implemented using `JDialog` to ensure only authorized users can edit inventory items.
  - The interface includes:
    - Username and password fields.
    - Login and cancel buttons.
    - Message label for login feedback.
  - Credentials are stored in a `.dat` file (`login.dat`) for basic obfuscation and are read during authentication.
  - If the file does not exist, default credentials are created:
    - **Username:** CookieMonsta
    - **Password:** ILuvCookies
- Edit Button Functionality
  - Before the edit popup appears, the system:
    - Prompts the user with the login dialog.
    - Grants access only if credentials are valid.
    - Shows an error message if login fails or is cancelled.



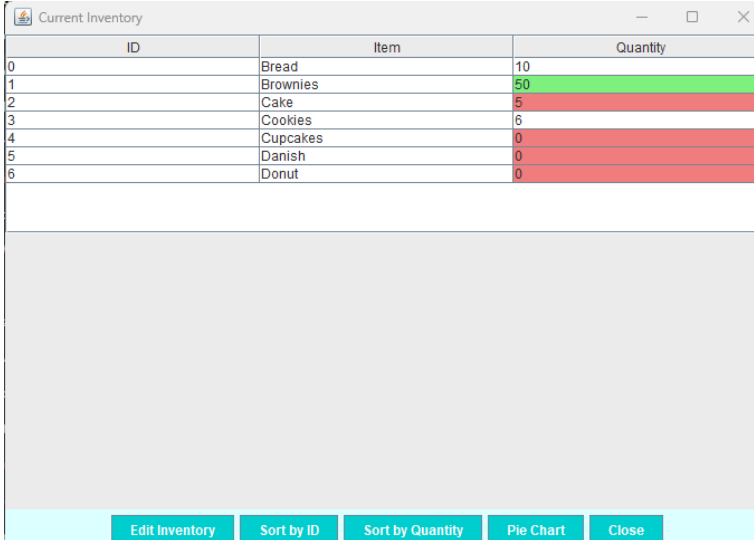
## Key Features

### 1. Inventory Management

- View and Edit Inventory: The system loads inventory items from a file (inventory.txt). The inventory includes various baked items such as **Bread**, **Brownies**, **Cake**, **Cookies**, **Cupcakes**, **Danish**, and **Donut**. The inventory is updated whenever a delivery is made or an item is ordered.



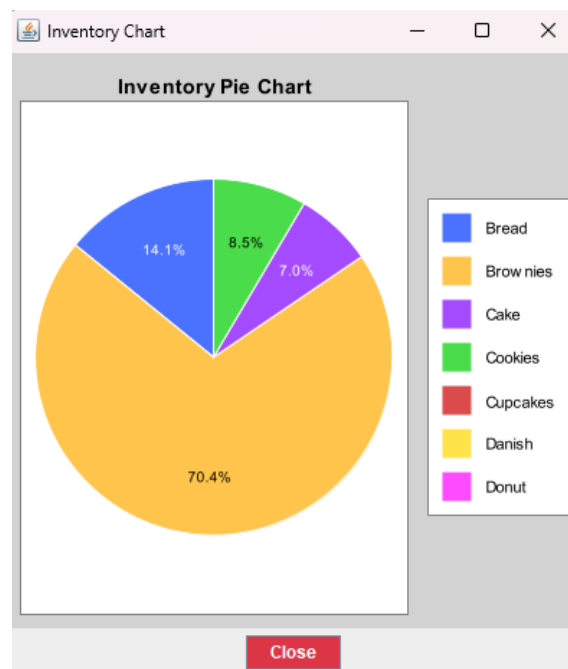
- Low/Overstocked Alert Feature [Using Custom Cell rendering for JTable]
  - When there are less than 5 items the items are **highlighted in red** on the table for ease of viewing.
  - When there are 50 or more items the items are **highlighted in green** on the table for ease of viewing.



ID	Item	Quantity
0	Bread	10
1	Brownies	50
2	Cake	5
3	Cookies	6
4	Cupcakes	0
5	Danish	0
6	Donut	0

Buttons: Edit Inventory, Sort by ID, Sort by Quantity, Pie Chart, Close

- Pie Chart Visualization: Pie chart generated for ease of viewing distribution of stock.  
(Pie Chart below Generated with same data as above)



