PRODUCT MANAGEMENT SYSTEM FOR RANIL'S POULTRY SHOP

A Software Engineering 2 Project by

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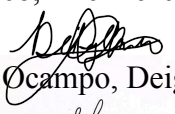

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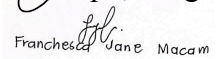

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Dedication

The proponents: Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam dedicate this research to their family and friends. For their support and for being the foundation to the respondents that kept them going no matter what.

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Chapter 1

Introduction

In the dynamic and constantly changing world of poultry shop businesses, a reliable product management system is one of the keys to success. There are other types of systems like payroll systems, accounting or human resources systems, healthcare systems, educational systems, library management systems, etc. Still, this project will mainly focus on a product management system. According to the definition of Altexsoft (2019), product management is developing existing products or bringing a new product to the market. Studies indicate the importance of excellent product management and illustrate how it can boost profits by 34.2%. Additionally, Its main role in the center of a company is managing products within a company and balancing the need to deliver value to a company (usually profit) between what customers want and what is technically and operationally feasible ("Product Focus", 2023). This project examines the development and implementation of a reliable product management system to automate the poultry shop's management systems such as sales and Point of Sale (POS), Inventory Tracking, Supplier Management, Customer Management, Reporting and Analysis, and Product Information Management (PIM) for orderly everyday processes and procedures and to meet the increasing demands of customers.

The Ranil's Poultry Shop retails various products such as feeds, pet food, accessories, farming seeds, pesticides, etc. A business like a poultry shop is complicated since it involves sourcing, handling, storing, and selling poultry products, each with its own special set of problems. Managing sales and inventory, labeling product expiration dates, proper storage, tracking orders, etc are just some of the things that make it

complicated. Just a small error when it comes to sales or mishandling products that are not immediately addressed might lead to product waste and a loss of sales to the company. Because of this, the concept of implementing an automated product management system becomes essential. This automated system can provide improved and reliable daily sales management, manage inventory and everyday transactions, and security. By having this product management system, poultry shop businesses can improve their operational efficiency and ensure the supply of quality poultry products.

An automated product management system will have lots of advantages for Ranil's Poultry Shop like increasing its efficiency by reducing the need for manual and repetitive tasks and also reducing the chances of errors. It can use previous sales data to predict demand and optimize inventory ordering, when products are running low or about to expire, reducing the risk of running out of most sold products or overstocking. Automated systems can also process tasks and data much faster than humans, which can speed up the day-to-day processes which can also efficiently collect, store, and analyze big data and reduce redundancy which can be a great help for the business having lots of products and transactions each day. By providing faster daily operations and quick responses to customer needs and inquiries, it can improve the customer service of the business. Furthermore, an automated system can be reprogrammed if needed and can easily adapt to changing requirements or business needs.

This project aims to identify the current problems that Ranil's poultry shop faces with its manual system and the potential benefits of a computer-based information system. According to Ranjan, S. (2021), one benefit of a computer-based information system is data standardization. It can be cost-saving by increasing productivity among

employees while reducing manual labor and can reduce the number of files and receipts and the amount of storage space they require. These also include fast data availability and quick printing of the recorded data. Moreover, it is completely customizable and extensible which is designed to meet the business's specific needs. It offers access efficiency compared to manual systems like handwritten receipts of sales and inventory. It files documents logically, uses filters, and allows manual categorization, boosting employee productivity. Innovations in technology and the internet have improved society and organizations. Understanding the benefits of computer-based information systems is crucial for effective use (Williams, S., 2021).

This project also identifies the important factors that must be taken into consideration when developing and implementing it. By addressing these factors, the proponents aim to highlight what an automated product management system for the poultry shop business might improve and help their business to be more secure, efficient, profitable, and convenient. Through development and efficiency, this project also highlights the importance of having a convenient system for the future of retail poultry businesses enabling more effective customer service and enhancing the experiences of both poultry shop owners and its customers.

Background of the Study

Ranil's Poultry Shop is a business that offers products for poultry, including bird feed, plant seed, fertilizers, and poultry accessories. They also offer additional pet-related items like dog and cat food, pet supplies, pet care, and pet basics. It is located at Rodriguez Rizal, operating from 7:00 a.m. to 7:00 p.m. The current owner of the business is Mrs. Rachel Manuel, who has taken on the responsibility of operating the store and

overseeing store operations up until today. The business was established by Mr. Arthur Tumali, a well-known veterinarian in the area, who also provided free consultations, which later became the store's unique feature. The name of the shop is a play of words from his name and his wife's name, Mrs. Linda Tumali. After the birth of their first child, the owner's mother, Linda Tumali, retired from teaching the same year to help start and support the store. Meanwhile, the owner, Mrs. Rachel Manuel acts as the cashier of the store most of the time and assigns her sons to serve as her proxy when she has some important errands to run.

The owner is still using a manual operation as she follows what is taught by her parents and is currently recovering in the aftermath of the pandemic. As the business expands and as time goes by, it faces lots of problems caused by its manual system. Written and collecting receipts, lost receipts, lack of data security, manual counting of inventory, and manual computation of sales were stated by the owner. The business currently uses handwritten receipts when processing transactions, providing customers with a tangible record of their purchases. Additionally, a calculator is utilized to calculate the total cost of the customer's purchase.

Feeds are measured via a measuring cup and a weighing scale for verification while medicine, fertilizers, and pesticides are sold per piece. The business only has a single employee who is in charge of measuring the products that the customers ordered and is also responsible for handling the heavy lifting of sacks. An employee is required to measure an item that a customer buys using a measuring cup and a measuring scale. The owner then writes a handwritten receipt to record and verify the transaction, which will be provided to the customer and duplicated for the use of the business. Because of this,

the owner finds it difficult to keep track of receipts, and writing receipts takes a lot of time. There have been instances where some receipts were lost due to the huge number of receipts the owner had to track and gather at the end of the day. However, all receipts related to transactions and inventory are kept for verification. Because receipts are required for calculating the store's net profit, losing one is considered a loss for the company.

In regards to replenishing stock, the owner orders from their suppliers and verifies if the order is correct and complete. Checking, updating, and counting stock repeatedly requires physical labor which is inconvenient and time-consuming. When it comes to returned and expired products, the determination of whether a returned item can be resold depends on factors such as whether the product has been opened or used by the customer. The feasibility of resale is dependent upon these considerations, influencing the decision-making process regarding the handling of returned products under their condition. In terms of expired items, specifically medicine, the product is discarded.

Regarding data security, the receipts were placed only in a file organizer on the table, which might be lost if not handled and stored correctly. The process of writing receipts and storing them in an insecure manner poses a potential risk to data security. Additionally, the manual nature of calculating daily sales and conducting inventory counts contributes to operational inefficiencies. Addressing these limitations is crucial to enhance both the efficiency and security of the business processes at Ranil’s Poultry Shop.

Statement of the Problem

The Ranil's Poultry Shop serves as an essential source for pet and plant owners to acquire products, meet the needs of customers, and provide guidance to them. However, the owner of Ranil's Poultry Shop still has difficulties in running business operations**.** Despite the ongoing efforts to ensure the business is running smoothly, several problems persist, by that means interfering with the performance of the business operations and decelerating growth. The proponents will be developing a product management system that will address the following:

1. Lack of security when handling receipts, records, and payments. Manual data entry such as writing receipts and daily sales is prone to damage, loss, or theft, potentially in sales records and transaction history. The poultry shop's security is at risk due to it having no secured system making unauthorized individuals have access to its cash. This situation poses a serious concern due to the vulnerability of theft or unwarranted data alterations. Manual systems create more serious issues with data security.
2. The current system of generating and storing receipts is prone to errors in terms of accuracy, legibility, and efficiency. Since the business is still relying on a manual system, it tends to be time-consuming due to handwritten receipts, which results in discrepancies and erasures in receipts and potential misunderstandings with customers.
3. The current sales operations of the poultry shop face challenges due to inefficient sales tracking and manual calculations. It can negatively impact purchase histories and transaction records. Manual data entry and tracking procedures are

time-consuming and product price and quantity are sometimes forgotten by the staff which may cause transaction times to take longer. The deficiency of a sales management system makes it difficult to access vital sales data that are used to make reports.

4. The shop's lack of a central repository or database poses a significant problem due to human memory. Recording receipts, handling them, and keeping them safe are problems encountered by the owner. Item prices and quantities can be occasionally forgotten which leads to sales inefficiencies. Product information is also sometimes not updated like its details, price, and availability, and backups or option B are not planned whenever an error occurs.
5. The existing inventory management system suffers from the lack of real-time tracking capabilities. The business is having a difficult time monitoring the quantities and the status of each specific product or item that is on hand. Inaccurate tracking systems lead to stockouts or overstock situations and affect customer satisfaction and operational efficiency.

Objectives of the Study

Since Ranil's Poultry Shop has been a long-established company, it is a 48-year-old shop, despite its age it always has a constant supply of competitors both old and new. During its time of creation digital systems and computers weren't accessible and widely used for this type of business. This is why the company's operations or procedures are mainly focused on manual execution of tasks such as manually processing transactions and receipts this way is reliable but needs to be updated. Developing an automated product management system that will replace the manual system used by the

company allows employees to skip the laborious tasks and focus on the more important tasks in the company. This can give the company an advantage over its competitors not only in efficiency but also in efficacy. The proposed system will highlight the implementation of a product management system. The following are the specific objectives of the proposed system:

1. To develop a security system that focuses on authentication and authorization of the user's credentials. This will ensure that the system can only be controlled and accessed by authorized personnel. The system will be able to have two levels of access which are admin and employee based on the preferences of the owner. Permissions of each user can also be altered depending on their level of access within the system. User logs will also be saved to monitor logging in and out of each user in the system.
2. To develop a computerized product management system for the production of product information and computerized receipts. This will keep track of what and when products were sold and their price and will lessen the chances of misinterpretation of handwriting. It is also searchable, faster, and more efficient than manually writing receipts. The user is also allowed to create, read, update, and disable items in the program, thus making the program versatile to the changing needs of the consumer.
3. To provide improved and reliable daily sales management and automated transaction systems. Enabling the new transaction system to make other modes of payment simple and more efficient. Since the owner explained that she is having a hard time tracking the actual sales coming from the receipts at the end of the day,

a computerized data entry of sales and a more reliable sales recording will be beneficial to the business. This system will display all the products along with their price and quantity for easy input of data by just clicking on the product and later on, accept payment amounts and display their change to be able to track daily sales and transactions. This will make tracking sales easier to record and manage for reports, provide insight into the demand for each product, speed up transaction processing, and reduce the risk of errors like miscalculations.

4. To create a database that will store, log, and record all transactions, user credentials, and actions made within the system. There will only be one database that consists of multiple normalized tables, which are all editable by the user using the program. This will guarantee that all receipts will be recorded and will not be easily lost due to manually handling them. The program will take advantage of this database to store and retrieve information and allow the user to view its contents. This will make tracking sales easier to record and manage for reports and also provide insight into the demand for each product. Scheduled backups are made to ensure data in case of unforeseen errors or hardware failures, backups are stored between clients to ensure data integrity.
5. To allow real-time inventory tracking. Since the system and the database do update every transaction, real-time inventory information can be available. This provides timely updates on the status and information of each product to avoid overstocking or running out of stock. Product information can be sorted or searched according to the user's content, this brings easier navigation and immediate access to the information that the user needs. Not only does this bring

convenience but also efficiency as product management and inventory monitoring could be done with a click in the program. An inventory tracking that monitors the quantities and status of each specific product or item that is on hand.

Significance of the Study

The introduction of the product management system at Ranil's Poultry Shop is expected to yield a range of notable impacts. It will incorporate technology, optimize operational processes, and provide potential economic benefits to the business.

The product management system will adopt technology and integrate digital solutions to the ongoing problems of the company. The proposed system will be a primary tool that will replace the manual system, in terms of recording sales, monitoring inventory, security of receipts, and managing transactions. The product management system will be a key factor in efficiency and improved service to the customers.

Implementing a digitalized system delivers optimized operational processes and convenience to the user. Fundamentally the system will be used to manage transactions, monitor inventory, and be user-friendly to the employees. This allows the user to be able to do complex transactions and meticulous tasks by clicking a button.

According to the preceding statements, a company’s economy and financial health are determined by many factors including the company’s efficiency, customer service, and financial management. Optimizing product management leads to substantial cost reductions, enhanced profitability, and improved cash flow. A data-driven approach empowers Ranil’s Poultry Shop to make informed decisions, identify cross-selling opportunities, and optimize pricing, driving both revenue growth and long-term financial stability. Continuous improvement through a strong product management framework

allows companies to navigate changing market conditions successfully, making it a cornerstone of economic growth and overall financial success.

Scope and Limitation

Scope

This project focuses on the implementation of an automated product management system that will improve the current procedures used by the poultry shop business. The system will have five main modules together with the basic general modules to support the daily operations of the poultry shop. The basic modules will be composed of a security module, registration and verification module, login module, search module, reporting module, maintenance module, about module, and help module, while the main modules of the system will be the transaction module, record-keeping module, sales management module, and inventory module.

The proposed system will be using the LAN technology which is used to connect devices within a limited area. The system will be implemented on Windows 11 64-bit operating systems. Python 3.12.3 will be utilized for the front-end while MySQL 8.4.0 will be used for the back-end. The minimum hardware requirements for this project to run include operating system of Windows 11 64-bit, a Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook Laptop with an intel Core™ i5 i5-13500HX 2.50 GHz, Random Access Memory (RAM) of 8GB DDR5 SDRAM, and a storage of 512GB M.2 NVMe PCIe NVMe

The security module will ensure that only authorized personnel can access the system. This will protect the database, avoid editing of the normalized tables, and avoid the deletion of copies of receipts. Along with this is the registration module where the

owner can register new products to the system. The system will have a login module that requires a username and a six-digit PIN code before accessing it. There will also be a forgotten password link if the owner forgets her PIN code. The owner can only search, access, and monitor the daily logs and transactions of the system since she is the only one who knows the account details of the system.

The search module will allow users to search for information, data, products, etc using keywords, numbers, or filters easily. This will ensure that the system can handle and search multiple data-encoded files quickly. If a user mistyped a letter or a number the system will show a message such as “try again” or “no results found”. It is well integrated with the transaction, record-keeping, inventory, and sales management modules.

The transaction module and sales management module will be connected as the sales management module is responsible for processing and tracking sales efficiently. This will manage overall daily sales within the day and the transaction module will be responsible for handling different daily transactions such as purchases, payments, and changes. This will handle payments such as cash and online payments specifically, “gcash”. The user will click the item purchased by the customer and the system will generate the total transaction of each customer which will accept the payment and display the change to eliminate manual computations. This will then generate a receipt for the customer and a copy for the system. Saved transactions and reference numbers will be added to the database and only the admin can access it.

The inventory module will manage and control the stocks of the business. It will enable the user to keep track of inventory levels and ensure product availability for

customers. This system will store each product's details such as product ID, name, selling and cost price, expiration date, and quantity. In addition, the record-keeping module is for managing, storing, and organizing different types of receipt records and data in everyday business operations. This will manage product information and details like purchase history. This module will record all the transaction receipts, reference numbers, and supplier receipt records.

Lastly, the reporting module will also be connected to the transaction module, record-keeping module, sales management module, and inventory module. This will be responsible for generating, managing, and presenting different reports like sales and inventory reports based on the data stored within the system. This will also manage daily and monthly sales reports. The help module will provide on-screen assistance, guidance, and support to the users of the system. This will help them to navigate the system, and access relevant information. The maintenance module will ensure that the system is running smoothly, has robust security, has a backup and restore of system data, and will manage system updates. The About module will contain the system developers' information and contact details.

Limitation

A limitation of the project is the decision to implement specific components of a product management system, rather than the entire scope of a comprehensive product management system. Therefore, components that concern product marketing, market research, setting product strategy, product innovation, and product roadmaps are excluded from the project. Consequently, certain systems like payroll systems, accounting systems, and human resource management systems are excluded from the scope of the project.

Returns and exchanges will also not be implemented in this system, nor will other payment methods such as bank transfers, debit, and credit card payments. This system will not operate online since it is only on a local area network (LAN).

Furthermore, audit trails to be shown in the user logs are also excluded in this proposed system, meaning that each action the user takes will not be visible in the logs and the system is purely dependent on the hardware's date and time. The only algorithms used in the system are the ABC Algorithm for inventory management and the SHA-256 algorithm for secure data hashing. Additionally, the system doesn't have a super admin role incase there is a crash in the main database that the proponents have. There is also no legal basis for the implementation of the system. The exclusion of these systems will significantly impact the project's comprehensiveness by narrowing the system's scope.

Chapter 2

System Design

A System Design is an important step in making a system, it also serves as the backbone for dealing with unusual scenarios because it represents the business logic of software. In this chapter, the proponents will include all the graphs and diagrams such as Flowcharts, Data Flow Diagrams (DFD), Context Diagrams, Use Case Diagrams, Hierarchical Input, Processes, and Output and Input, Processes, and Output needed to ensure efficiency and coherence in achieving specific objectives. This will help define the interactions and relationships between system elements, clarifying the flow of data and processes. A system design is also a crucial process in research that involves planning, defining, and specifying the structure, components, and interactions of a research system. It involves understanding the research problem, analyzing requirements, identifying key components, defining interactions, prototyping, managing data, selecting appropriate technologies and tools, developing an implementation plan, testing and validating the system, and providing comprehensive documentation. System design helps researchers create a well-organized, efficient, and reliable research system, ensuring its effectiveness and efficiency.

Narrative Description of the Existing System

The existing system of Ranil's Poultry Shop is essential to their day-to-day operations. It facilitates paper-based processes such as daily sales and transactions, inventory control, record-keeping, and the overall workflow of the business. The manual system of the poultry shop has been used ever since the establishment of the shop forty-nine years ago.

Transaction - this will enable the Owner to make a transaction and handwritten receipts with the customer given what they purchase.

1. When a customer enters the shop, he or she will declare what he or she will buy.
2. The employee will measure and prepare the order for the customer.
3. The employee will then dictate what the customer purchases to the owner.
4. The owner will calculate the total purchase of the customer using a calculator.
5. The owner will write the order on a receipt that will be given to the customer after their purchase.
6. Payments are collected in cash and Gcash payments are accepted.
7. If cash payments are made, the owner will give change to the customer if there is any.
8. In Gcash payments, the QR code will be scanned to proceed with the payment using the personal Gcash account of the owner.
9. Receipts collected including the purchase of stocks will be kept in a file organized in the table and will be calculated at the end of the day to know how much the shop has gained or lost at the end of the day.

Sales management - this will enable the Owner to track all sales in a logbook at the end of the day as well as the monthly sales of the shop.

1. The owner will compute all the total sales of the shop at the end of the day and will put it in a separate logbook for managing sales.
2. The owner will summarize all the transactions for monthly sales tracking.

Inventory - this will enable the Owner to manually record inventory levels of each product.

1. Inventory levels are manually updated and checked by the owner by listing them on a piece of paper.
2. If there is a need to order stocks, the owner will make a phone call to the suppliers to purchase stocks.
3. Slow-moving stocks will not be ordered as usual and fast-moving stocks will be ordered whenever they are about to run out.
4. Expired products will be thrown in the trash and are considered a loss.
5. The owner will order the same items again from the suppliers but in a lesser quantity than the last order.
6. Some suppliers that are within their area will have a same-day delivery if ever she has a stock order while others will take days to deliver since it is from Marikina and Quezon City.
7. After a delivery of stocks has been made, the supplier will hand out receipts to the owner that will be added to sales records.
8. The owner will check if the orders are correct, complete, and in good condition.
9. The employee will place the stocks on the shelves and in their proper places and will be recorded by the owner.

The existing manual system has several challenges since businesses like poultry shops are easy to put up, and there will be more competition in the market. There is a potential for human error in data entry and calculations by having a manual system.

Retrieving and managing physical records is time-consuming, and there is limited data reporting and analysis capability. Additionally, the business has no security and privacy when it comes to handling transactions and receipts record-keeping, and ensuring data security for handling written records is a concern.

Narrative Description of the Proposed System

The proposed system will be a solution to the problems encountered by the business including daily sales management and inventory control. This study will provide a detailed description of how the proposed system will operate regularly.

Security - This will ensure that users have different levels of access to the system, to make changes and secure data. This handles the user logs and forgotten passcodes.

1. The admin will pick either user information or user logs that the system will ask for.
2. If the admin wishes to display user logs, the system will display a tabled form of user logs.
3. If the admin wishes to display user information, the system will provide a list of accounts.
4. The admin will then select an account she wishes to view.
5. The system will display detailed personal information and levels of access that are in the database.
6. There is an edit button that allows the user to edit the personal information of the user.
7. If the admin decides not to update the information, she will be redirected to the option of whether she will pick either user information or user logs.

8. If the admin wishes to edit the user's information, the admin can edit or input new data.
9. The system will then verify the changes.
10. If the verification of changes is unsuccessful, the system will display an error message and will be redirected again to editing or inputting new data.
11. If the verification of the changes is successful, the system will ask for the admin/owner's passcode for final confirmation of changes.
12. After the admin/owner inputs his/her passcode, the system will verify the passcode inputted.
13. If the verification of the inputted passcode is successful, The system will make the changes, save it in the database, and display new data, alert the user, and redirect to the main menu.
14. If the verification of the inputted passcode is unsuccessful, the system will display an error message and will be redirected again to input the passcode.

Login - This handles the user's credentials such as username and passcode and logging into the system.

1. The system will ask for the user's username and PIN code.
2. The user will input his/her account details into the system. There will be different levels of access depending on the user. Input will be a registered username and a (6) digit PIN code.
3. The system will verify the account.

4. If the account is saved in the database, the system will be redirected to the main menu.
5. If the username and passcode entered are invalid, the system will display an error message and forget the passcode link.
6. If the user wishes not to go through the forgot passcode, the system will ask again for the user's username and PIN code.
7. If the user clicks the forgot passcode button, the system will display a forgotten passcode form.
8. After the user fills in the form, the system will verify the data input.
9. If the verification is unsuccessful, the system will display an error message and will be redirected again to a forgotten passcode form.
10. If the verification is successful, the system will update and save it in the database and will proceed to log in.

Registration and Verification - this will enable the user to register to the database of the system.

1. The system will ask the admin what to register to the database.
2. After the admin chooses what to register, the system will show the corresponding input form.
3. If the admin registers new products to the system, the admin will input the product details such as product ID, quantity, details, etc.

4. If the admin registers a new user to the system, the admin will input some personal information of the user such as full name, contact details, email address, age, date of birth, etc.
5. The admin will enter the user's preferred username and (6) digit PIN code into the system.
6. The system will then verify the registered information.
7. If the verification of the registration is unsuccessful, the system will display an error message and will be redirected again to ask the admin what to register to the database.
8. If the verification of the inputted data is successful, the system will request the admin/owner's passcode for final confirmation of registration.
9. The system will then verify the passcode inputted.
10. If the verification of the passcode is unsuccessful, the system will display an error message and will be redirected again to request the admin/owner's passcode.
11. If the verification of the passcode is successful, the system will update the database and will display a preview of new accounts/products.

Transaction - this will enable the admin to compute all the transactions the system makes easily.

1. The system will display all the product lists.
2. The admin will input the customer's order by clicking on the screen the product, quantity, or its measure.
3. The system will check the availability of the products in the database.

4. If the product is not available, the system will display an error message and the user will be redirected to inputting the customer’s order.
5. If the product is available, the system will calculate the purchased product's price.
6. The system will display the total price of the customer’s purchase.
7. The system will ask the user if the payment is via Gcash or cash.
8. If the payment method is in cash, the admin will input the amount paid by the customer.
9. If the payment method is via Gcash, the admin will input the amount paid in Gcash and the reference number.
10. The system will accept the payment, display the change if there is any, and generate and display a receipt.
11. The system will store the receipt in the database for record keeping.

