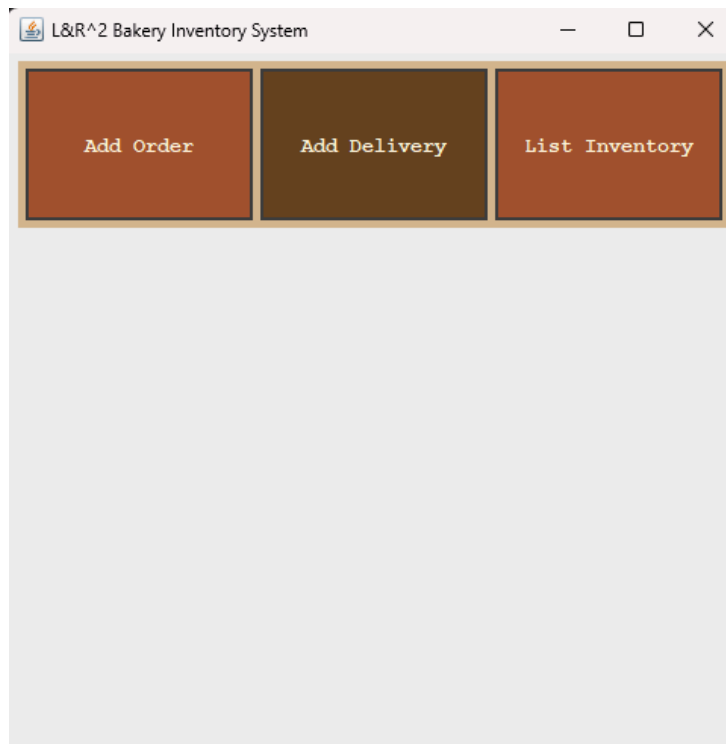# L&R^2 Bakery Inventory System

Introduction

Welcome to the L&R^2 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.
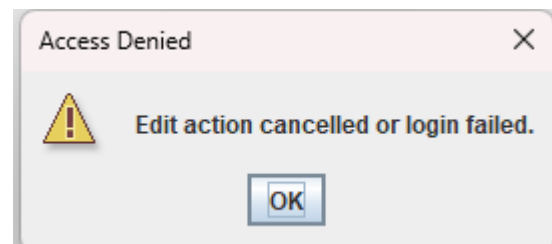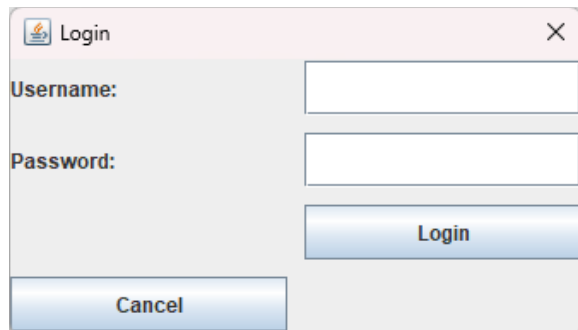
System Overview

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.
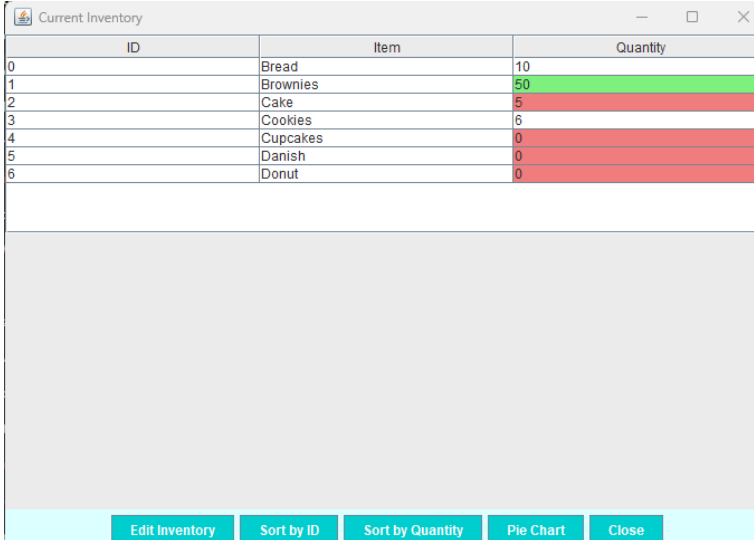   - Shows an error message if login fails or is cancelled.

Key Features

1. Inventory Management

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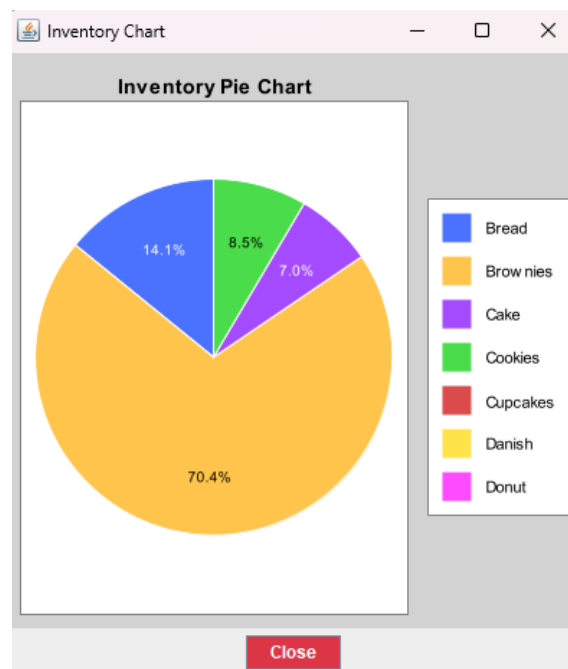
- Low/Overstocked Alert Feature [Using Custom Cell rendering for JTable]
    - When there are less than 5 items the items are **highlighted in red** on the table for ease of viewing.
    - When there are 50 or more items the items are **highlighted in green** on the table for ease of viewing.

