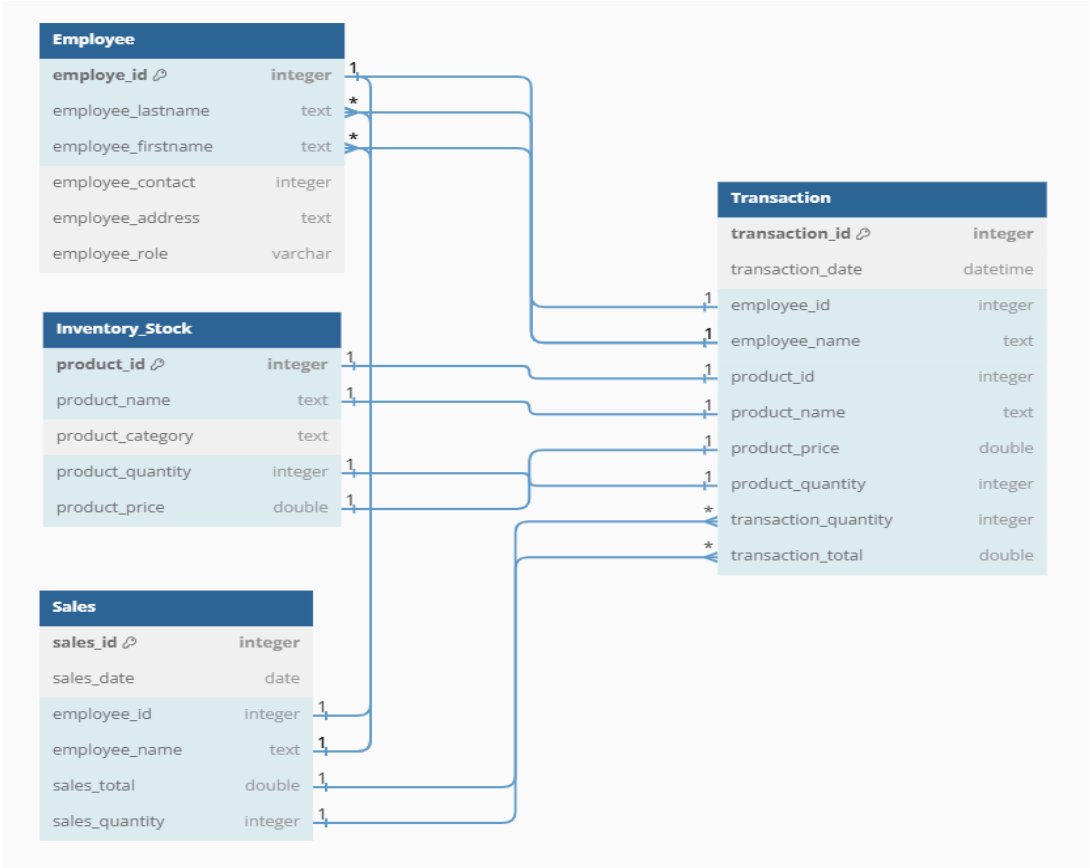# INVENTORY MANAGEMENT SYSTEM PROPOSAL

Project Topic: Grocery Store Inventory Management System

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Group 4 - Kudeler

Short Description:

Food is one of the essential requirements for humans to live and it can be bought from various shops such as grocery stores. There are a wide range of food products in grocery stores that are available such as meat, fish & seafood, canned goods, fruits, vegetables, dairy, snacks, drinks, etc. (Instacart, 2022). Due to the large goods that they handle, creating an inventory management system can help the store to manage and track the sales and stocks of each item through the use of Point-Of-Sale (POS). This system will help to meet the customers' needs and prevent shortage by having the right number of products. Furthermore, by tracking real-time sales and stock levels, categorizing each product, and displaying the list of items, grocery stores can make informed decisions about purchasing, pricing, and restocking strategies that will be a great success in serving the needs of the customers.

Framework:

Spring Boot

Spring Boot is a framework that simplifies the process of building and deploying applications by providing a set of pre-configured tools and dependencies. It is built on top of the Spring framework and provides a lightweight and opinionated approach to building applications.

Data Flow Diagram (DFD) 0:

Data Flow Diagram (DFD) 1:

Entity Relationship Diagram (ERD):

Modules/Features:

Grocery Store Inventory Management System is a Web based application designed to run on any browser. This proposed system has a user-friendly interface so users can manipulate it easily. The system is composed of five different modules that work together to complete the project. Below is the User Profile section of the system that contains the Register, Log In, and Log out option.