Sales Management - this handles sales summary for daily, monthly, and yearly.

1. The system will check the receipt details that are in the database and will display current sales
2. The system will ask for a time interval and if the user selects a time interval, the system will accept the input of the user.
3. The system will then process data into inputted time intervals that are in the database.
4. The system will display sales data and return to the menu page.
5. If the user does not select a time interval, the system will be redirected to the main menu.

Inventory - this will enable the admin to update the inventory and monitor inventory levels.

1. The system will display lists of all products registered in the database.
2. The system will display an option if the admin wants to edit/update the product information.
3. If the admin wishes to update product information, the admin will select a product and edit its information.
4. The system will display the product information in detailed form.
5. If the admin wishes to update the product details, she can update the product details such as quantity, expiration date, and other product information.
6. If the admin wishes to keep the product details the same, she will be redirected to the main menu.
7. Using the ABC Classification Algorithm, the admin can see which products are of importance to the business by being classified as Category ‘A’, Category ‘B’, and Category ‘C’. This enables the admin to identify which products to keep a steady stock and possibly overstock with guarantee that the products will be sold, and which products to cut or lessen stock on.

Record-Keeping - this module will handle reference numbers in receipt records.

1. The admin will pick either supplier receipts records or transaction receipts records that the system will ask for.

2. If the admin wishes to display supplier receipts records, the system will display a list of supplier receipts.
3. There is an add button that when clicked, will display a form where a user can add a supplier receipt and its details.
4. Once a receipt is added, it will be saved in the database.
5. If the admin wishes to display transaction receipts records, the system will display a list of transaction receipts.
6. The lists are clickable that is when clicked, it will display the receipt details

Search - this will enable the user to search for a specific item in the system.

1. The user will input the product she wants to search for.
2. If the searched item is not in the database, the system will not display the searched term so he/she can continue searching for other terms and items again.
3. If the item is in the database, the system will display it.

Reporting - this will enable the admin to access, compile, and print sales reports, inventory reports, and overall financial reports in the system.

1. The system will display overall data to the user such as inventory, and sales information.
2. If the user wishes to filter data, the system will filter the data selected by the user.
3. The system will compile and display the reports based on the user's preferences.

Maintenance - this handles system maintenance and updates.

1. The system will display two buttons which are Back up and Restore.
2. If Back up button is clicked, there will be a pop up where the user can choose for files.
3. After the user choose a file, the system will run sql file into database.
4. If Restore button is clicked, there will be a pop up where the user can choose for files.
5. After the user choose a file, the system will backup database into file.

About - the developer's information is what this module contains.

1. Display the company’s contact number and information, system information and developers' information.

Help - this contains information that will provide assistance, guidance, and information to users within the system.

1. The system will display two buttons which are FAQs and user manual.
2. When FAQs button is clicked, the system will display FAQs in a PDF form.
3. When User’s Manual button is clicked, the system will display User’s Manual in a PDF form.