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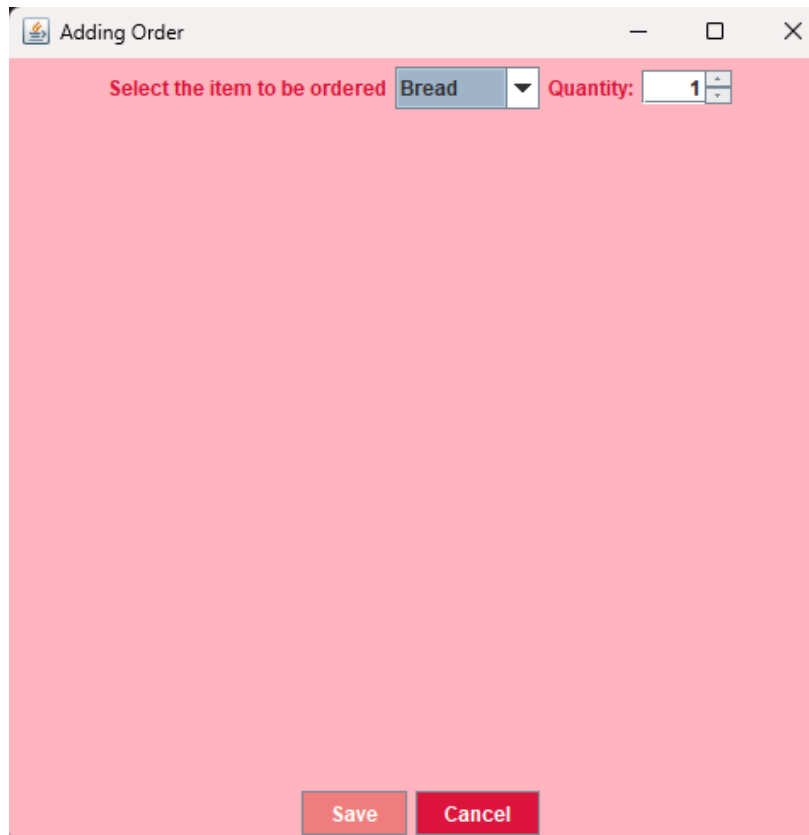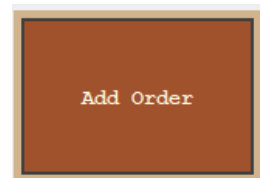   (Pie Chart below Generated with same data as above)

- 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
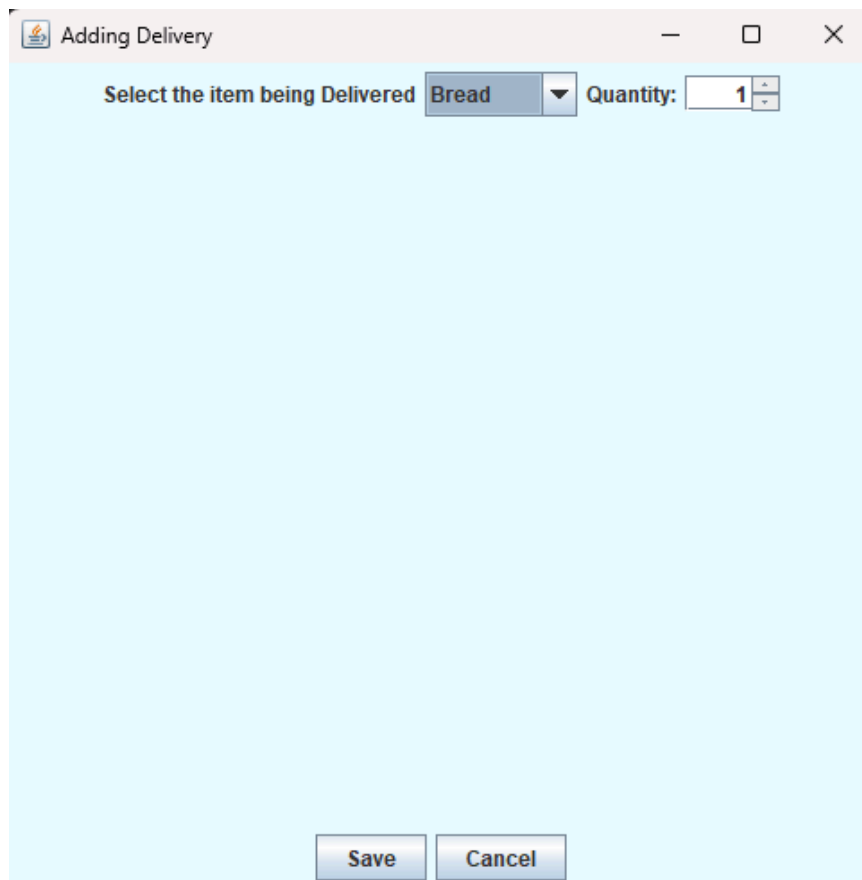   - Click the Cancel Order button (if you wish to cancel the order)

Add Order

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

Adding Delivery — □ ✕

Select the item being Delivered Bread ▼ Quantity: 1 ⬍

Save   Cancel