- **User Profile**

Figure 1. Log In

This is the homepage and Log In option of the system. In order to enter the system, they need to input their username and password. Once the Log In is successful, it will go to the dashboard page.
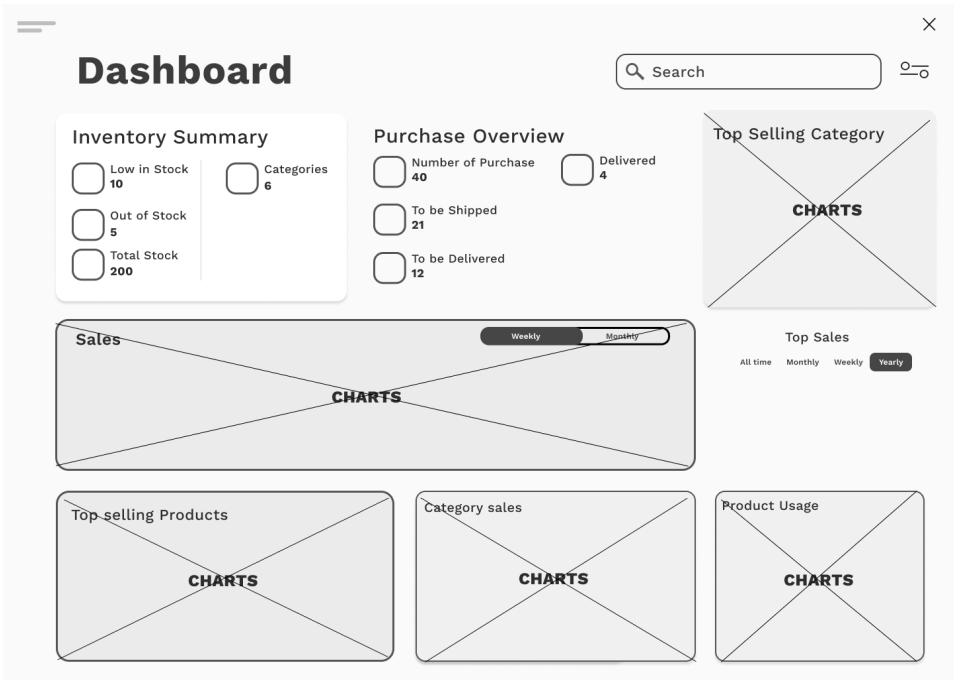

Figure 2. Profile

This is the User Profile feature of the system which allows the users to access, modify, and manage their personal information, such as their Name, Email, Phone number, and password. Users can log out of the system using the logout option.

- **Dashboard**

Figure 3. Dashboard

This dashboard leverages the power of data visualization through charts and graphs provides a comprehensive and real-time overview of information such as Inventory Summary, Purchase overviews, Sales, Top Selling categories, Top sales, Top selling Products, Category Sales, and Product Usage.
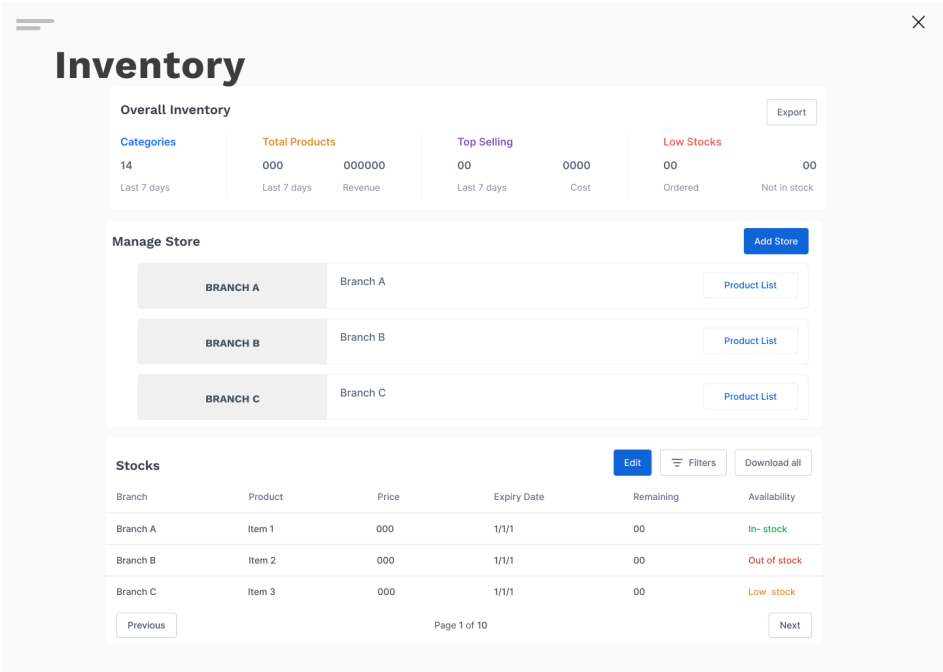
● **Inventory**