Procedural Flowchart of the Proposed System

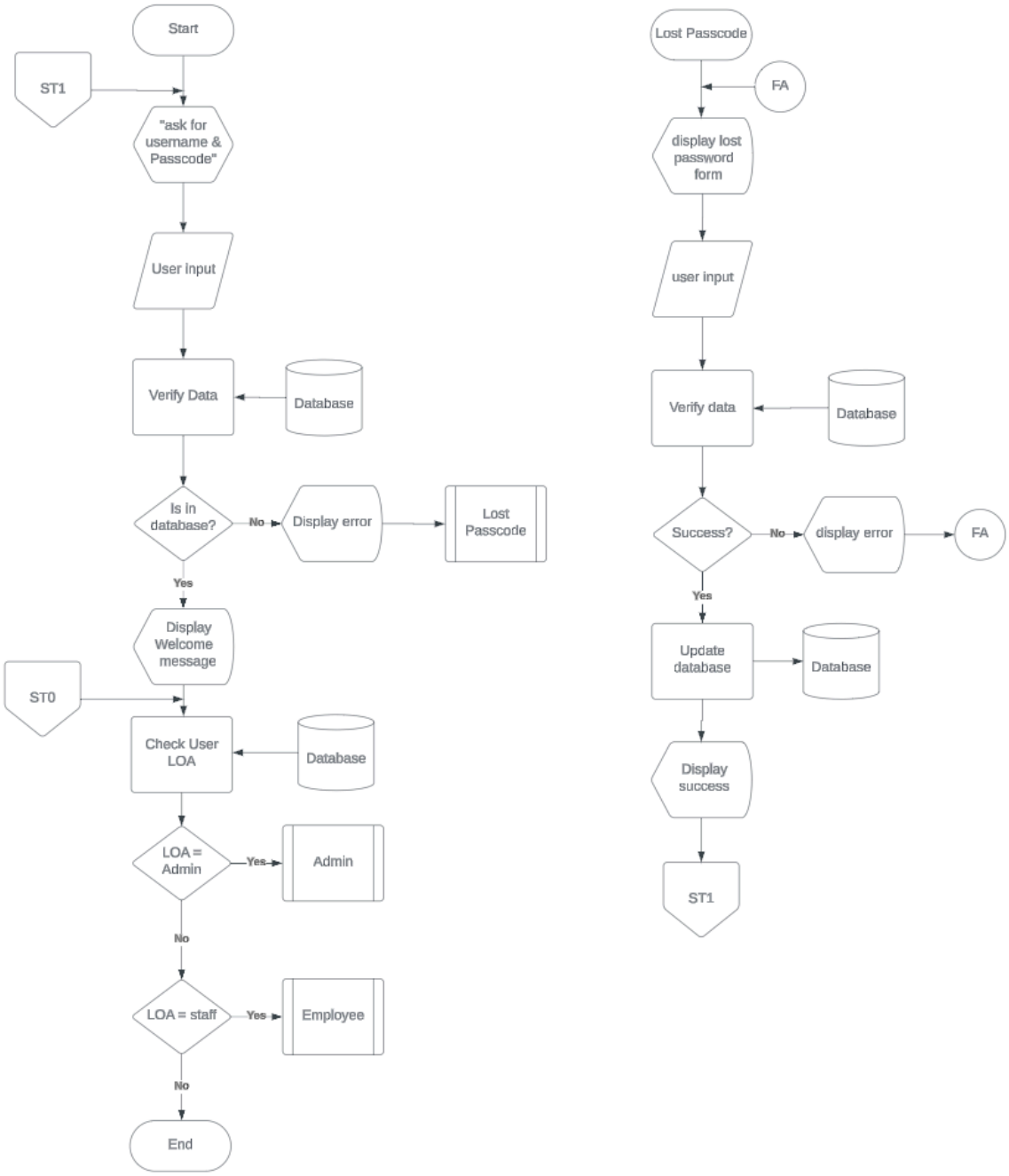

Figure 1 Start and Lost Passcode Flowchart

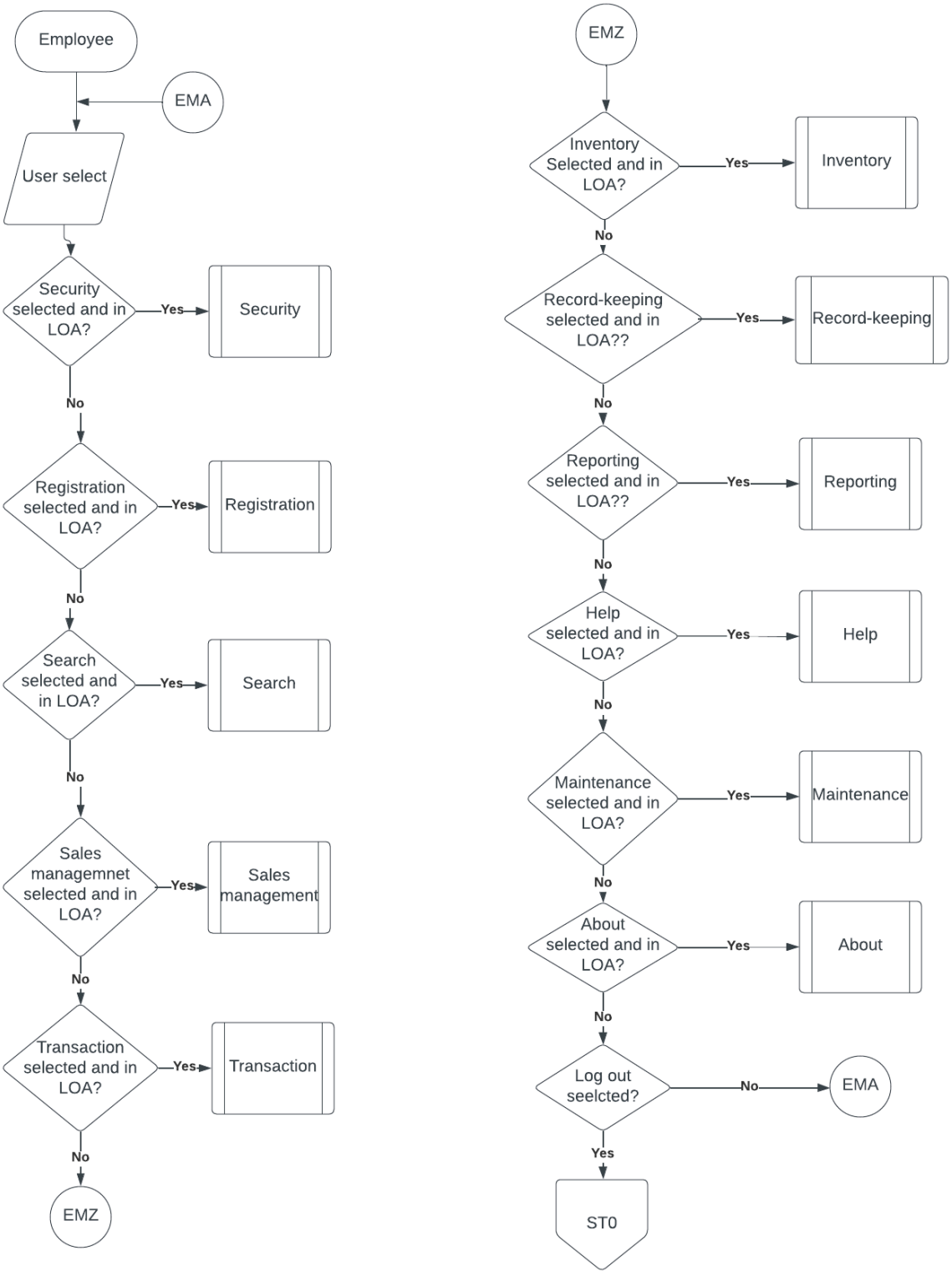

Figure 2 Employee Flowchart

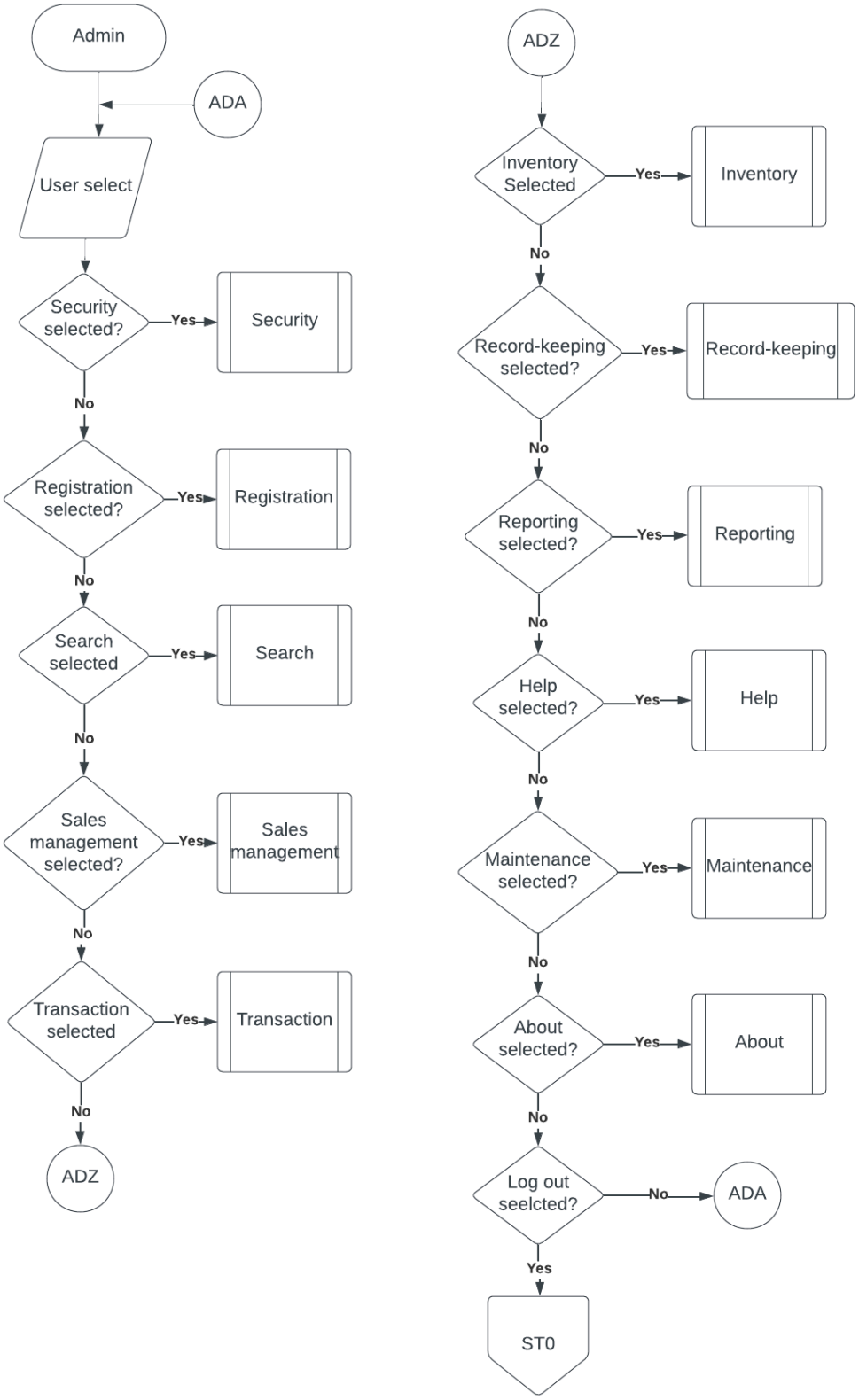

Figure 3 Admin Flowchart

Figure 4 Security Flowchart

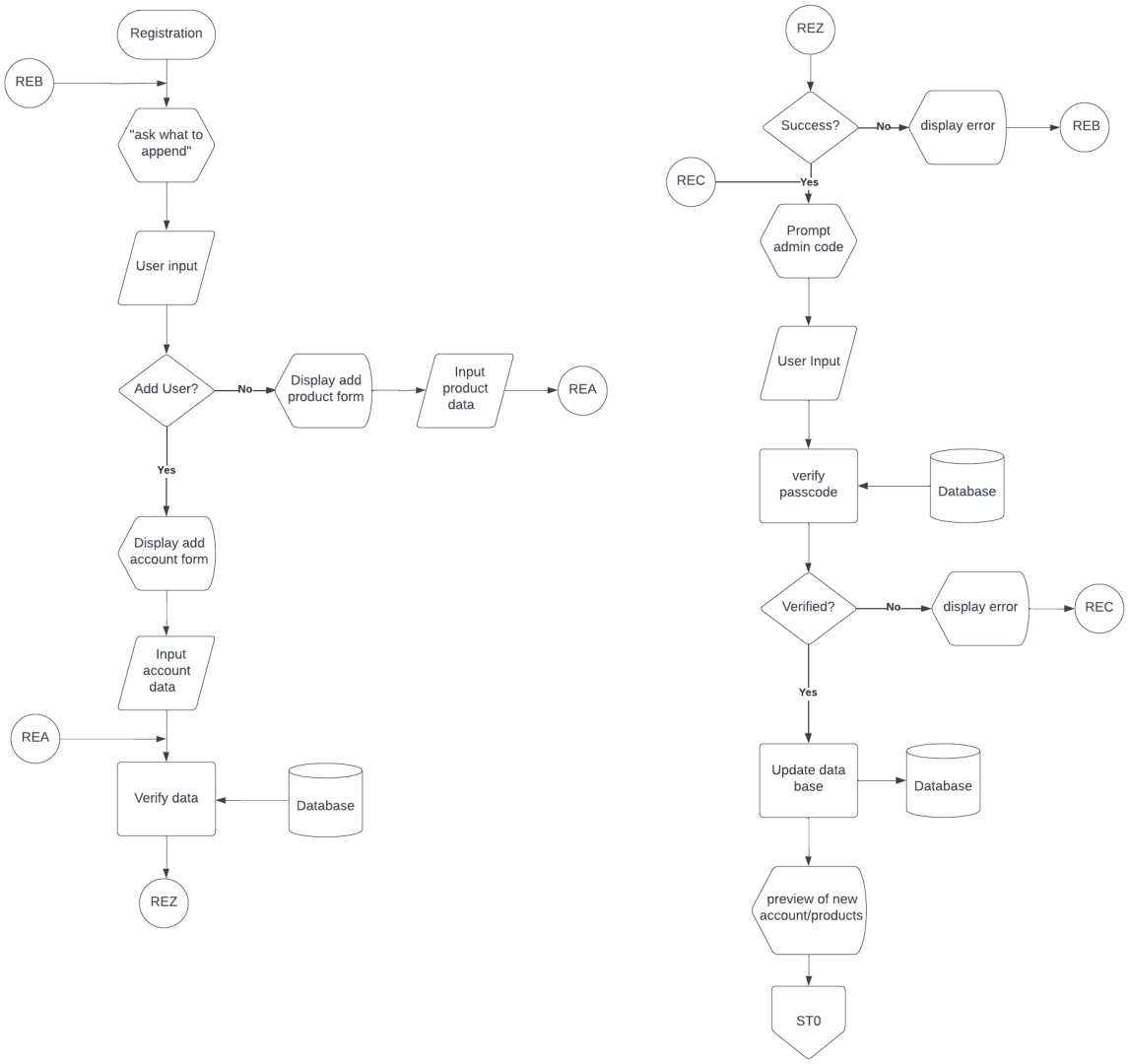

Figure 5 Registration Flowchart

Figure 6 Search Flowchart and Sales Management Flowchart

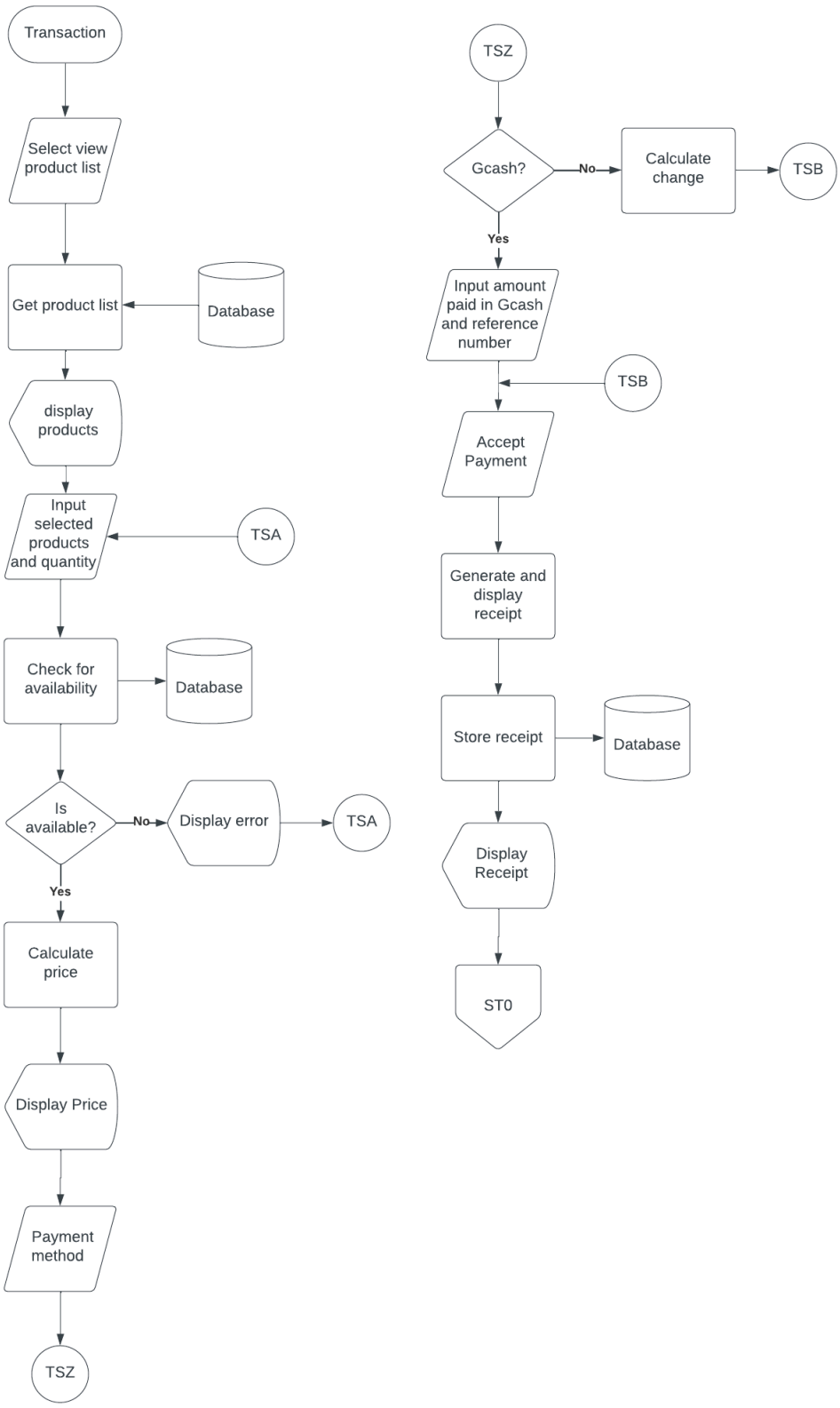

Figure 7 Transaction Flowchart

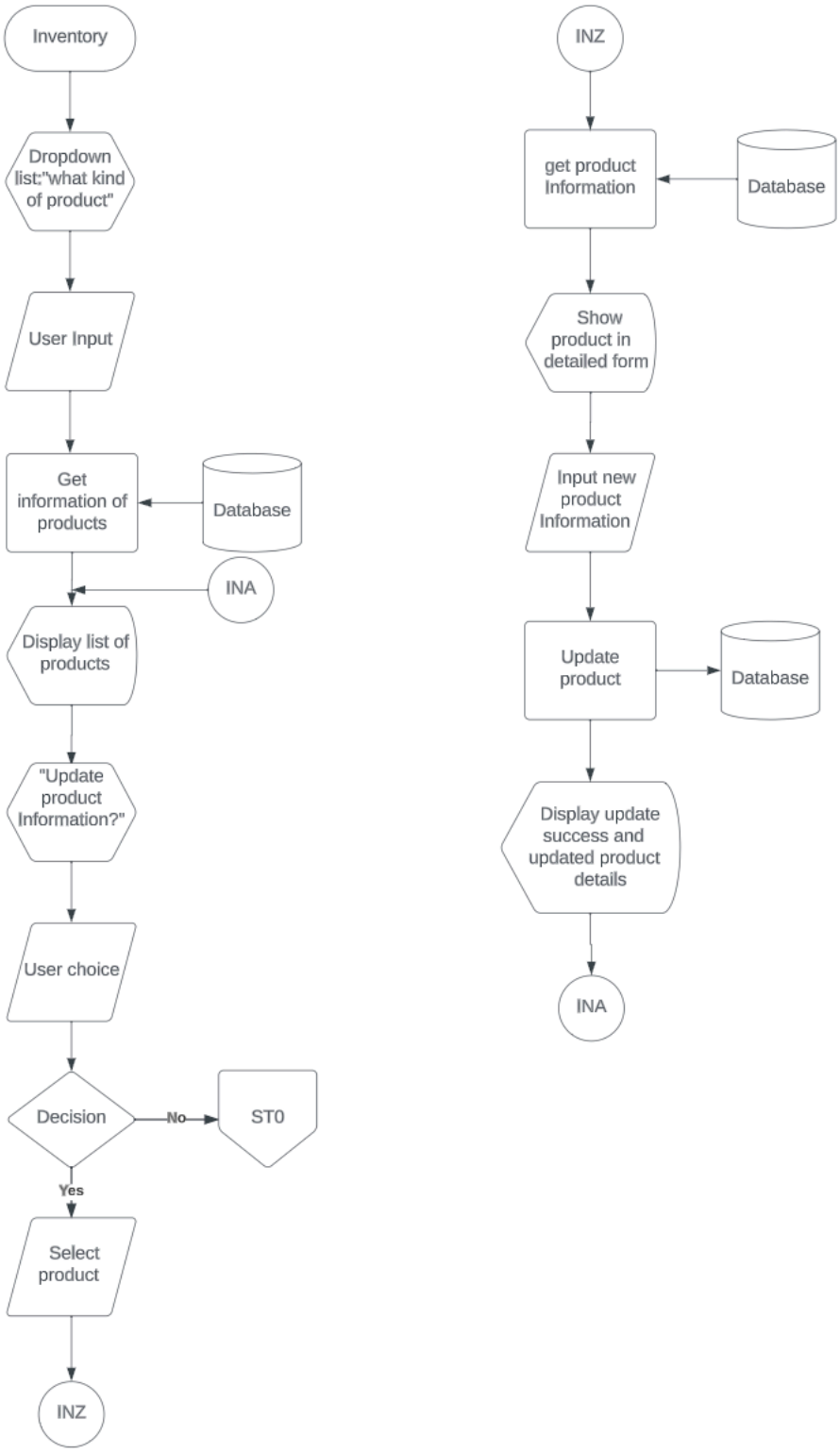

Figure 8 Inventory Flowchart

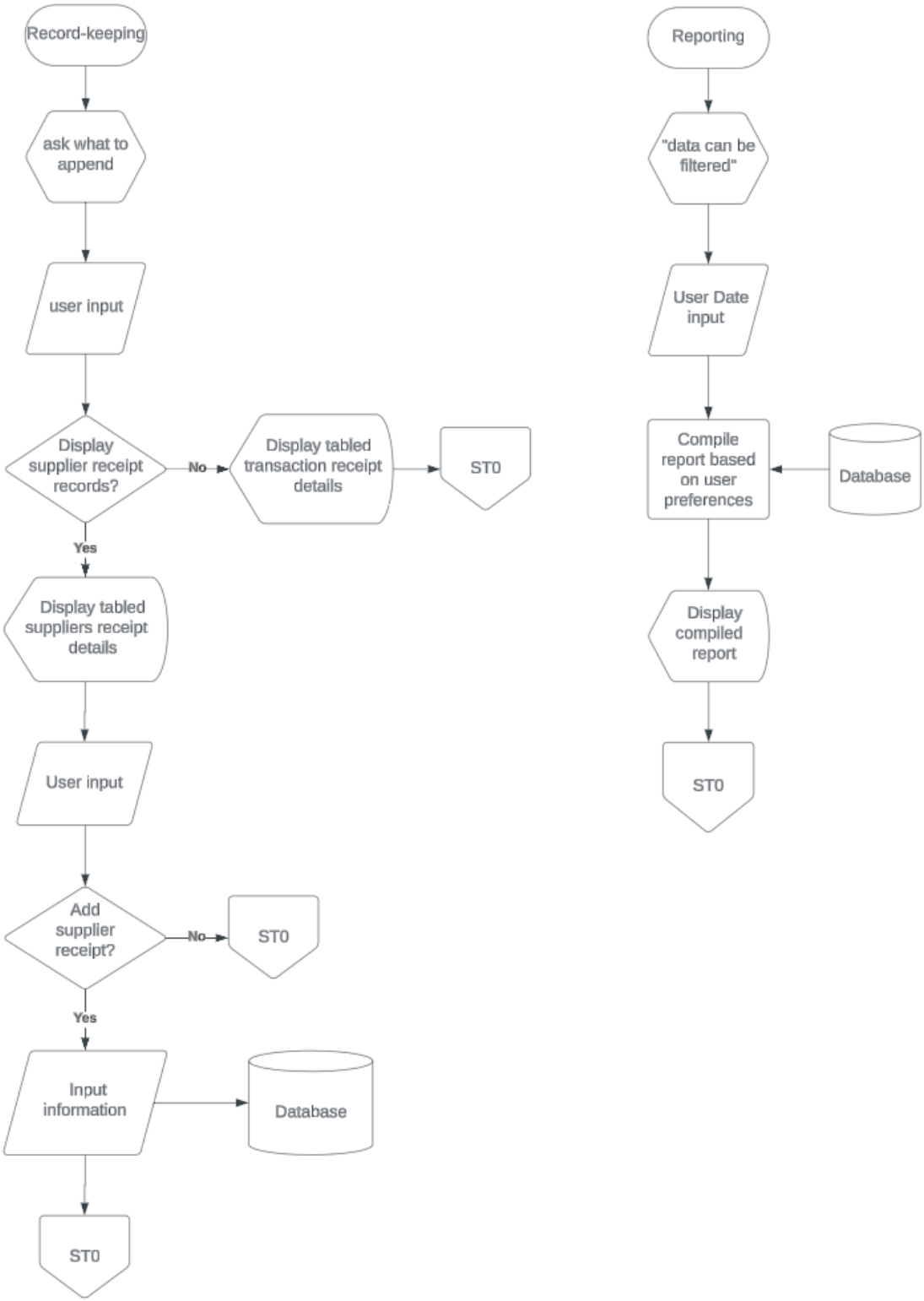

Figure 9 Record-Keeping Flowchart and Reporting Flowchart

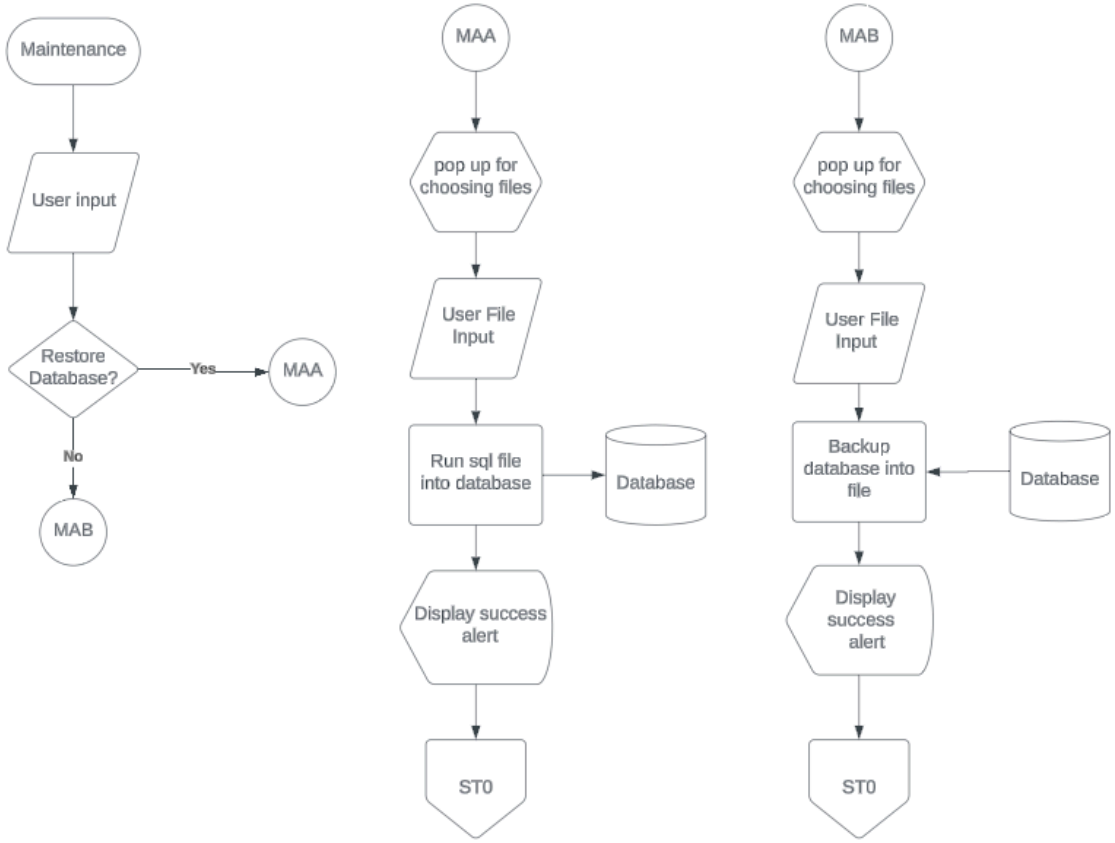

Figure 10 Maintenance Flowchart

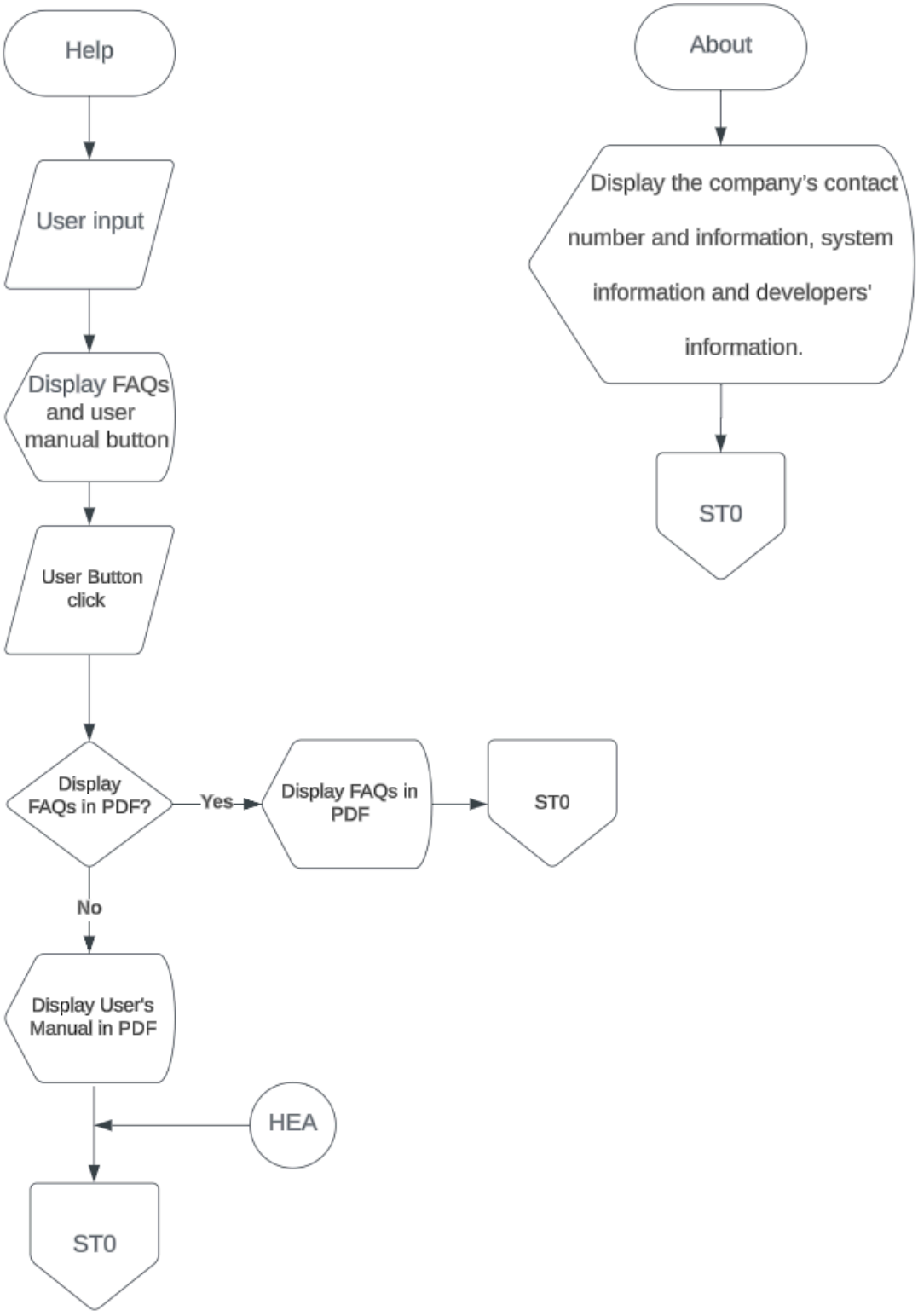

Figure 11 Help Flowchart and About Flowchart

Context Diagram of the Proposed System

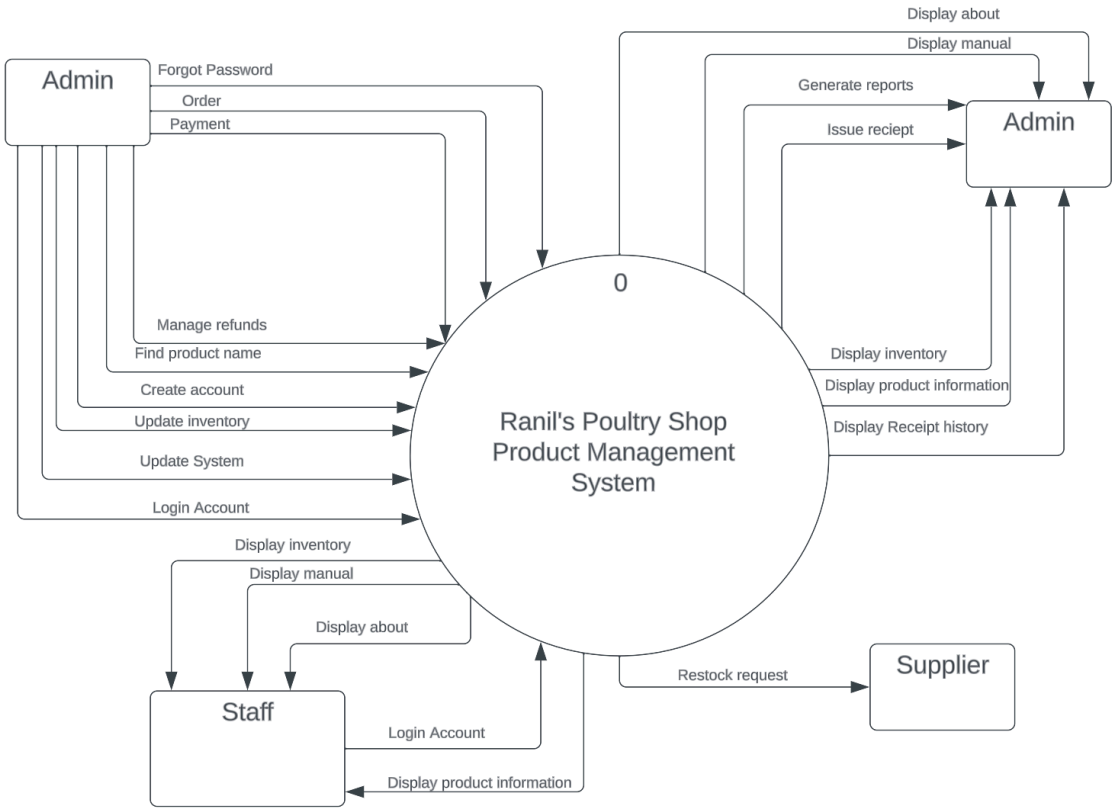

Figure 12 Context Diagram

Data Flow Diagram of the Proposed System

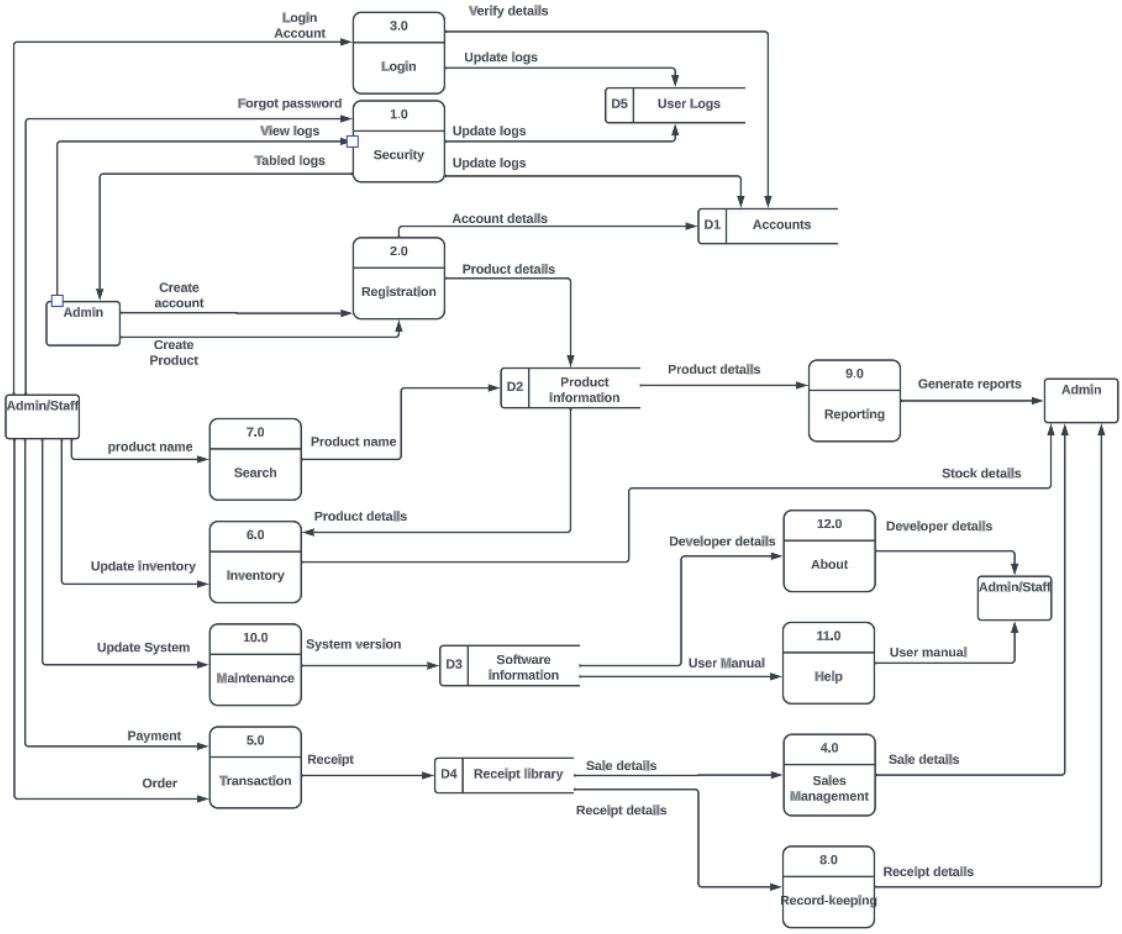

Figure 13 Data Flow Diagram

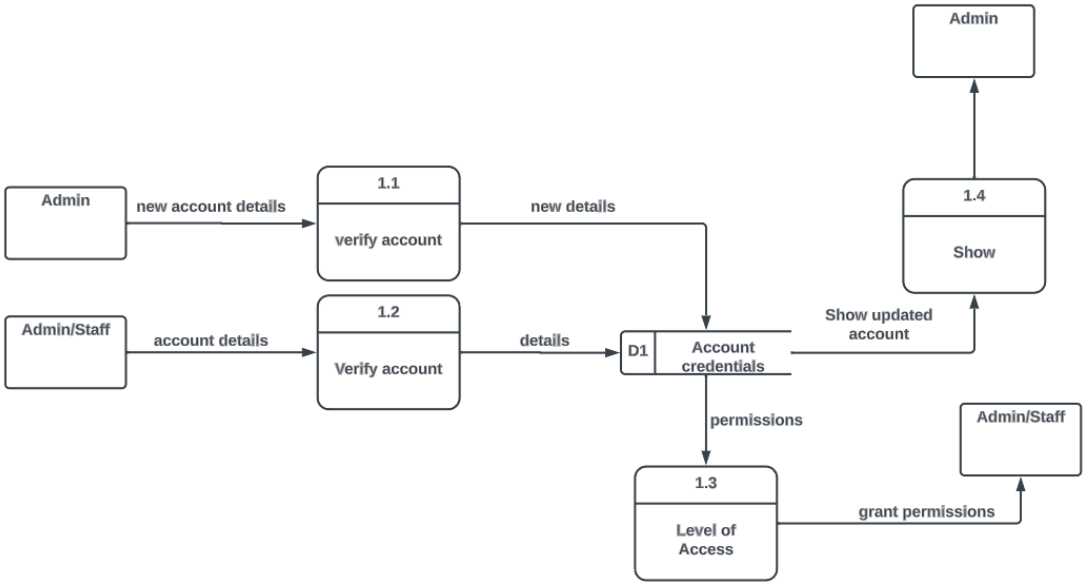

Figure 14 DFD - Security Module

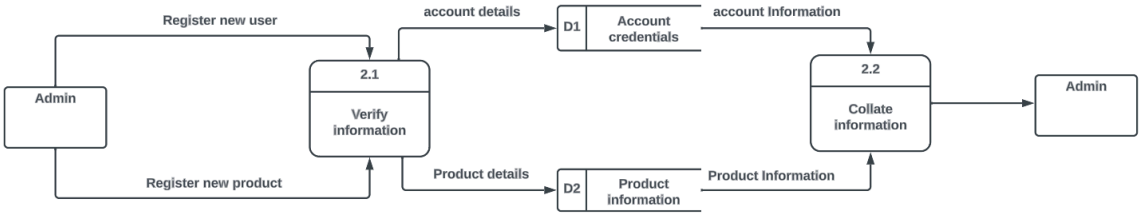

Figure 15 DFD - Registration Module

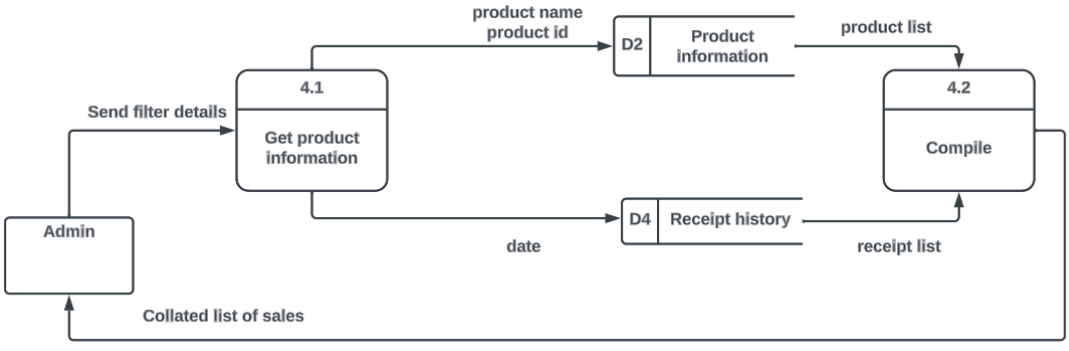

Figure 16 DFD - Sales Management Module

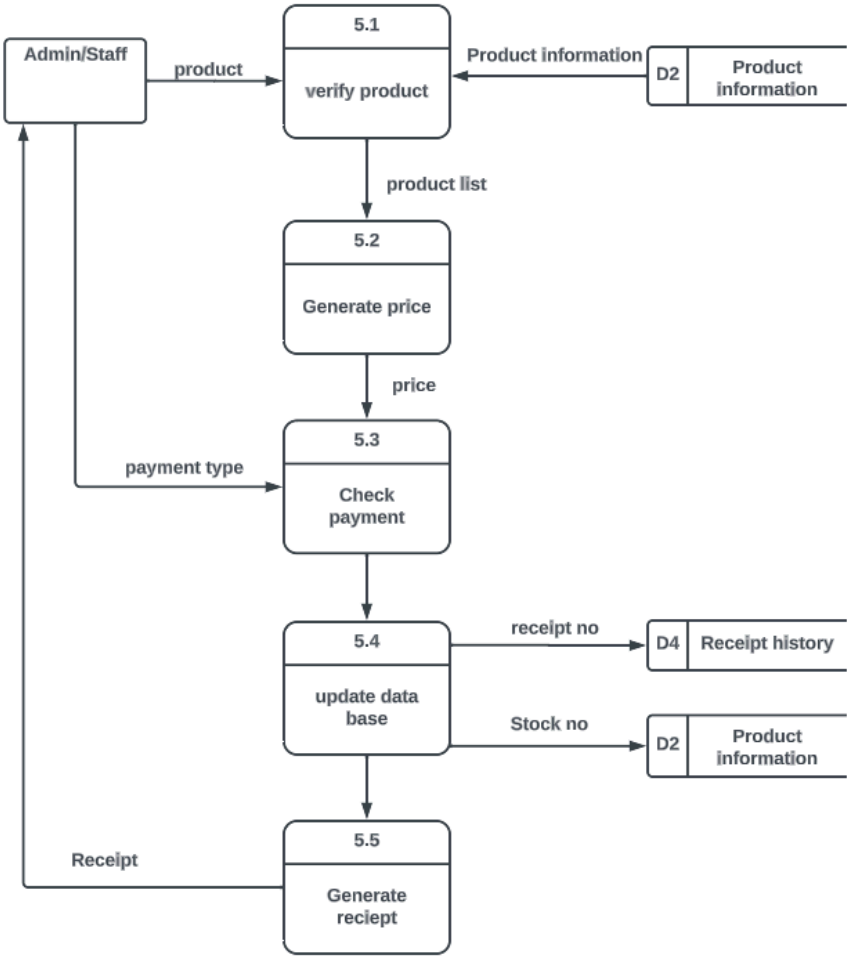

Figure 17 DFD - Transaction Module

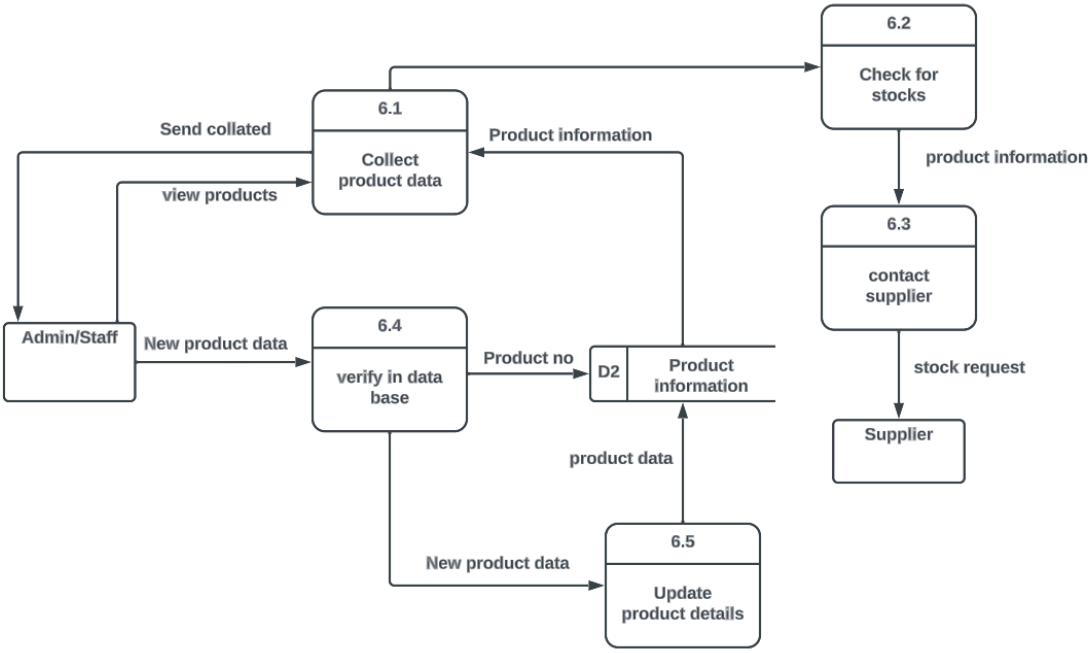

Figure 18 DFD - Inventory

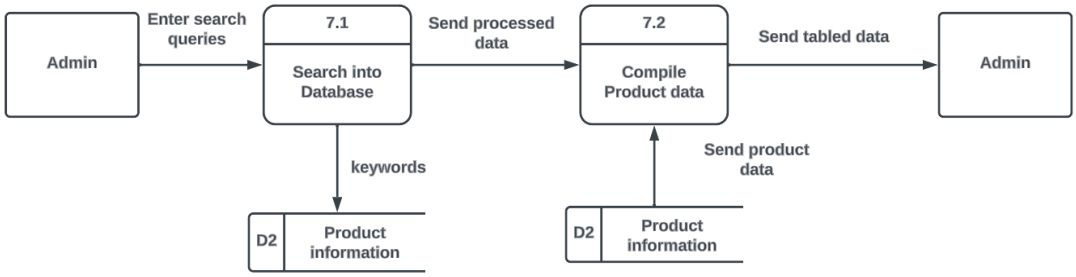

Figure 19 DFD - Search Module

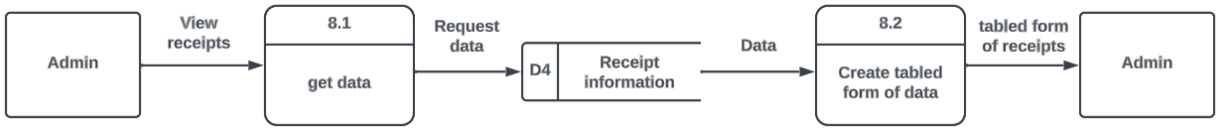

Figure 20 DFD - Record-Keeping Module

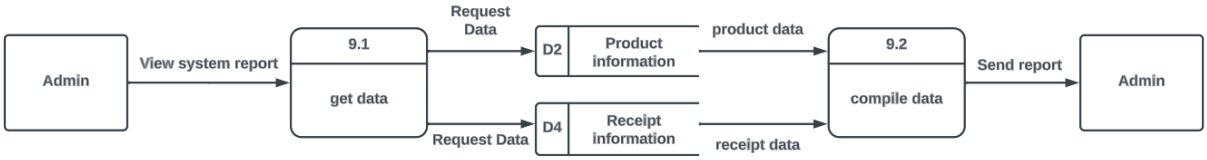

Figure 21 DFD - Reporting Module

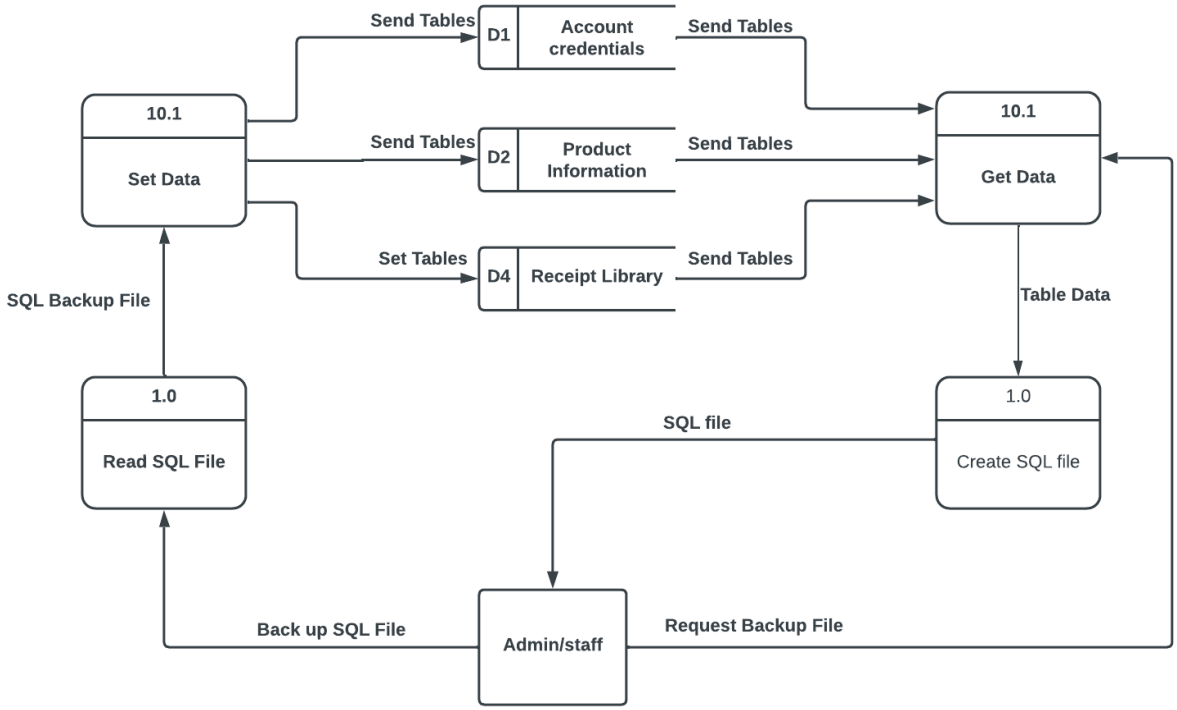

Figure 22 DFD - Maintenance Module

