UNIVERSITY OF CALOOCAN CITY

COMPUTER ENGINEERING DEPARTMENT

Data Structure and Algorithm

Progress Report No. 4

Sari-sari Store Inventory System

Submitted by: *Instructor:*

Adoracion, Jerick Dave D.   Engr. Maria Rizette H. Sayo

Calica, Ljay L.

Enverzo, Kyle Andrey D.

Gabuyo, Ivan Love D.

Luminario, Venice Lou Gabrielle M.

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I.   Objectives

In this progress report, we are aiming to apply these following objectives:

- To develop an efficient inventory management system that helps store owners easily monitor product stocks, prices, and quantities in real time.

- To implement a user-friendly graphical interface (UI) that simplifies navigation and improves the overall user experience for managing store operations.

- To integrate an automated low-stock alert feature that notifies users when products are running out, ensuring timely restocking.

- To enhance transaction accuracy and speed through a reliable receipt generation and point-of-sale (POS) module.

- To apply programming and database management concepts learned in th

II. Methods

-We crafted our Sari-sari Store Inventory System by methodically working through the stages of brainstorming ideas, sketching layouts, building the software, and running checks to ensure it all worked flawlessly—focusing on practical perks like watching over stock, logging every sale, and firing off quick warnings for dwindling supplies, all wrapped in a clean, straightforward dashboard that anyone could pick up and use without breaking a sweat.

In building our Sari-sari Store Inventory System, we leveraged programming languages like Python paired with MySQL for handling the database to keep track of product details, prices, and stock quantities, while drawing on data structures and algorithms to streamline how data is processed and pulled up; we wrapped it all up with rigorous testing to confirm smooth performance, spot on accuracy, and reliable low-stock notifications, ultimately honing our technical chops and problem solving prowess through this hands-on, practical project.

III. Results

Figure 1: User Interface with new functions

In this image, it contains the new UI for our system.
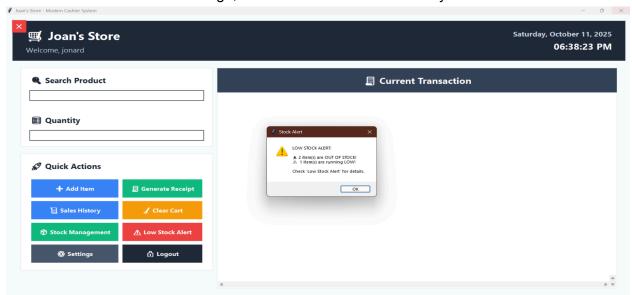

Figure 2: User Interface of Receipt

In this image, it displays different functions and a new function which alerts the user if there is a resource depletion
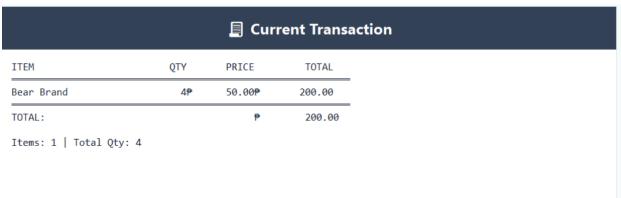

Figure 3: User Interface of Receipt
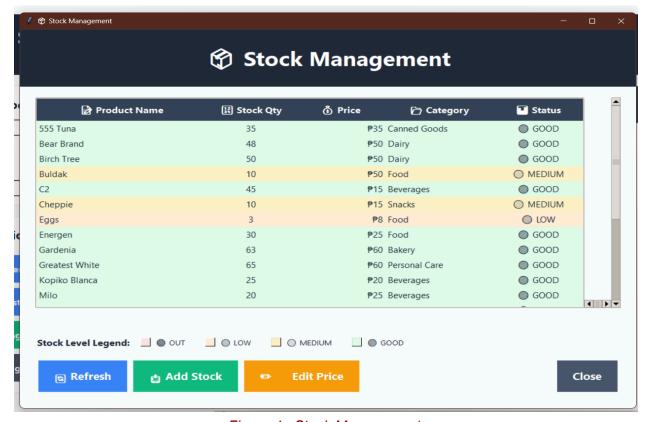
In this image, it displays the new model of the receipt.

Figure 4: Stock Management

In this image, it displays the stock management which displays the products, quantities, prices, etc.

IV. Conclusion

As computer engineering students, diving into the Sari-sari Store Inventory System project let us roll up our sleeves and apply classroom lessons in database management and programming to a real-world scenario, sharpening our skills in system design, UI creation, and tech-driven retail efficiency while boosting our teamwork, problem solving, and analytical abilities to tackle everyday challenges like stock tracking and sales logging ultimately cementing our path as innovative engineers ready to craft practical, game-changing solutions.

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