Figure 4. Stock Tracking

This feature allows employees to monitor the overall current availability of each product in the inventory. Also, with this feature, it can categorize the store and view its product listing in each store. It can conveniently update the stocks in real-time. Additionally, the data can be exported as CSV files for further analysis.
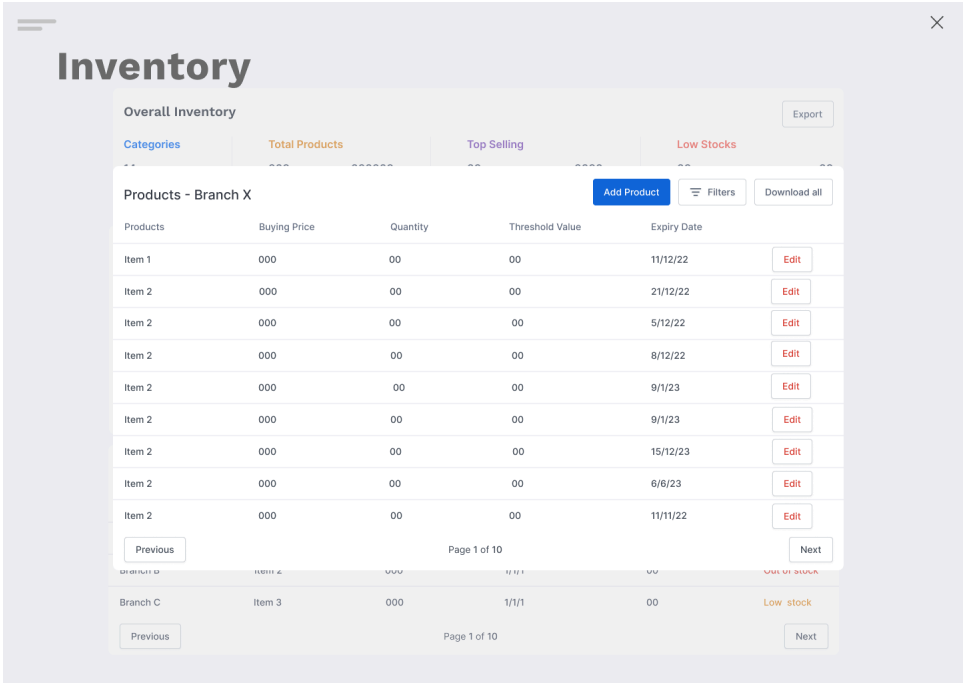