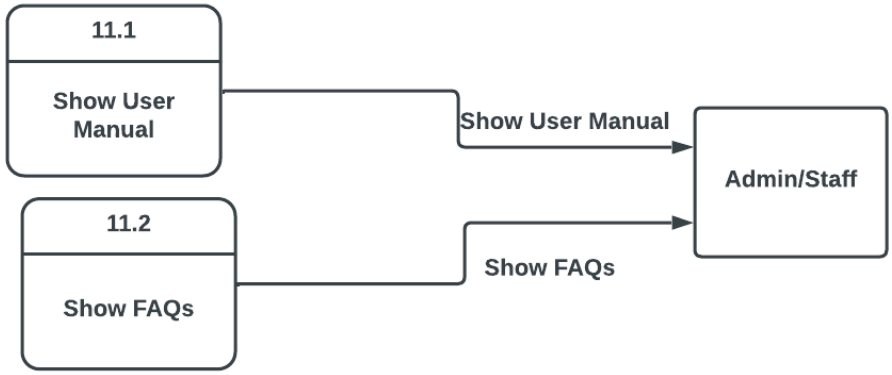

Figure 23 DFD - Help Module

Figure 24 DFD - About Module

Use Case Diagram

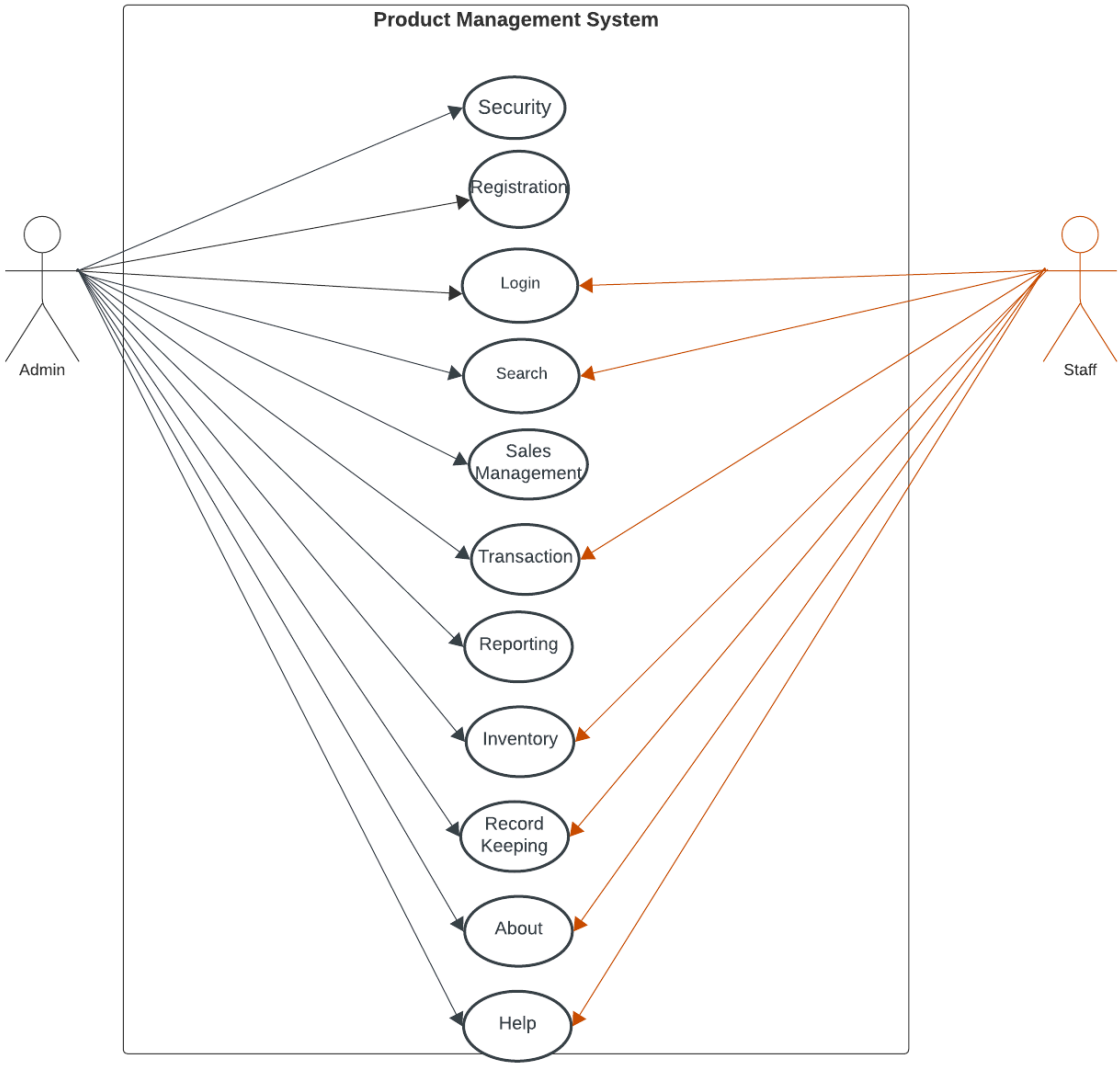

Figure 25 Use Case Diagram

Hierarchical Input, Process, and Output

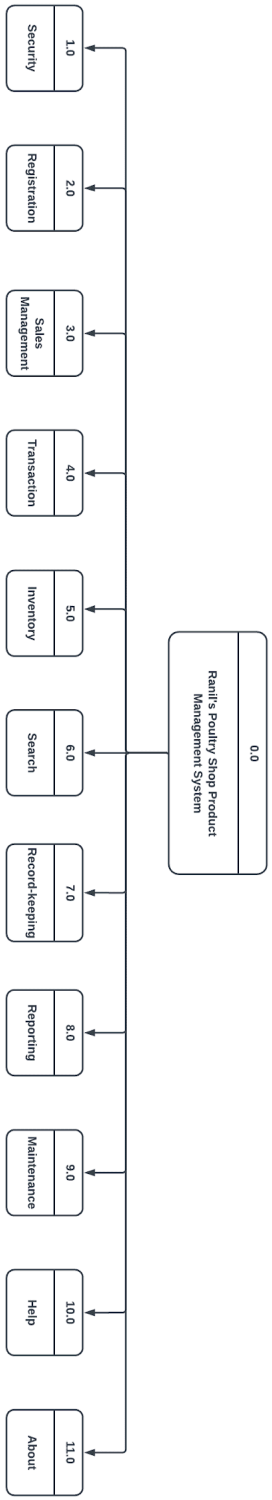

Figure 26 Hierarchical Input, Process, and Output

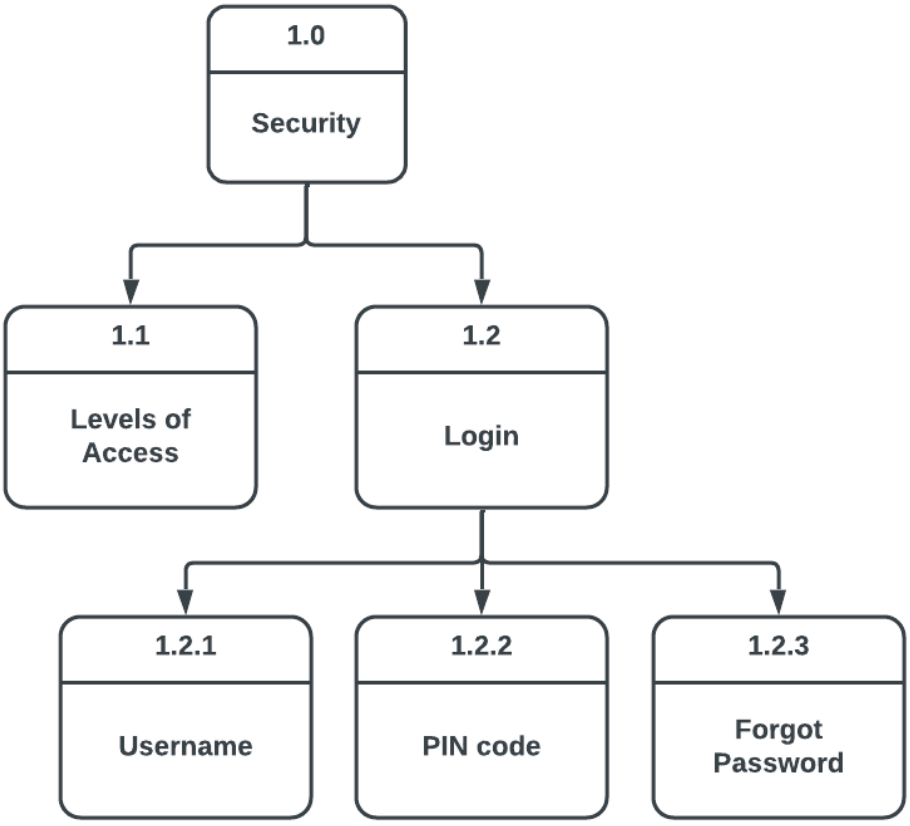

Figure 27 Security HIPO

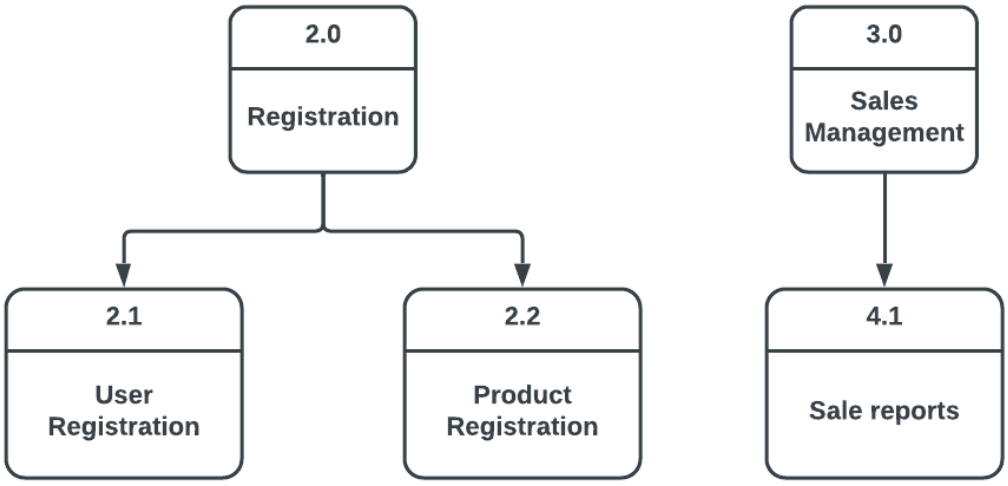

Figure 28 Registration HIPO and Sales Management HIPO

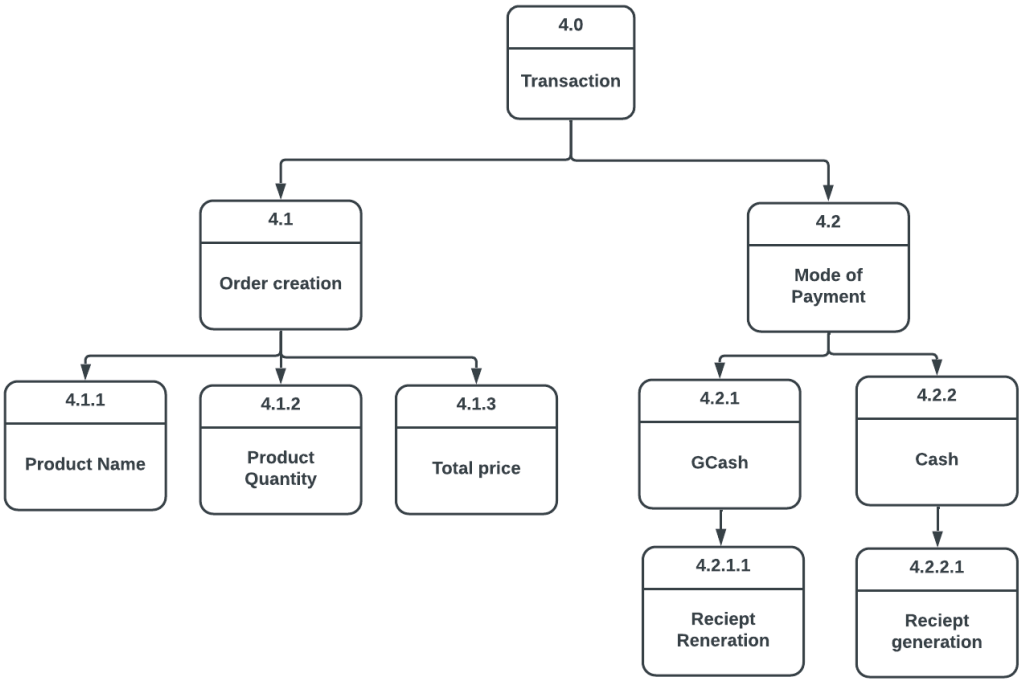

Figure 29 Transaction HIPO

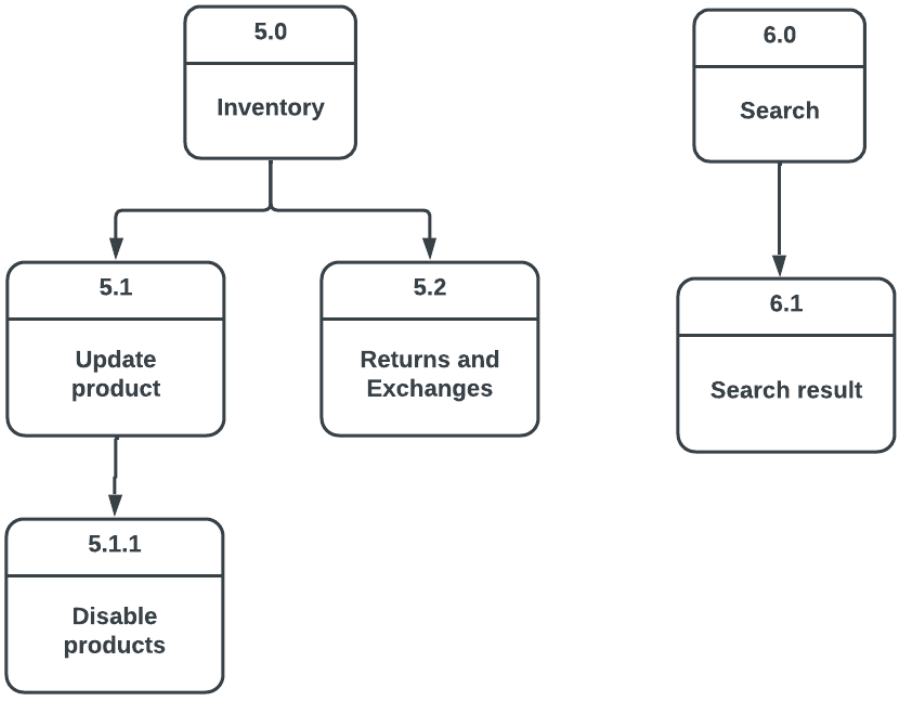

Figure 30 Inventory HIPO and Search HIPO

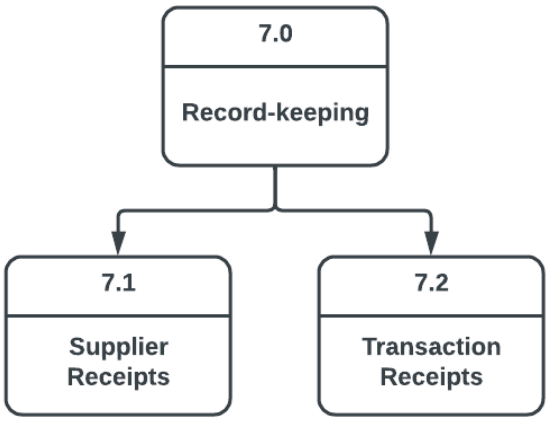

Figure 31 Record-Keeping HIPO

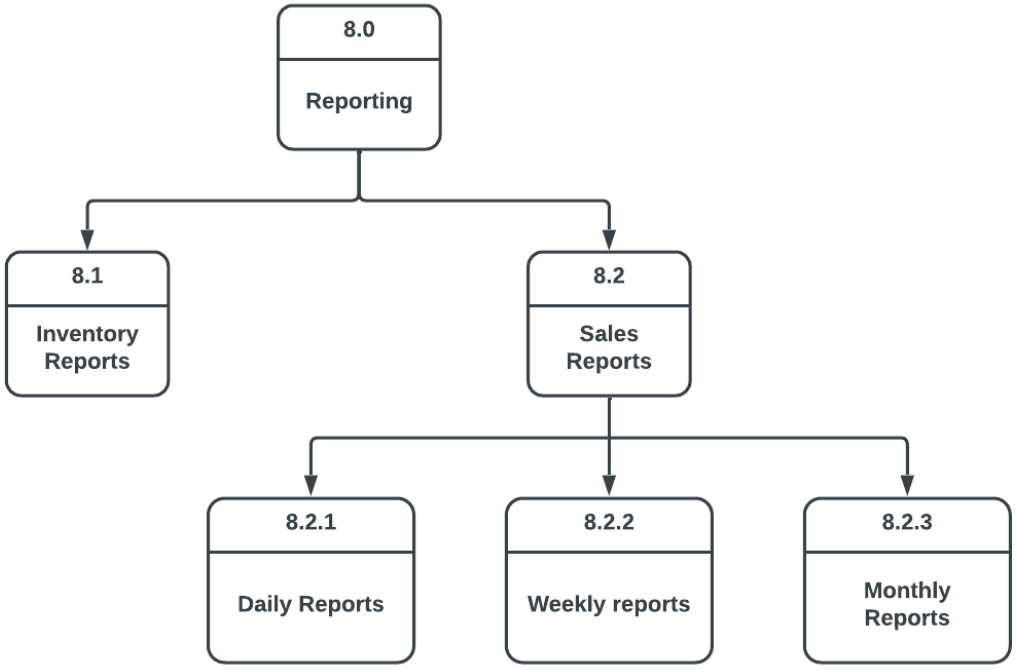

Figure 32 Reporting HIPO

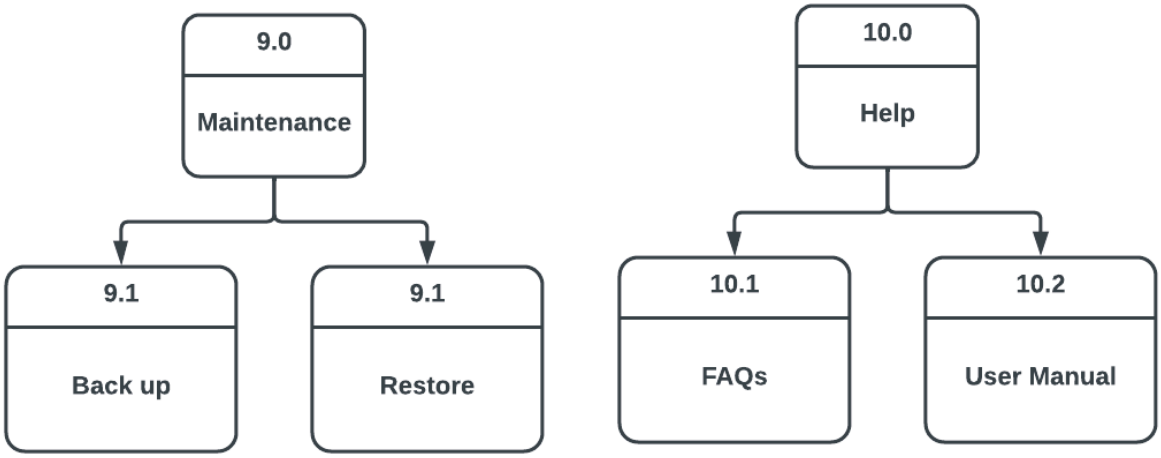

Figure 33 Maintenance HIPO and Help HIPO

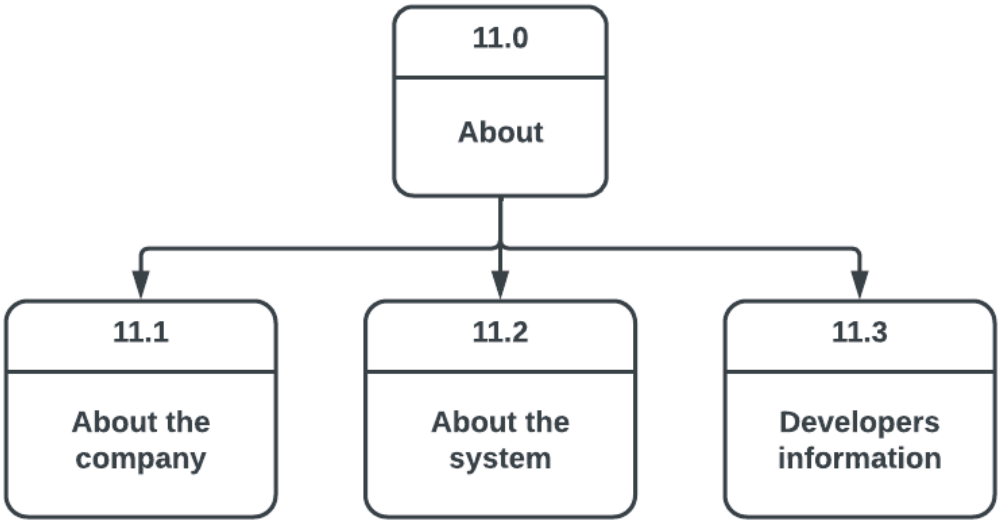

Figure 34 About HIPO

Input, Process, and Output

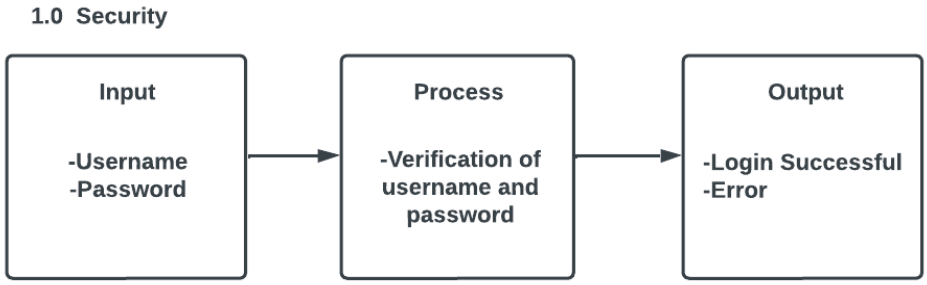

Figure 35 Security IPO

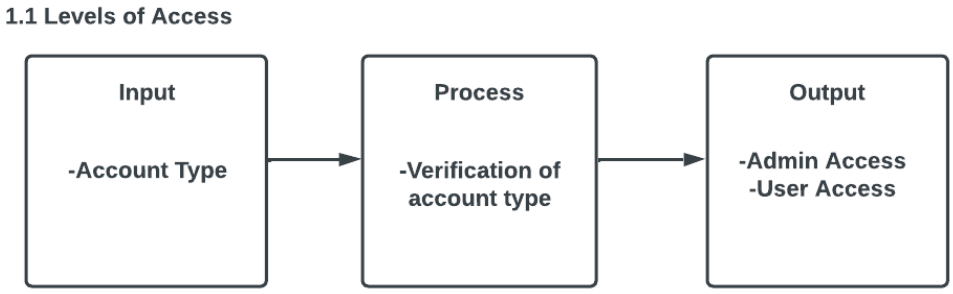

Figure 36 Level of Access IPO

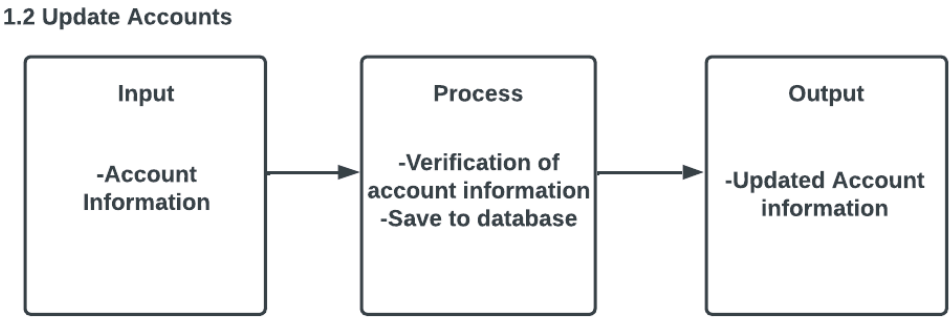

Figure 37 Update Accounts IPO

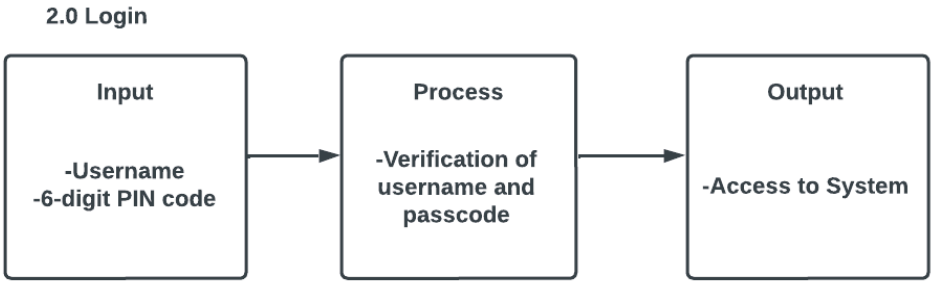

Figure 38 Login IPO

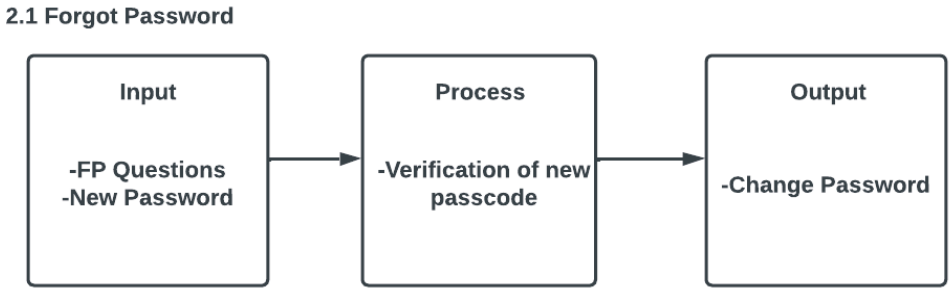

Figure 39 Forgot Password IPO

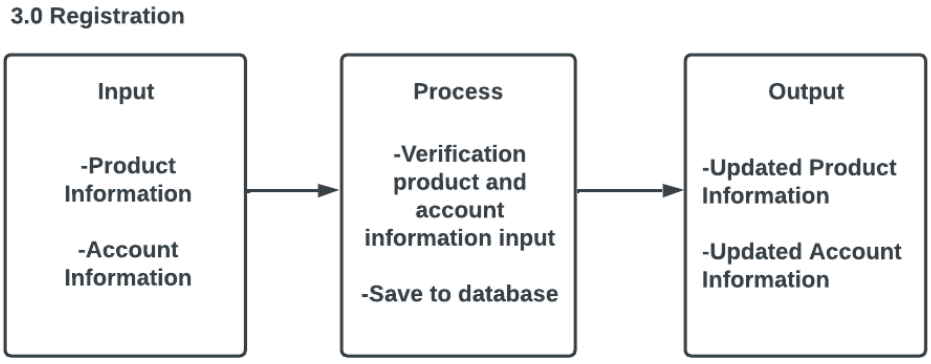

Figure 40 Registration IPO

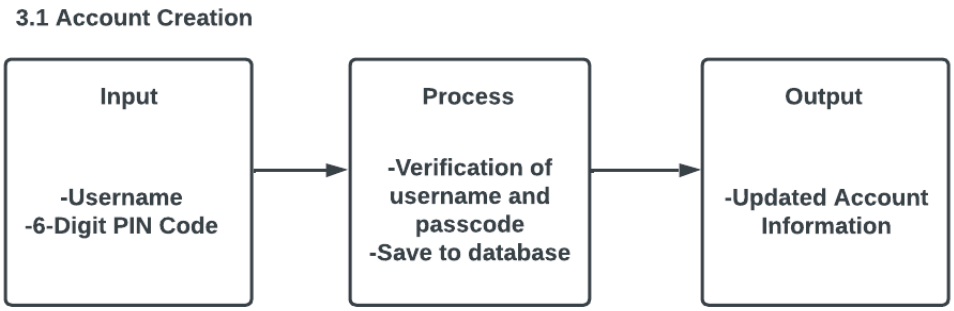

Figure 41 Account Creation IPO

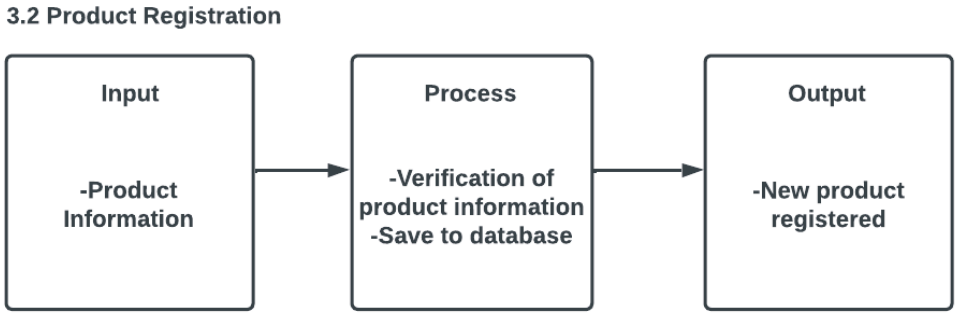

Figure 42 Product Registration IPO

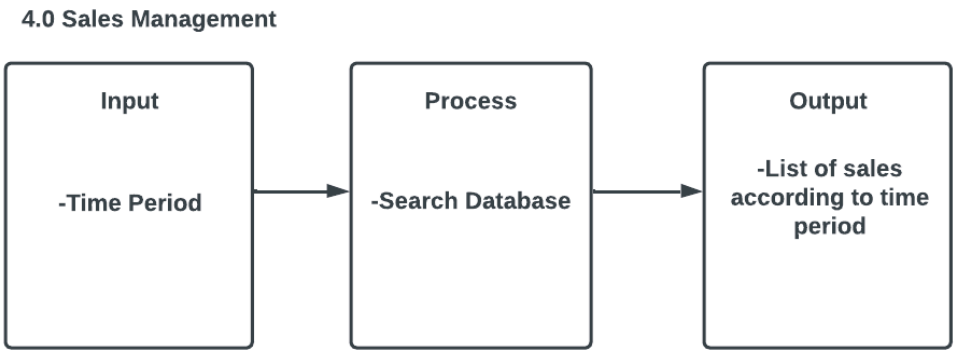

Figure 43 Sales Management IPO

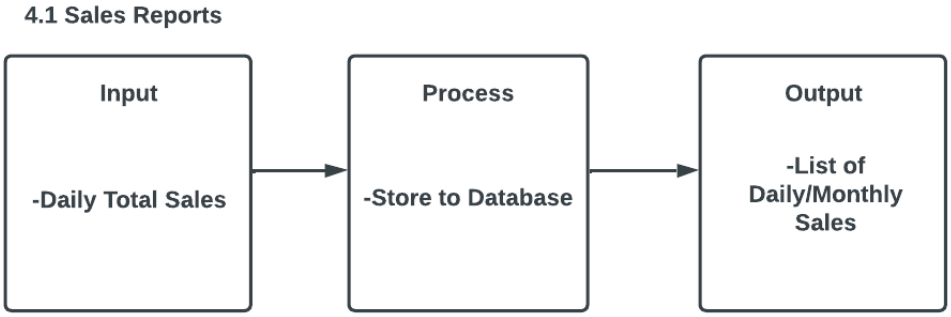

Figure 44 Sales Report IPO

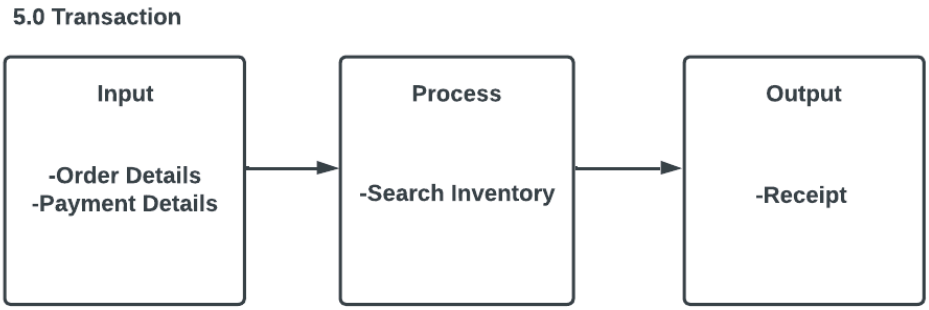

Figure 45 Transaction IPO

