"J&Z Milktea Web-Based Daily Stock Inventory Management System"

(A Project)

A Final Requirement for the subject of
Enterprise Architecture

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December 2023

Project Context

Introducing the J&Z Milktea Web-Based Daily Stock Inventory Management System, a powerful platform designed to streamline and enhance their inventory management experience. This system offers a robust and user-friendly interface, providing them with the tools to efficiently track and update their inventory. Whether they are a small business and become large enterprise, their system is tailored to meet their needs seamlessly. With features such as easy item creation, comprehensive viewing of inventory details, and straightforward editing and deletion options, managing their inventory has never been more straightforward. Navigate through the system effortlessly, starting with the basics of accessing the platform and diving into advanced functionalities such as creating, editing, and deleting items. Additionally, the developer prioritizes the security of J&Z data, emphasizing the importance of secure connections, and regular backups to prevent data loss. Welcome to a new era of efficient and hassle-free inventory management with the J&Z Daily Stock Inventory Management System.

Currently, J&Z Milktea House relies on a manual inventory tracking system, employing a yellow pad and pen to compile a comprehensive list of available items. The establishment has the capacity to process up to 50 orders per hour, resulting in a daily gross income of 19,500 pesos. However, a fluctuation of 40% in net income occurs due to challenges associated with manual processes. The main issue revolves around flavor shortages, particularly during peak demand periods, resulting in customer dissatisfaction and loss sales. Despite the resilience of the existing workforce, there are difficulties in efficiently navigating and analyzing inventory data.

The core challenge stems from the employees' limited analytical skills, contributing to frequent stock shortages. Inability to effectively analyze inventory data hampers the timely identification of stock levels, leading to instances where popular flavors run out during periods of heightened demand. This deficiency in analytical capacity impacts customer satisfaction negatively and results in missed sales opportunities for the business. The existing manual processes exacerbate the problem, creating inaccuracies and delays in managing stock levels. Addressing this issue is crucial for optimizing operations and ensuring a consistent supply of popular flavors to meet customer demand.

The proposed solution for J&Z Milktea House involves the development and implementation of a user-friendly web-based inventory management system, aiming to revolutionize the operational landscape of the business by providing an intuitive interface and remote accessibility. The goal is to furnish the owner with enhanced decision-making tools for stock procurement, ultimately leading to increased sales and an improved overall customer experience. The new inventory management system will be designed using various tools and technologies, including Photoshop and Figma for a visually appealing and user-friendly design, GitHub for version control, 000webhost for reliable and scalable

hosting services, PHP MyAdmin for effective database management, and cPanel for server administration. This comprehensive integration with existing manual processes ensures a smooth transition to the digital platform, overcoming operational hurdles while leveraging the benefits of both manual and remote processes.

Accessible Links: To experience the system firsthand, you can visit the following links:

- J&Z Daily Stock Inventory Management System
- GitHub Repository for the Project
- Visual Paradigm Diagram for the Data Flow

Gap Analysis

Categories	Current State	Gap	Desired State
Technology Integration	Relies on manual processes for inventory management.	Gap exists in the utilization of technology to streamline and enhance daily inventory management processes.	Implementation of a user-friendly web-based daily stock inventory management system.
Training and Usability	Employees lack analytical skills for effective inventory data analysis.	Gap identified in employee skills and usability, necessitating training for effective system utilization.	Implementation of training programs to enhance analytical skills and promote system usability.
Complementary Role	Current inventory system primarily manual with limited support for decision-making.	Gap observed in the complementary role of technology, highlighting the need for a system that aligns with existing processes for seamless integration.	The new digital platform complements manual processes, providing decision-making support.

This combined table provides a consolidated view of the current state, identified gaps, and desired objectives for the three aspects in the proposed web-based daily stock inventory management system.

Technology Integration:

- **What:** The current state involves reliance on manual processes for inventory management.
- **Why:** This results in inefficiencies and missed opportunities due to delayed responses to changing demands.
- **How:** The desired state is the implementation of a user-friendly web-based daily stock inventory management system. This solution will utilize technology to streamline processes, enabling quick responses to demand fluctuations and optimizing overall inventory management.