Figure 5. Product Listing and Categorizing

This section offers a comprehensive view of all the products per store, including their names, prices, and store availability. This is for efficient product searching and stock management. Users can also export this data as a CSV file for further analysis or sharing with other platforms.
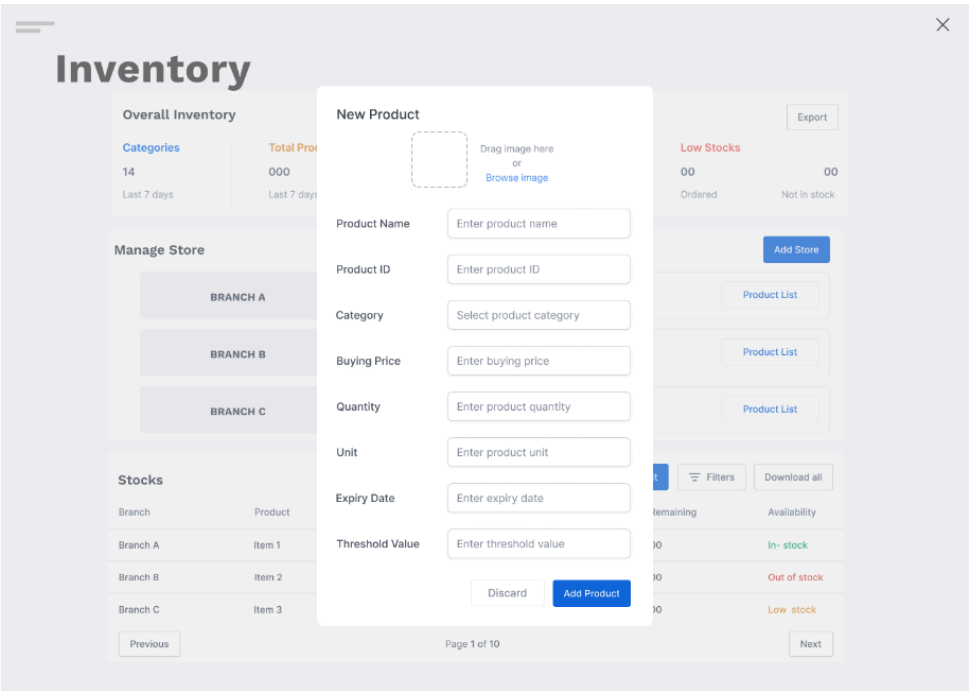
Figure 6. Adding Products

In this section, employees can add or edit product details based on the chosen store to ensure all product information is up to date and accurate.
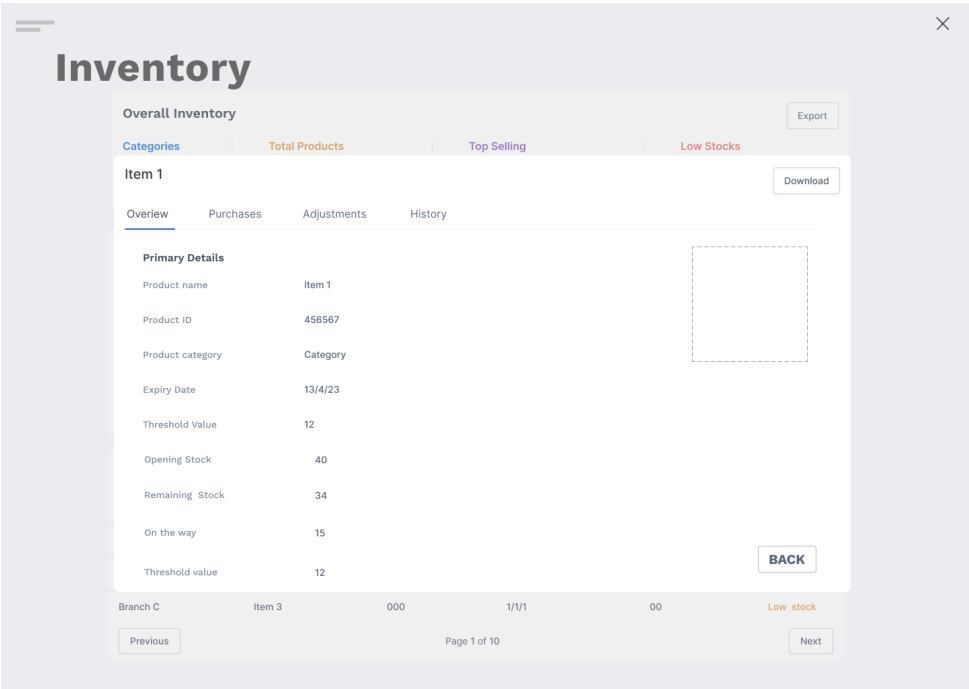