Figure 46 Order Creation IPO

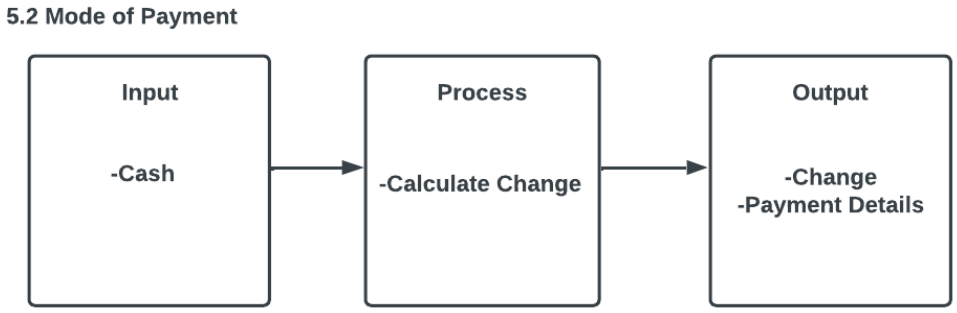

Figure 47 Mode of Payment IPO

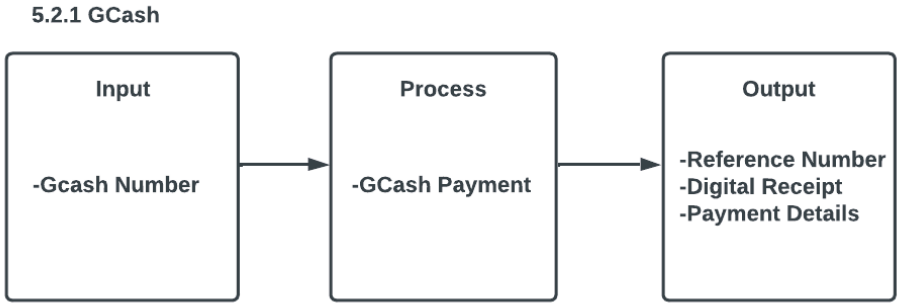

Figure 48 GCash IPO

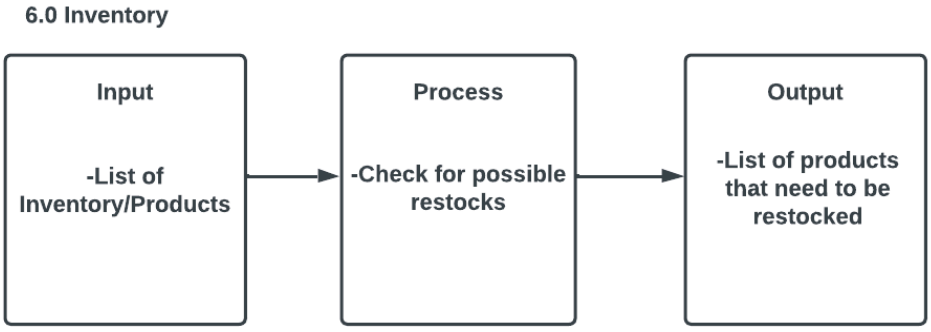

Figure 49 Inventory IPO

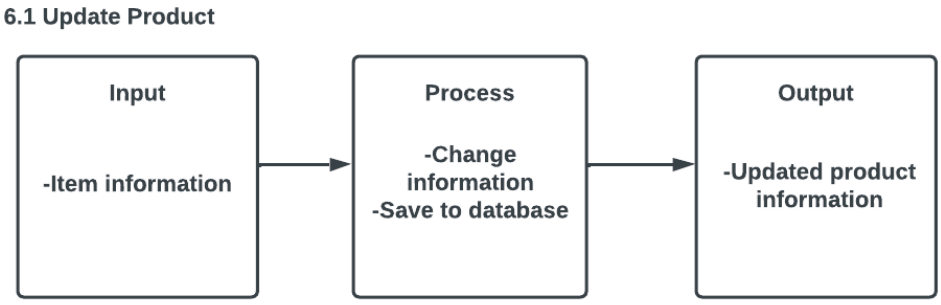

Figure 50 Update Product IPO

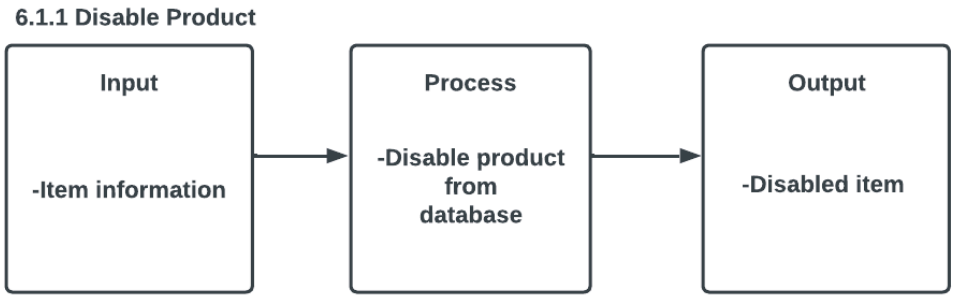

Figure 51 Disable Product IPO

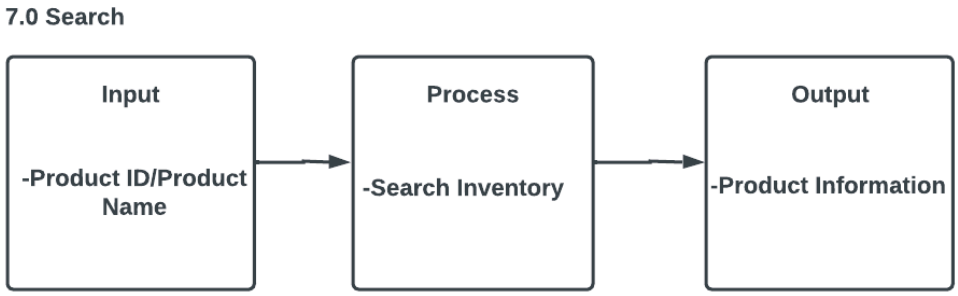

Figure 52 Search IPO

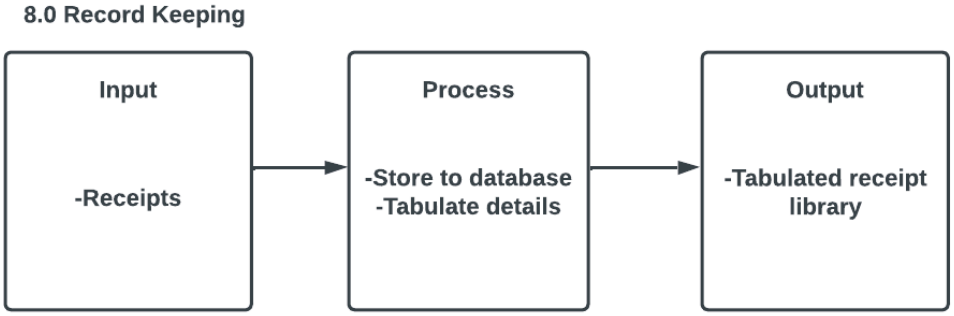

Figure 53 Record Keeping IPO

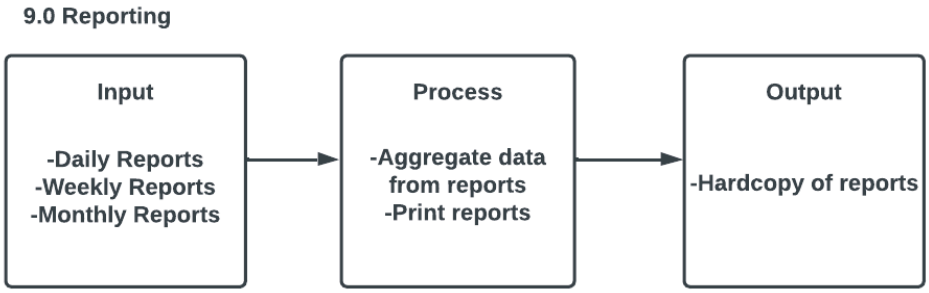

Figure 54 Reporting IPO

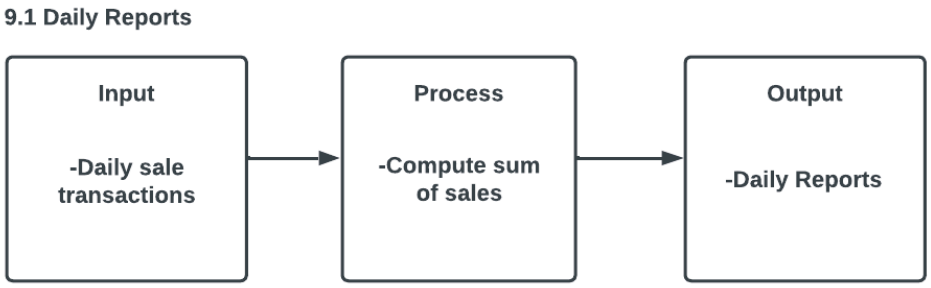

Figure 55 Daily Reports IPO

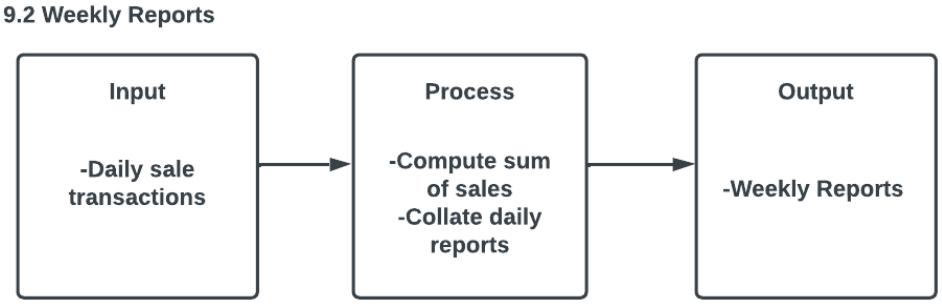

Figure 56 Weekly Reports IPO

Figure 57 Monthly Reports IPO

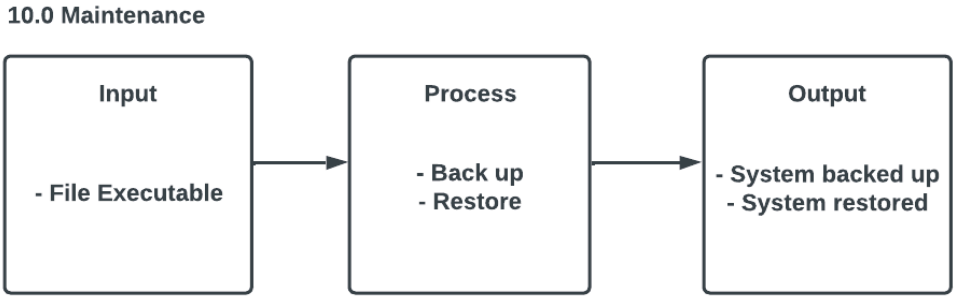

Figure 58 Maintenance IPO

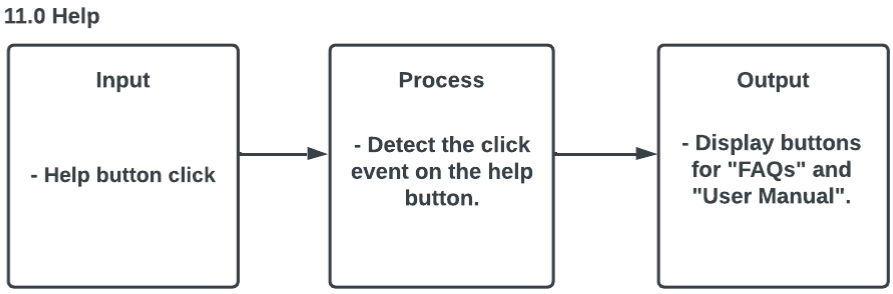

Figure 59 Help IPO

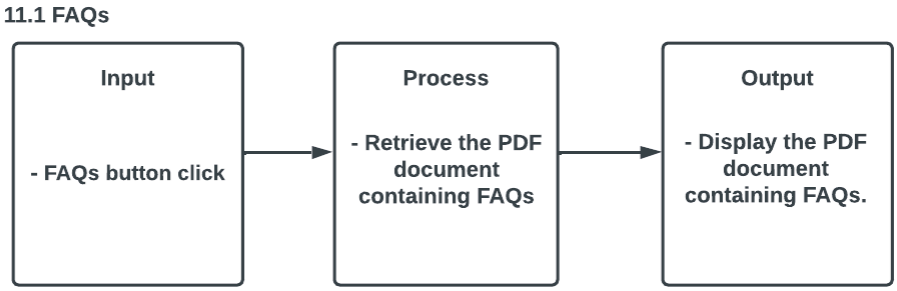

Figure 60 FAQs IPO

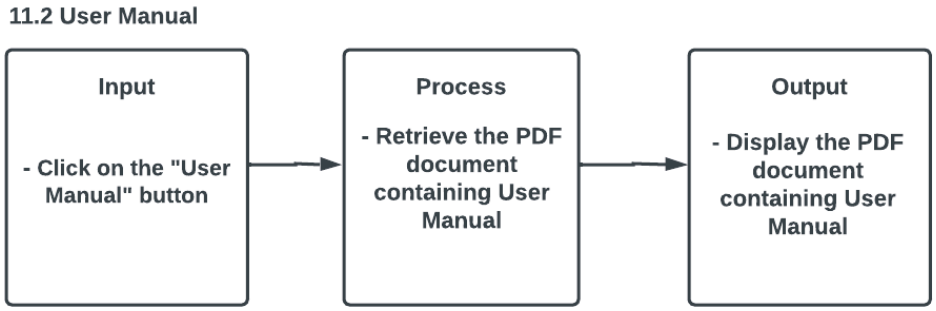

Figure 61 User Manual IPO

Entity Relationship Diagram (ERD)

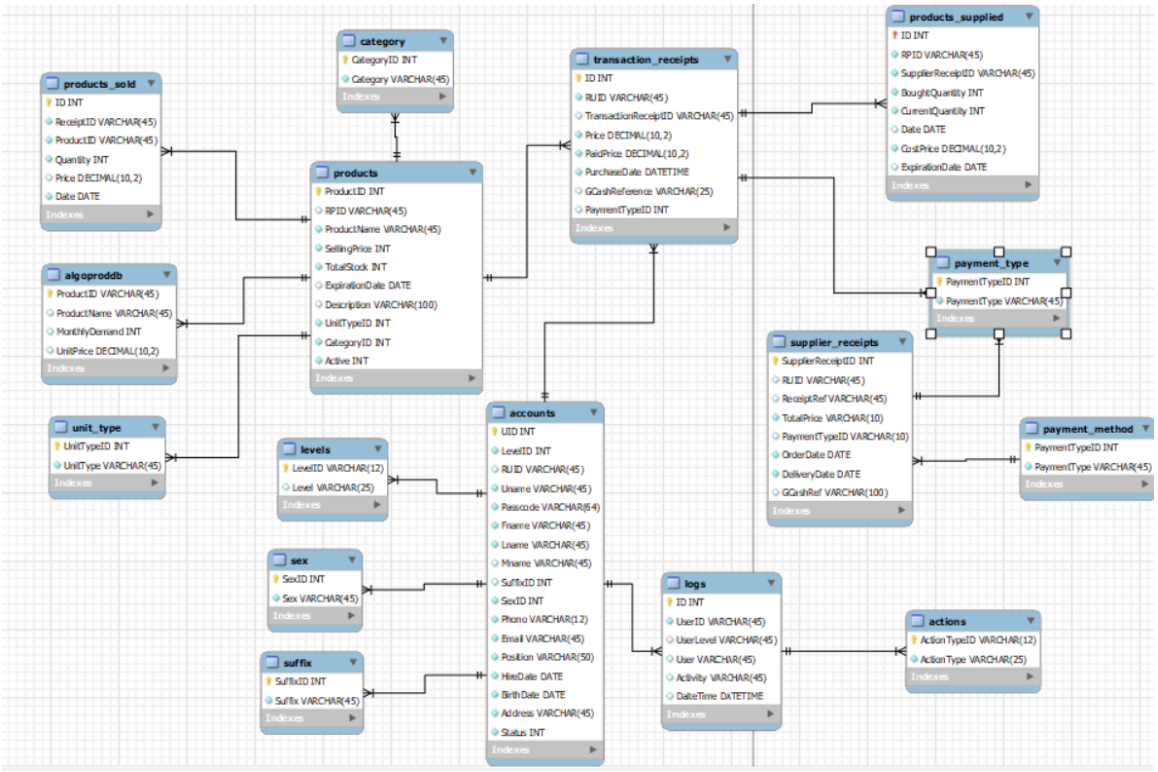

Figure 62 Entity Relationship Diagram

The entity relationship diagram for Ranil's poultry shop consists of several tables that will handle different kinds of data required for the proposed system. To be able to avoid data repetitions, insertion, and update anomalies, and to ensure database integrity, the entity relationship diagram is normalized. The diagram is composed of 11 normalized tables, each representing a name that identifies the contents of the said table. There are 4 major tables which are the Accounts, User logs, Receipts, and Products table, most of the system tasks interact with the said tables. The accounts table contains user credentials such as user ID, level ID, readable user ID, username, passcode, first name, last name, sex ID, phone number, email, position, hire date, birth date, and address. The user logs