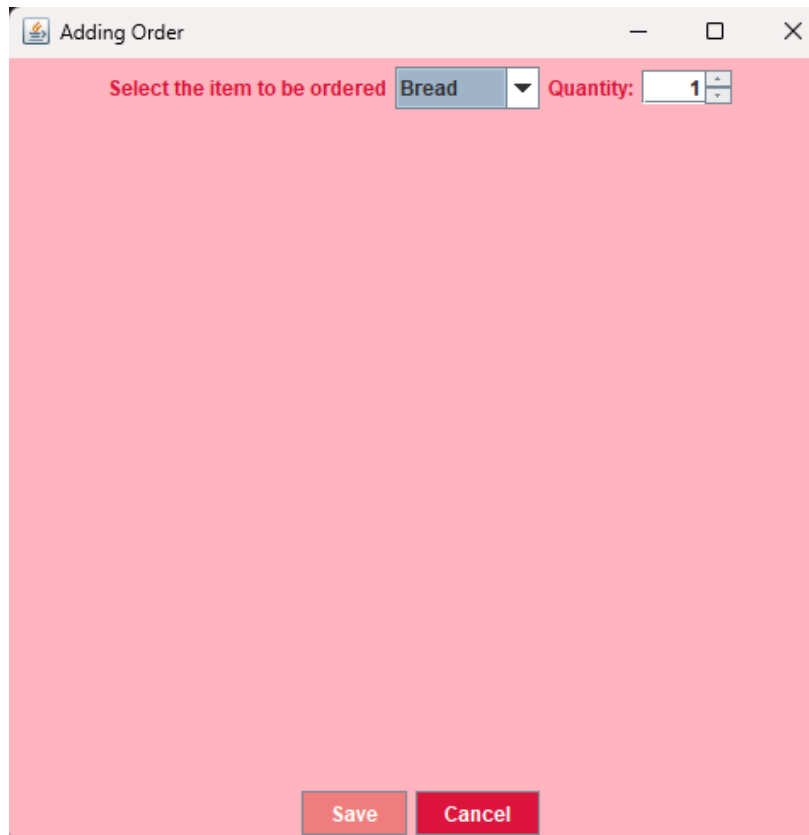
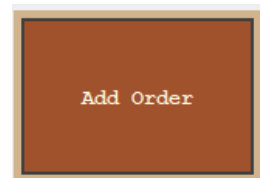
- File Persistence: Inventory data is saved to a file named 'Inventory.txt'. This ensures that all changes to the inventory are stored even after the program is closed.

## 2. Adding Orders

The Add Order functionality enables orders to be placed for different bakery items that are in stock.

- **How to add Orders**

- Click the Add Order button
- Select the item that is being ordered from the drop down menu
- Adjust the quantity as desired
- Click the Save button at the bottom
- Click the Cancel Order button (if you wish to cancel the order)

A screenshot of a web application window titled "Adding Order". The window has a light gray title bar with standard minimize, maximize, and close buttons. The main content area has a light pink background. At the top, there is a red text label "Select the item to be ordered". To its right is a dropdown menu with "Bread" selected and a downward arrow. Further right is a "Quantity:" label followed by a text input field containing the number "1" and a small spinner control. At the bottom of the window, there are two buttons: a light red "Save" button and a dark red "Cancel" button.

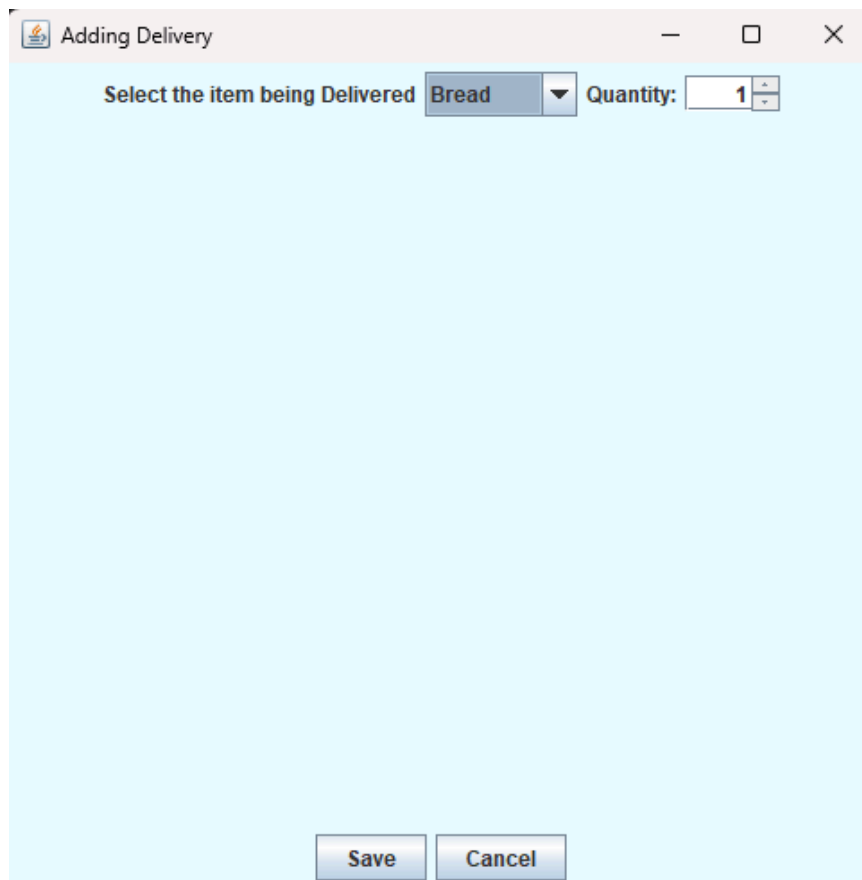
### 3. Adding Deliveries

The **Add Delivery** functionality allows users to restock inventory by entering a delivery. Delivery Class represents a delivery made to restock inventory

- **How to Add a Delivery:**

- Click the Add Delivery button
- Select an item from the dropdown menu
- Select the quantity of the item to be delivered using the spinner
- Click the Save button (which updates the inventory)
- Click the Cancel Delivery button (if you wish to cancel the delivery)

Add Delivery



The screenshot shows a window titled "Adding Delivery" with a light blue background. At the top, there is a label "Select the item being Delivered" followed by a dropdown menu showing "Bread" and a small downward arrow. To the right of the dropdown is a "Quantity:" label and a spinner box containing the number "1". At the bottom of the window, there are two buttons: "Save" and "Cancel".