Figure 7. Displaying the Added/Edited Products Details

This section displays recently added or edited products. Employees can review these products here to ensure all details are accurate.
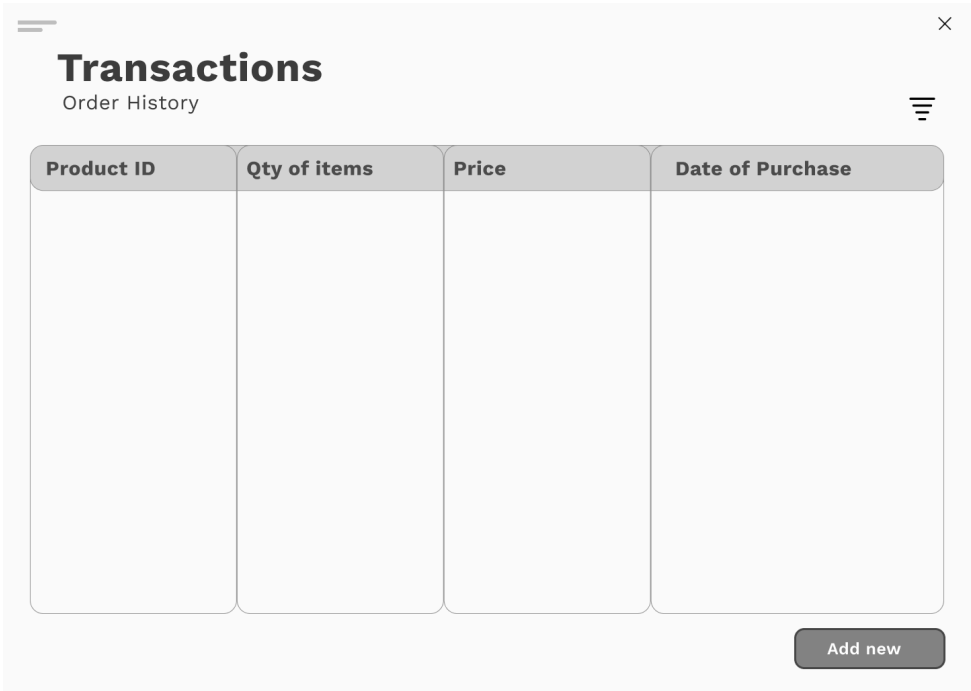
● **Transactions**

Figure 7. Order History and Adding Order

This transaction feature provides a summary of the purchases made within the system. Including details such as the date of purchase, product ID, the number of items, and its price. Allowing the users to monitor the customers' transactions effectively. Users can also add new purchases using this feature.
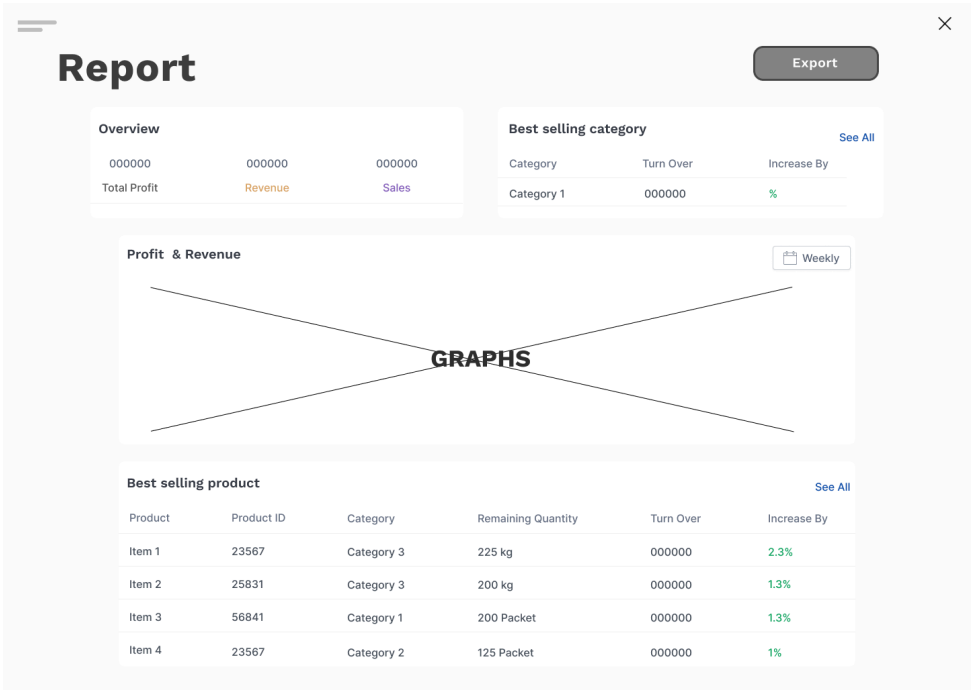
● **Report**

Figure 8. Sales and Profit Report

These feature us the Sales and Profit Reports which offer a combined view of the store's performance. Analyzing sales data, the Sales Report identifies top selling product and customer trends to optimize product offerings. While the Profit Report analyze both sales and expenses to pinpoint cost savings and maximize profit margins. Both reports can be exported as CSV files for further analysis or sharing, enabling the store to track financial health and make informed business decisions.