table contains the user ID, user level, user, activity, and date/time. The Receipts table contains the receipt ID, user ID, product ID, price, purchase date, and GCash reference number. The products table contains the product ID, readable product ID, product name, selling price, total stock, expiration date, description, unit type ID, and category ID. These tables are vital for the normal operation of the proposed system, as certain modules in the system such as the transaction, sales management, record-keeping, reporting, search, and inventory modules rely on these tables for quick access to information. Other tables such as the Activity, Levels, Sex, product type, quantity type, and payment type tables are created to normalize the entity relationship diagram. These tables mostly assign an ID for a specific value to avoid redundancies in the diagram.

Screen Designs

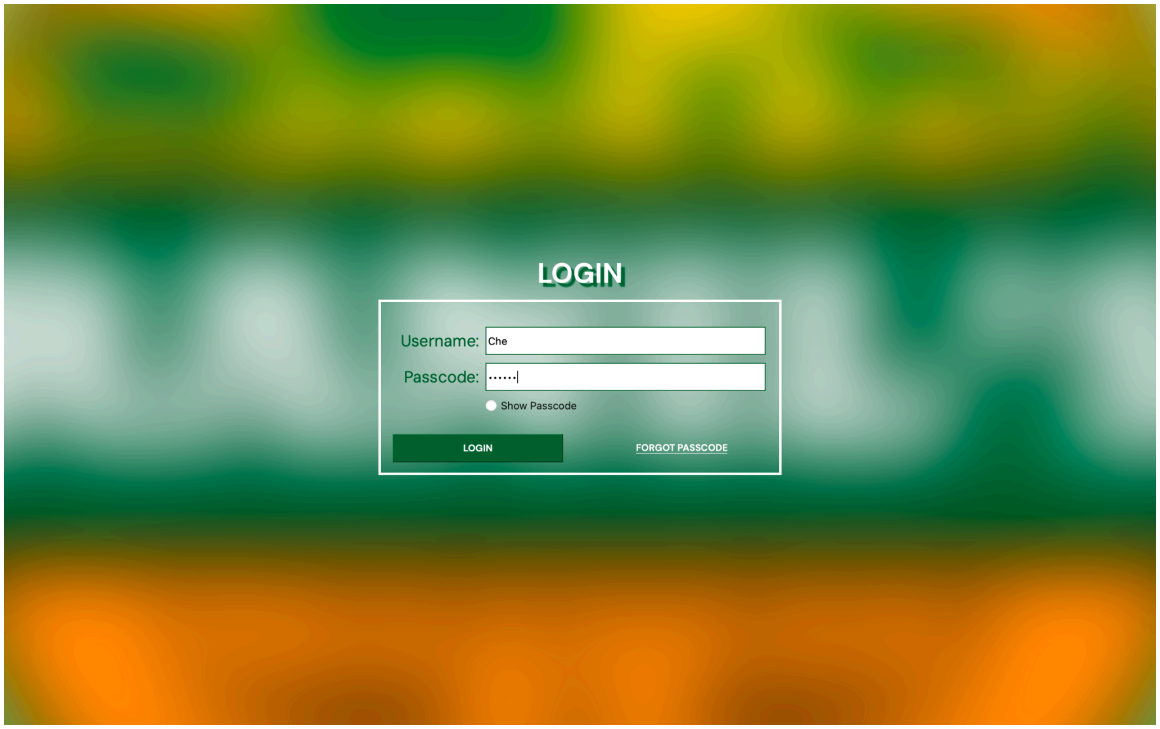

Figure 63 Login

This is where the user will log in to their accounts.

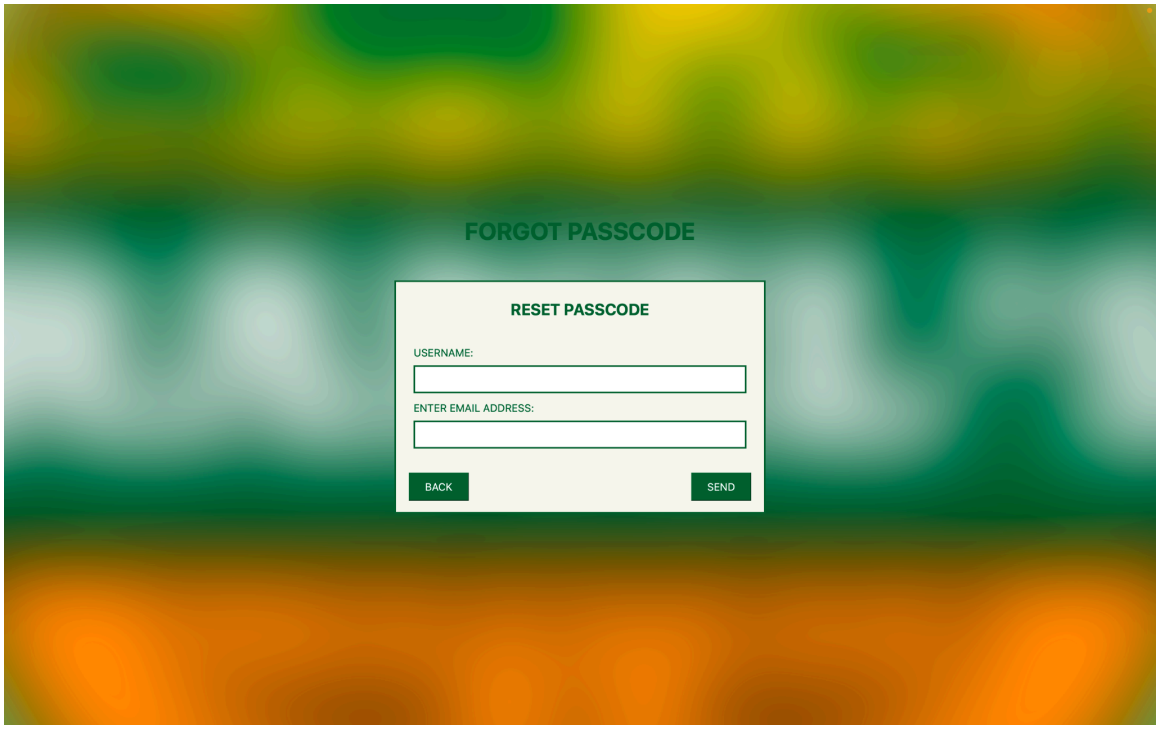

Figure 64 Forgot Passcode

The system will display a forgot password form when the “forgot password” button is clicked on the above image.

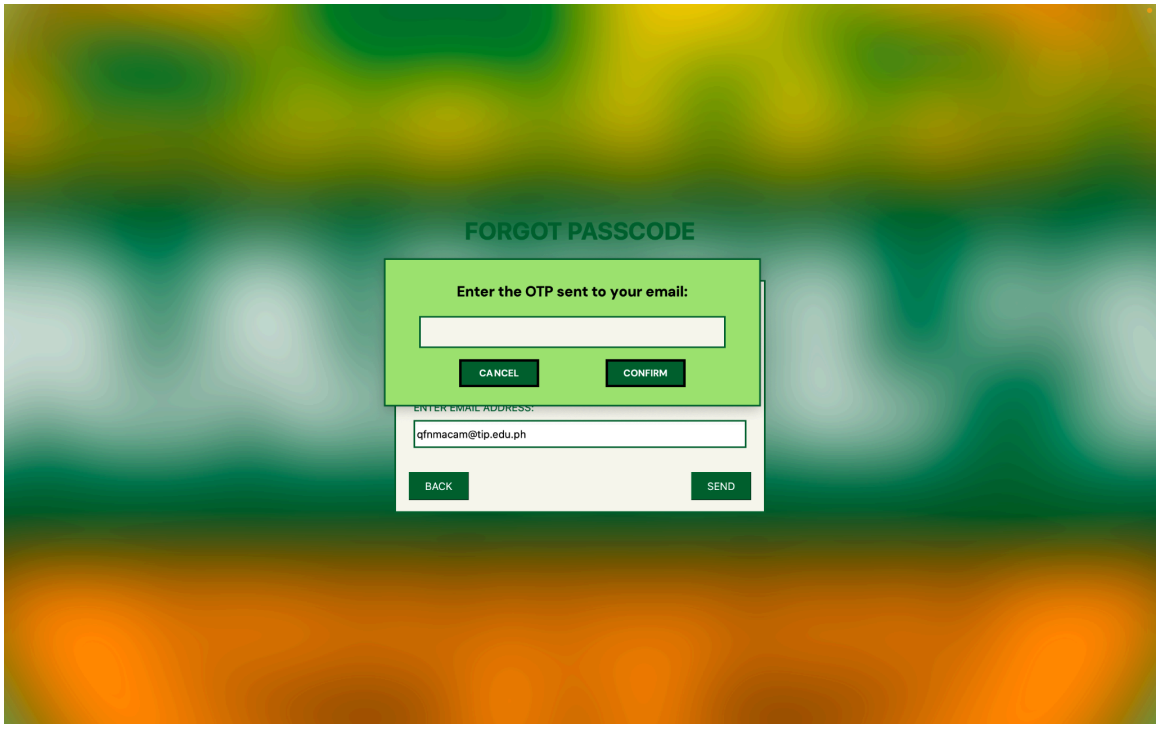

Figure 65 Forgot Password (Verification)
A pop-up window where the user will enter the verification code sent to their backup email to have their password changed.

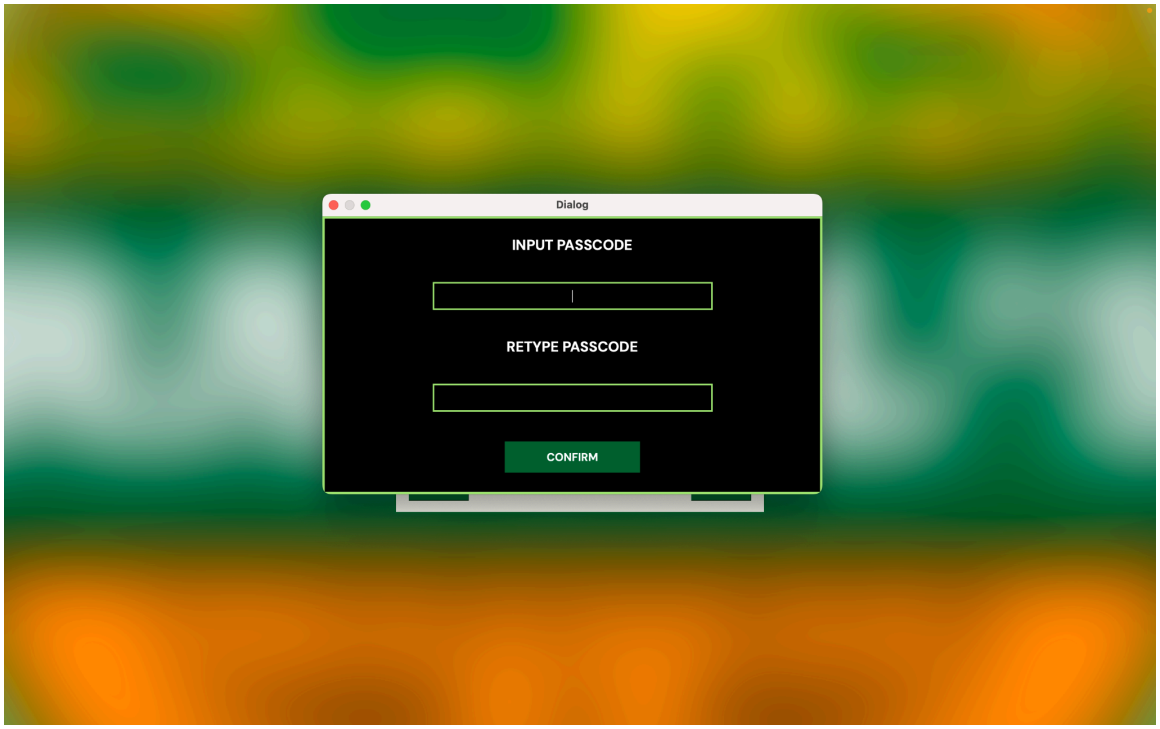

Figure 66 Forgot Password (Reset password)
A reset password form will be displayed when the verification is successful so the user can create a new password.