Training and Usability:

- **What:** Employees lack the analytical skills required for effective inventory data analysis.
- **Why:** This deficiency hampers the ability to navigate and analyze inventory data, leading to stock shortages.
- **How:** To address this, training programs will be implemented to enhance employees' analytical skills and promote usability of the new system. This will

empower the workforce to effectively utilize the tools provided by the digital platform.

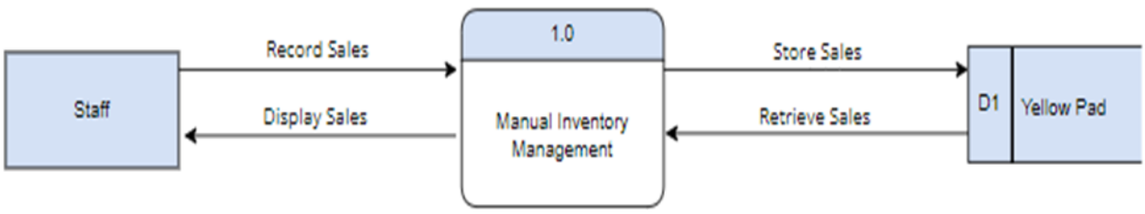
Complementary Role:

- **What:** The current inventory system is primarily manual with limited support for decision-making.

- **Why:** This lack of support contributes to inaccuracies and delays in managing stock levels.

- **How:** The desired state is a new digital platform that complements manual processes. This platform will provide decision-making support, aligning with existing processes for seamless integration. The goal is to enhance decision-making capabilities and ensure a more efficient and accurate daily stock inventory management system.

Traditional Data Flow Diagram Level 0



External Entity: Staff

Description: The individual responsible for recording sales and managing inventory.

Process: Inventory Management

Description: Staff records sold items on yellow pad paper.

Data Store: Yellow Pad Paper

Description: Contains handwritten records of sold milk tea items.

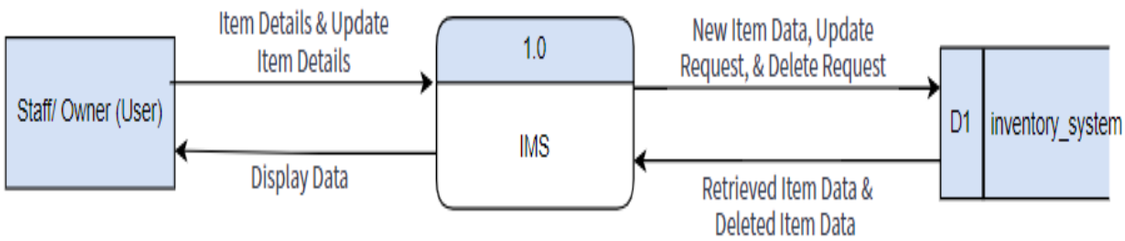
Data Flow: Sales Data

Description: Information about sold milk tea items flows from the Staff to the Yellow Pad Paper.

Data Flow: Inventory Update

Description: Periodically, the recorded sales data is used to update the inventory.

Modernized Data Flow Diagram Level 0



These more detailed labels explicitly show the purpose of each data flow in the context of CRUD operations in the web-based daily stock inventory management system.

Description of Arrows:

Label: "Item Details (from User)"
Indicates the data flow of item details from the user to the Inventory Management System (IMS).

Label: "New Item Data (to Database)"
Indicates the data flow of new item data from the IMS to the Database.

Label: "Retrieved Item Data (from Database)"
Indicates the data flow of retrieved item data from the Database to the IMS.

Label: "Display Data (to User)"
Indicates the data flow of displayed data from the IMS to the User.

Label: "Updated Item Details (from User)"
Indicates the data flow of updated item details from the user to the IMS.

Label: "Update Request (to Database)"
Indicates the data flow of an update request from the IMS to the Database.

Label: "Delete Request (to Database)"
Indicates the data flow of a delete request from the IMS to the Database.

Label: "Deleted Item Data (from Database)"
Indicates the data flow of deleted item data from the Database to the IMS.