Figure 67 Home Page (Main Screen)

This is the main screen that the system will display after a successful login.

Figure 68 Option

The options page is where the user will click the three lines on the upper left corner of the screen to choose different options to navigate.

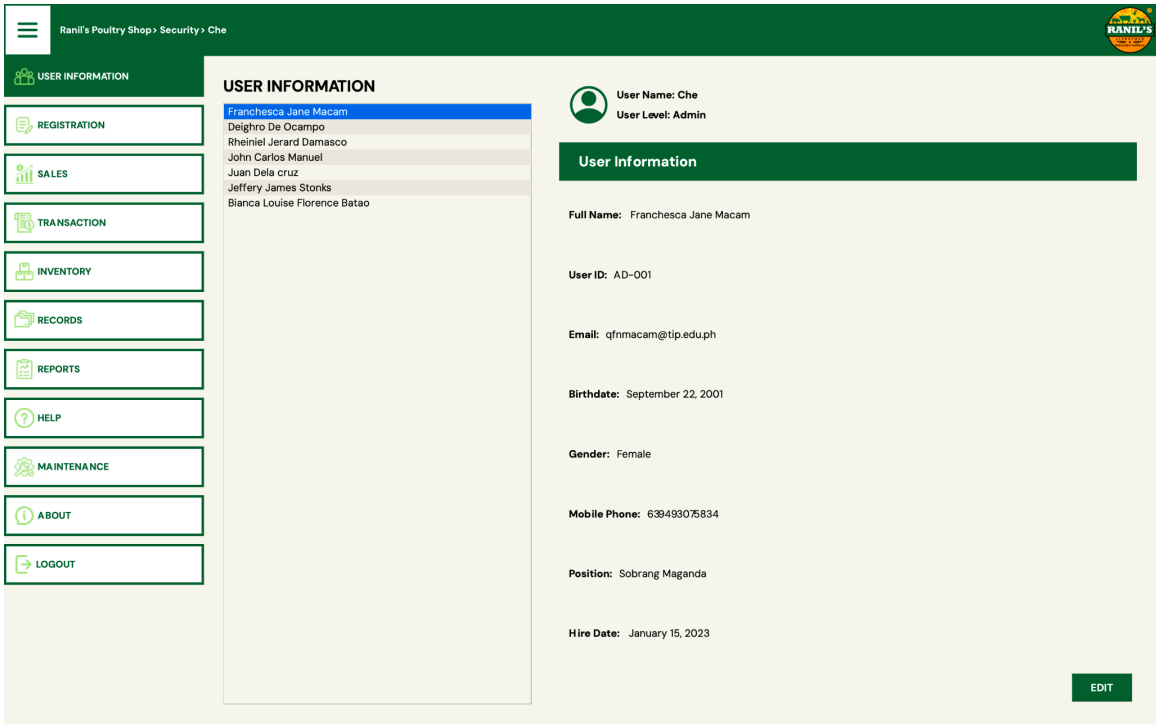

Figure 69 User information

User information page if the user clicks the "user information" button. When the user admin on a specific user information, the system will display detailed information about the specific user.

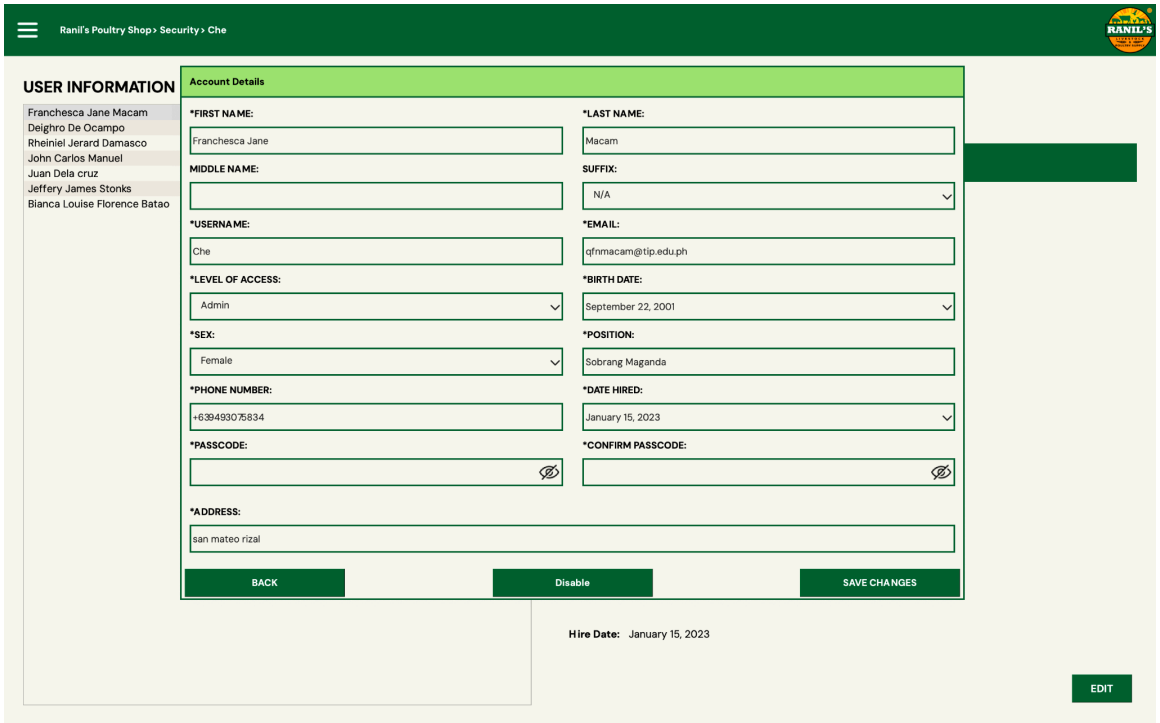

Figure 70 Edit User Information

The admin can edit the user information if he/she clicks the edit button.

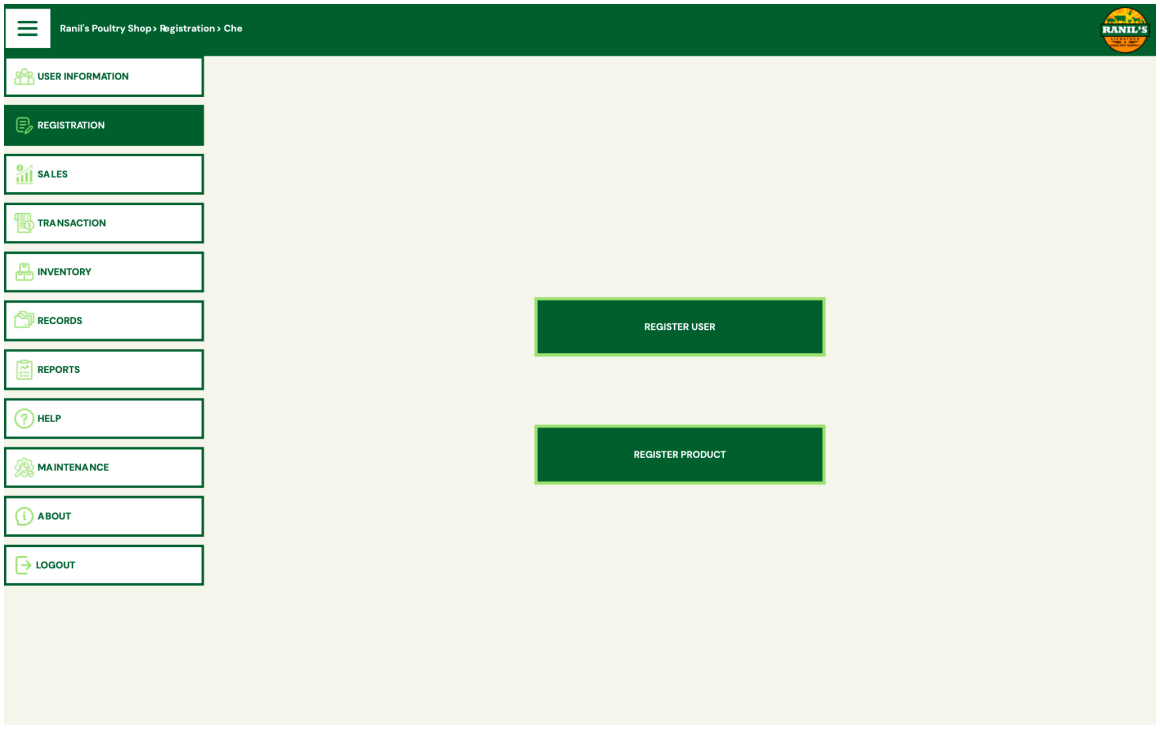

Figure 71 Registration

Registration page if the user clicks on the registration button will display the "register user" and "register product" buttons.

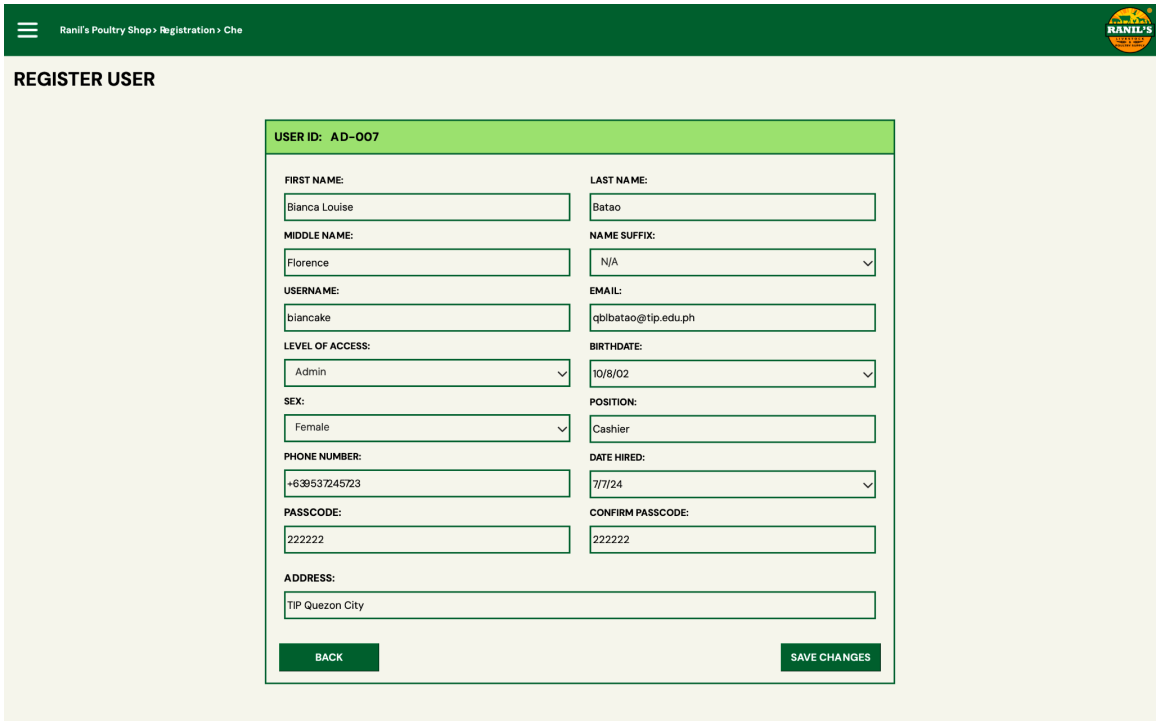

Figure 72 Register User

The system will display a register user form if the admin clicks the "register user" button.

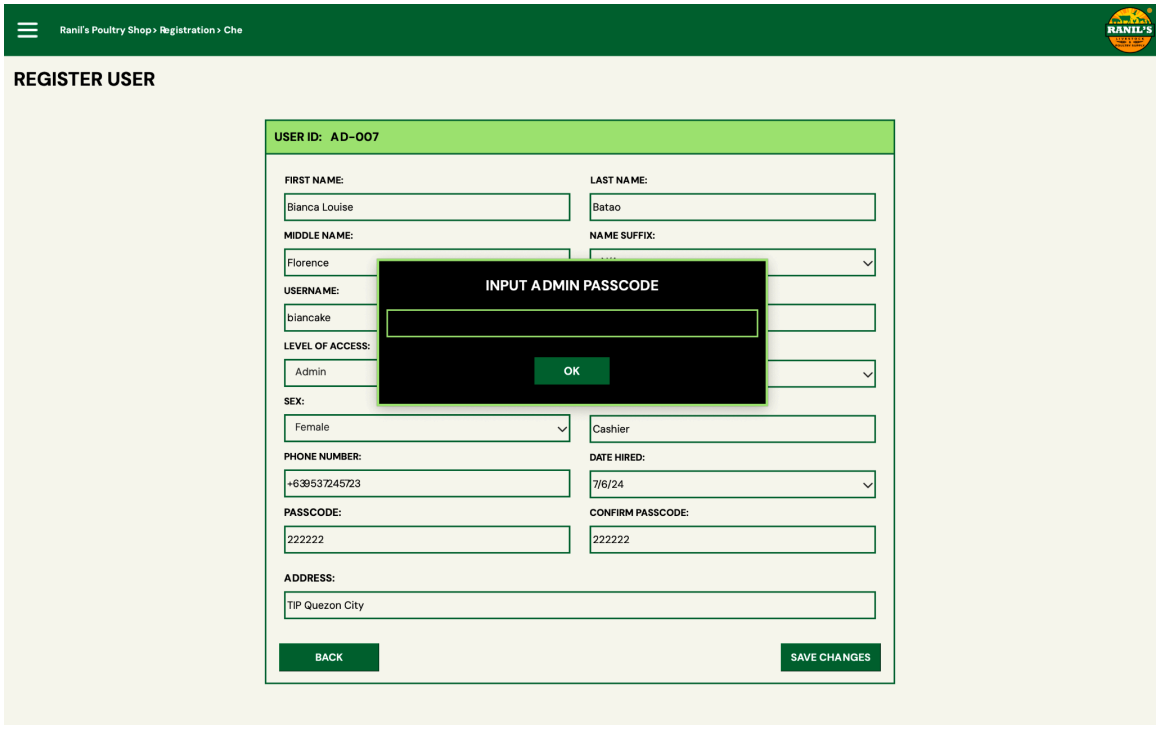

Figure 72 Verification - Register User

The system will display an input passcode form to verify the changes.

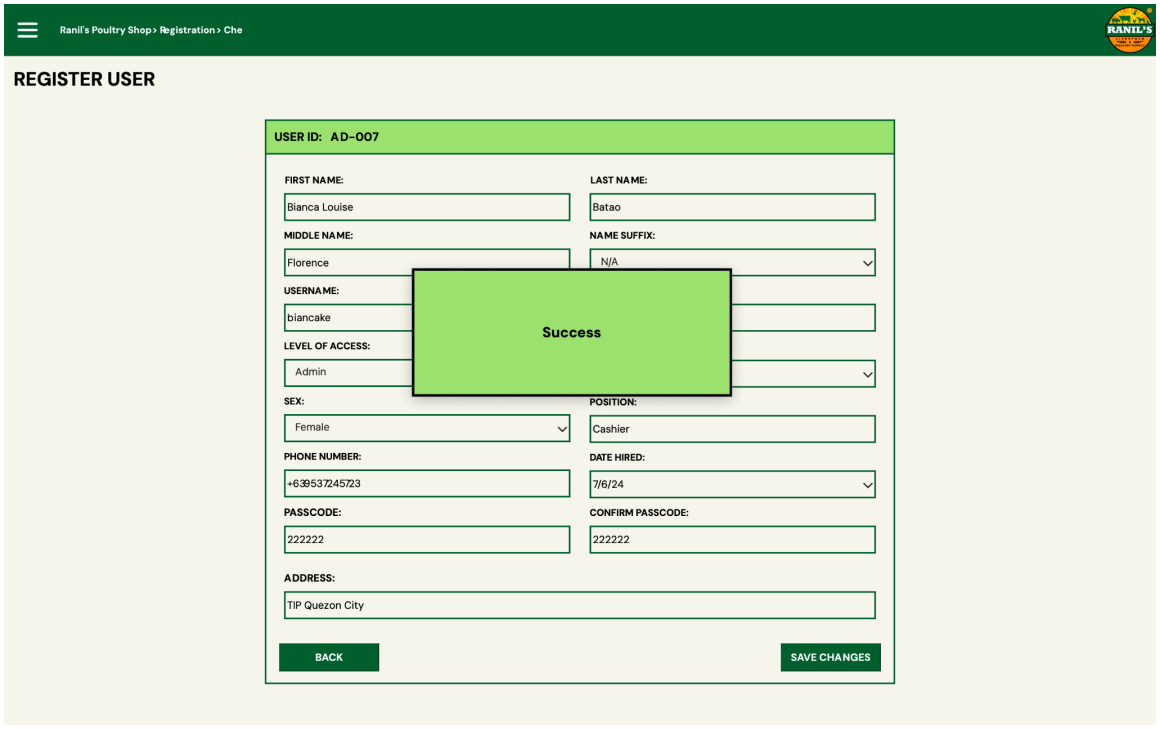

Figure 73 Output - Register User

The system will display an output if the registration is successful.

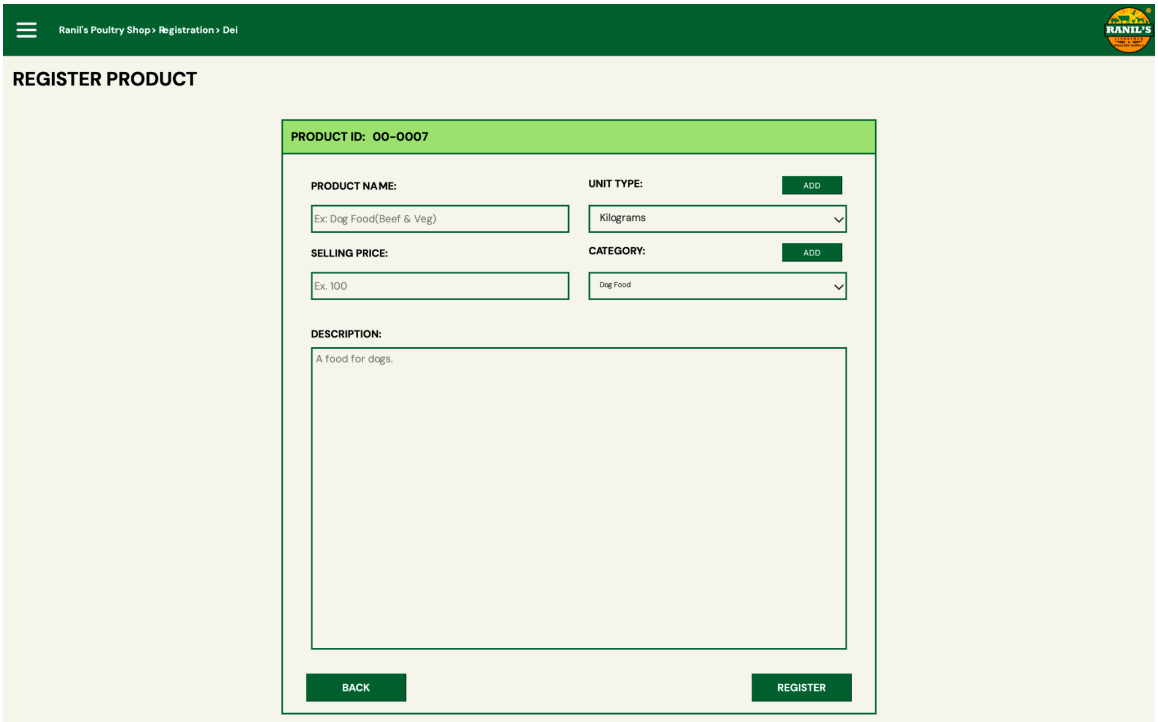

Figure 74 Register Product

The system will display a register product form if the admin clicks the "register product" button.

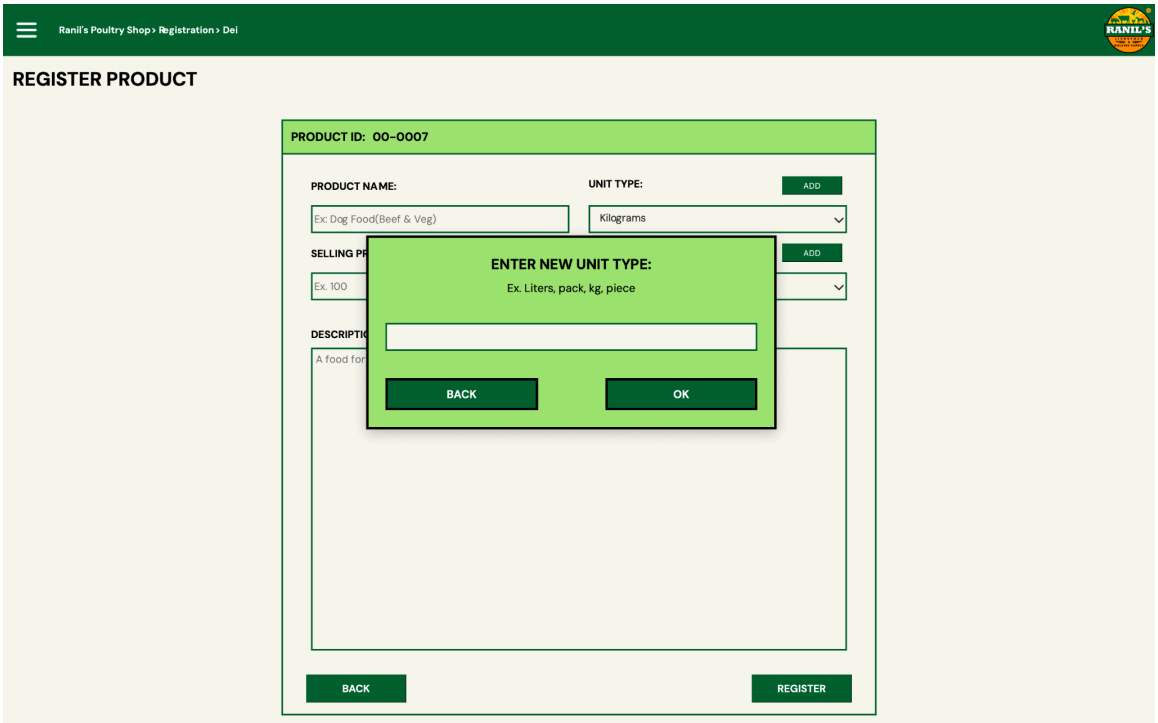

Figure 75 Add Unit Type

Allow the user to add new unit type.

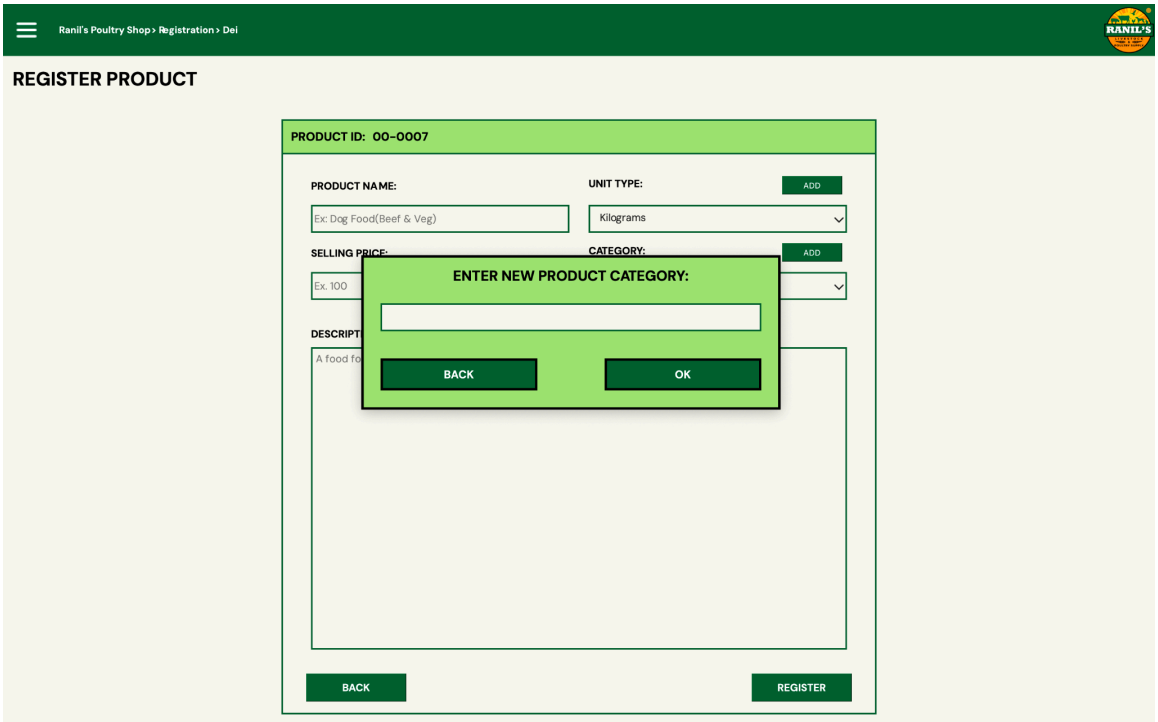

Figure 76 Add Category Type

Allow the user to add new category type.

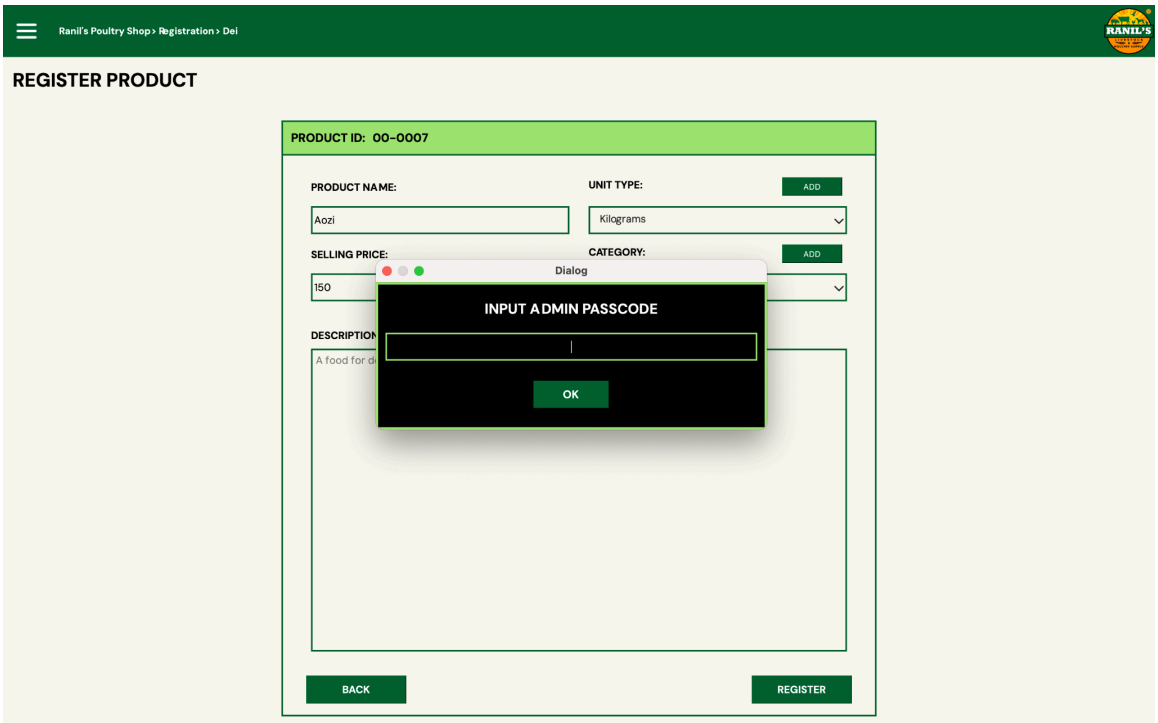

Figure 77 Verification - Register Product

Allow the user to add new category type.

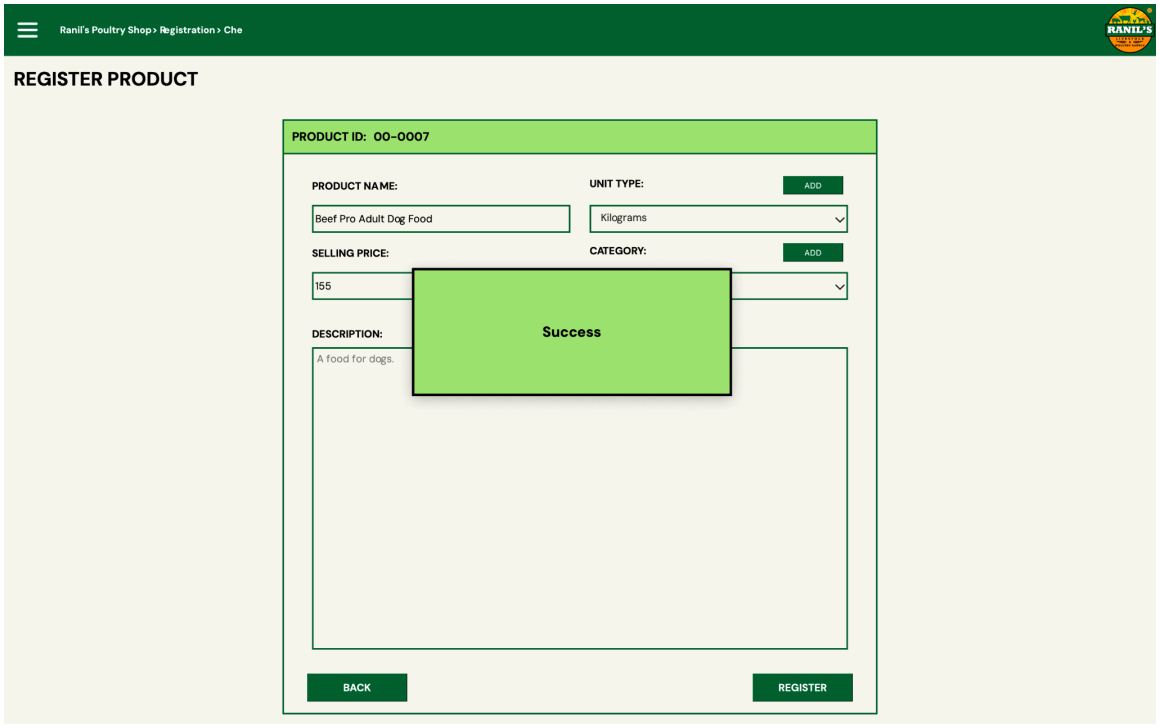

Figure 78 Output - Register Product

The system will display an output if the registration is successful.

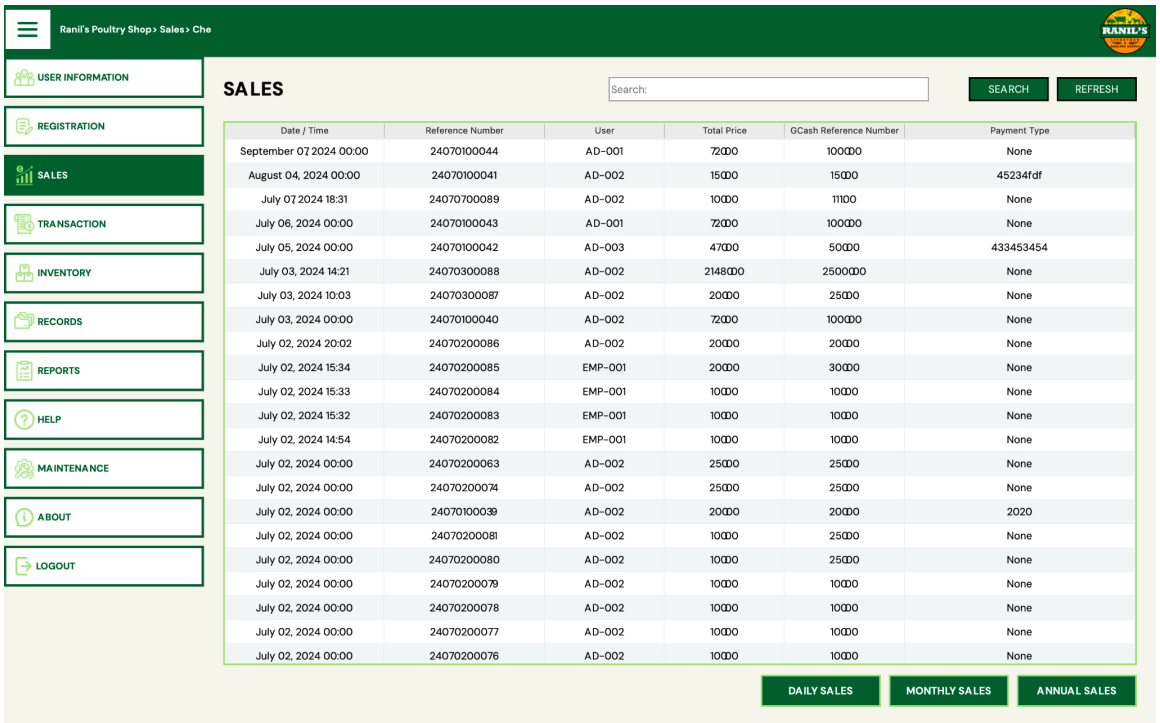

Figure 79 Sales Management

The system will display today's sales and has buttons to display and filter daily, monthly and annual sales.

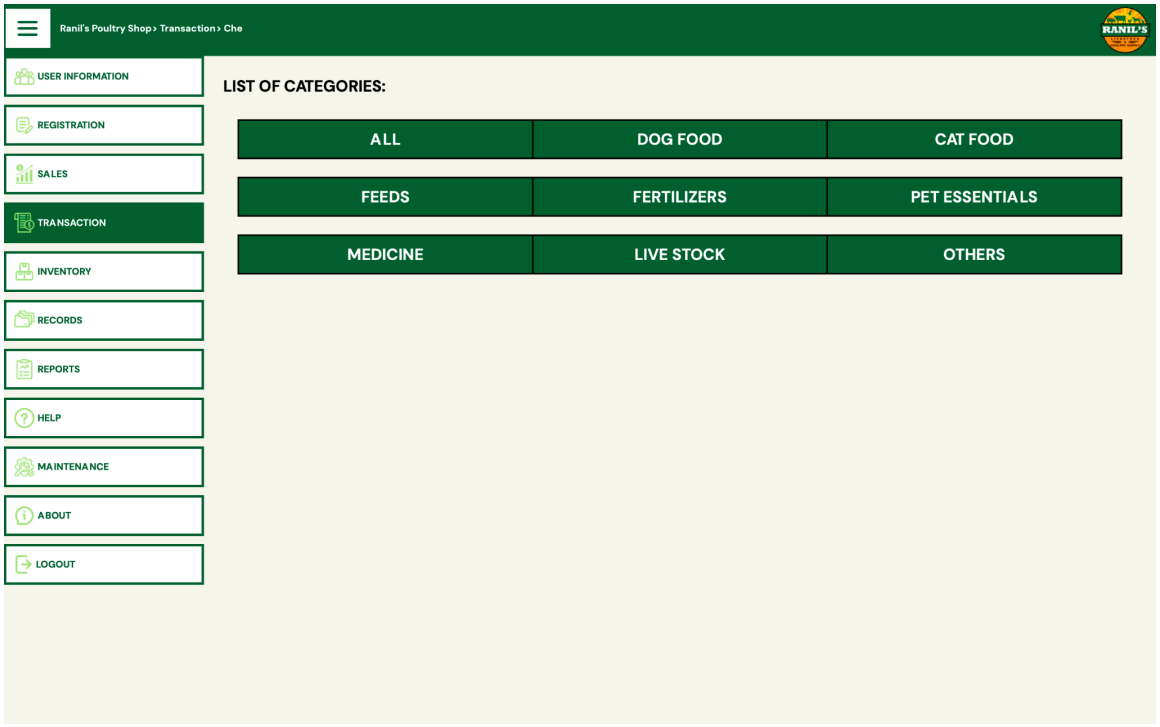

Figure 80 Transaction

Transaction page where the system will display buttons of the categories of the products that the company is selling.

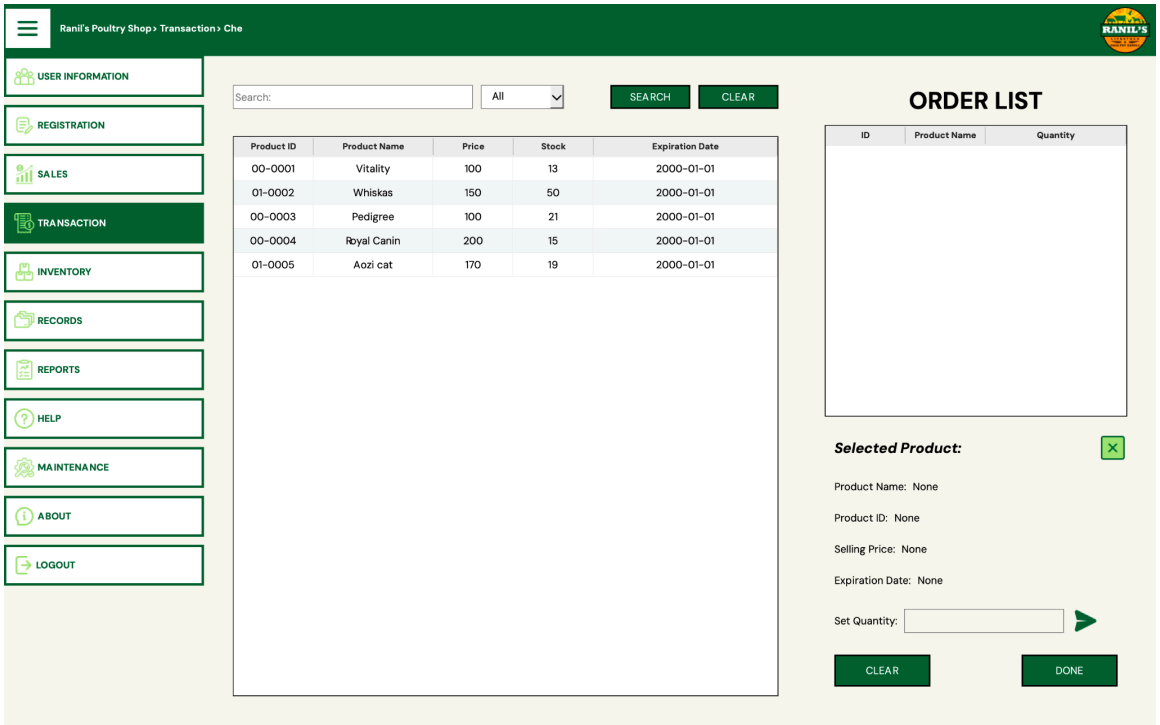

Figure 81 Display Product List

The system will display different products based on what the user has clicked on the product category.

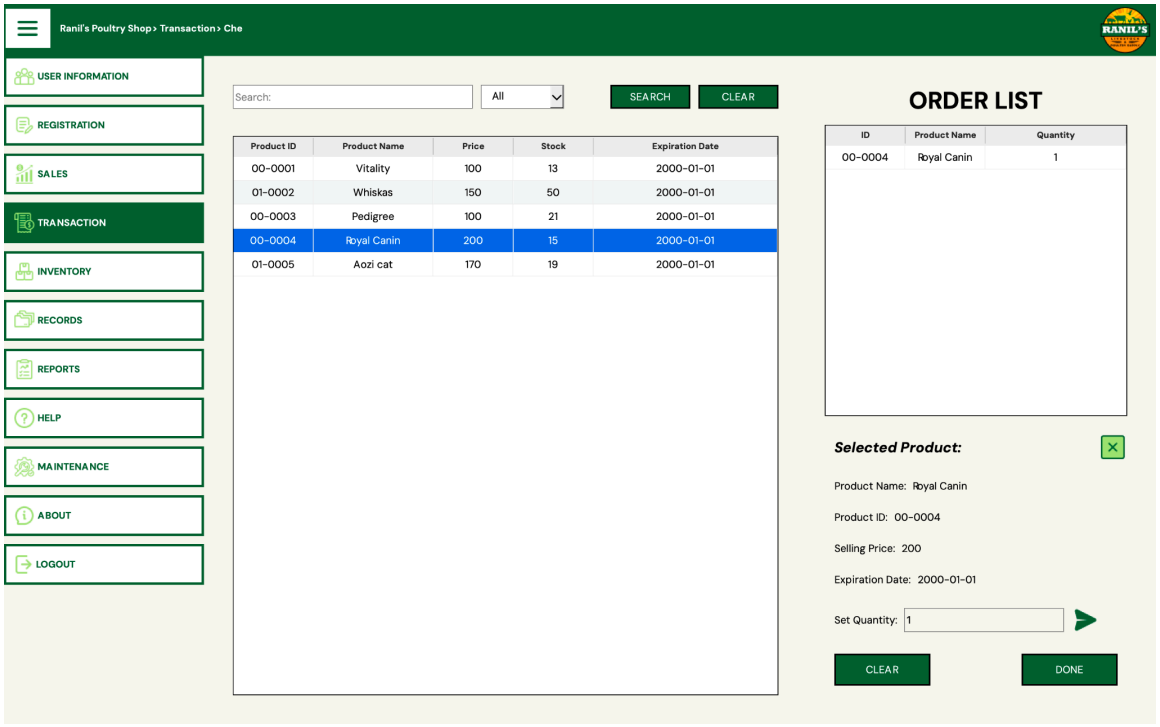

Figure 82 Product Selection

The product/s selected will be displayed in the right side of the screen. The user can edit the product quantity.

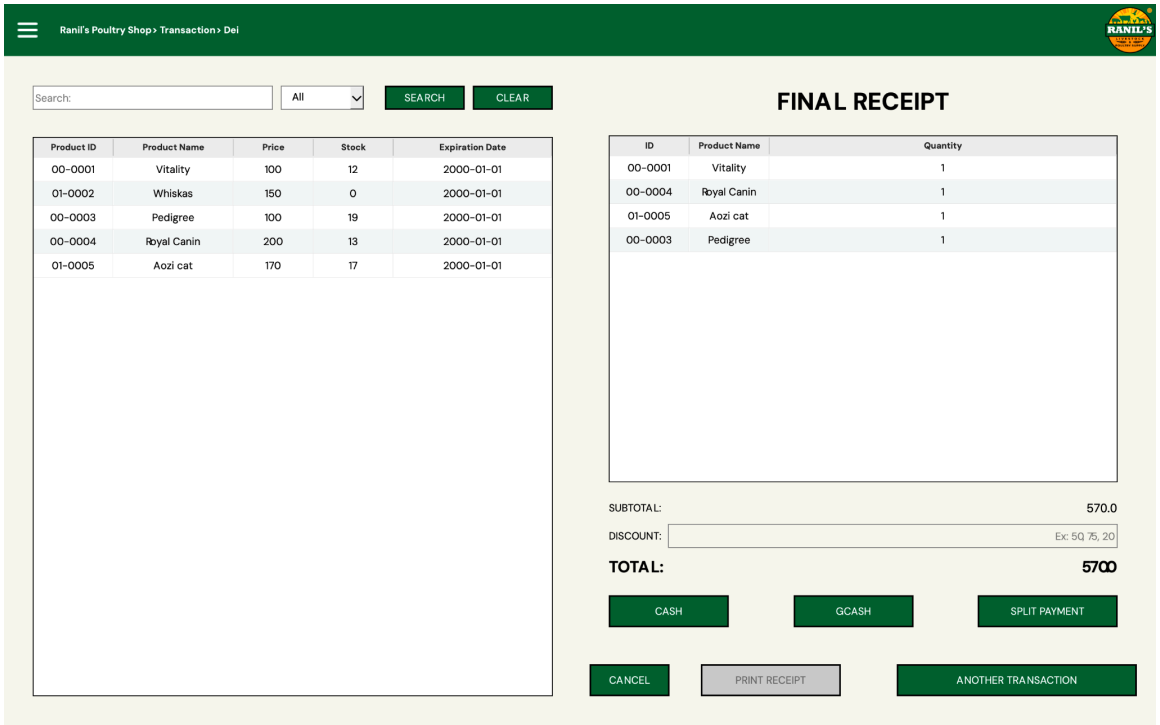

Figure 83 Final Receipt

After clicking done button, the system will display the total summary of what the customer has purchased.

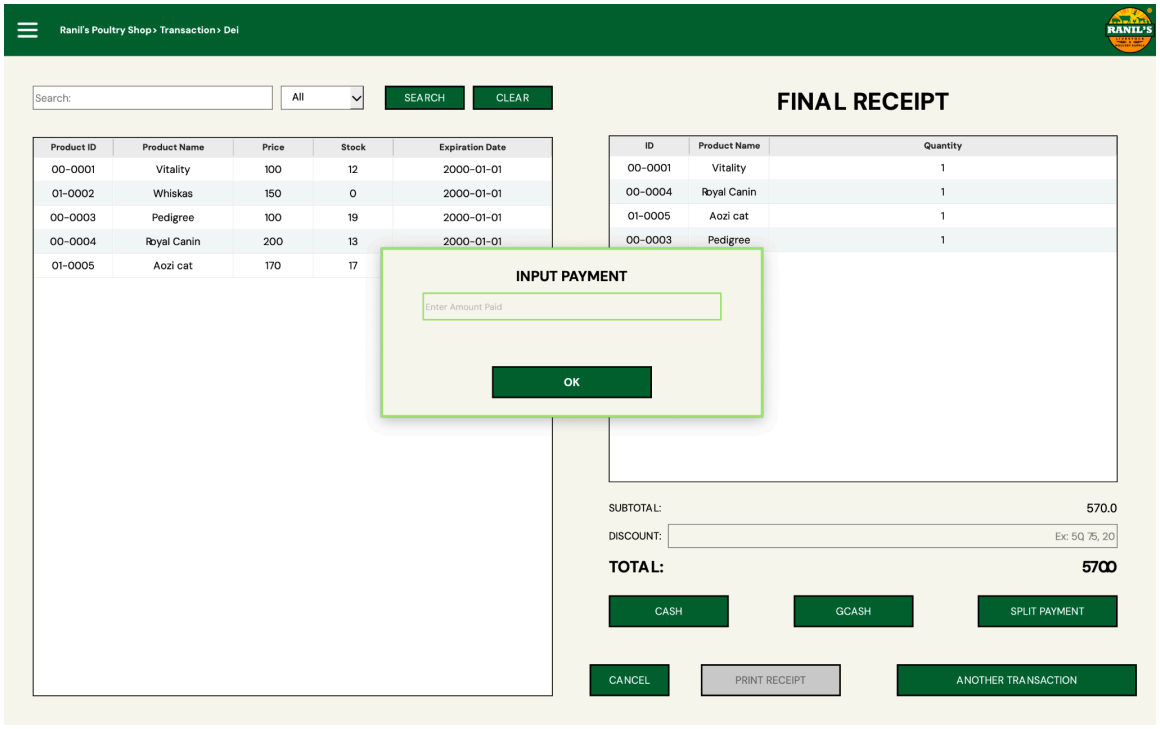

Figure 84 Cash Payment

If a cash payment, the system will display an input payment page where the user will input the amount paid by the customer.

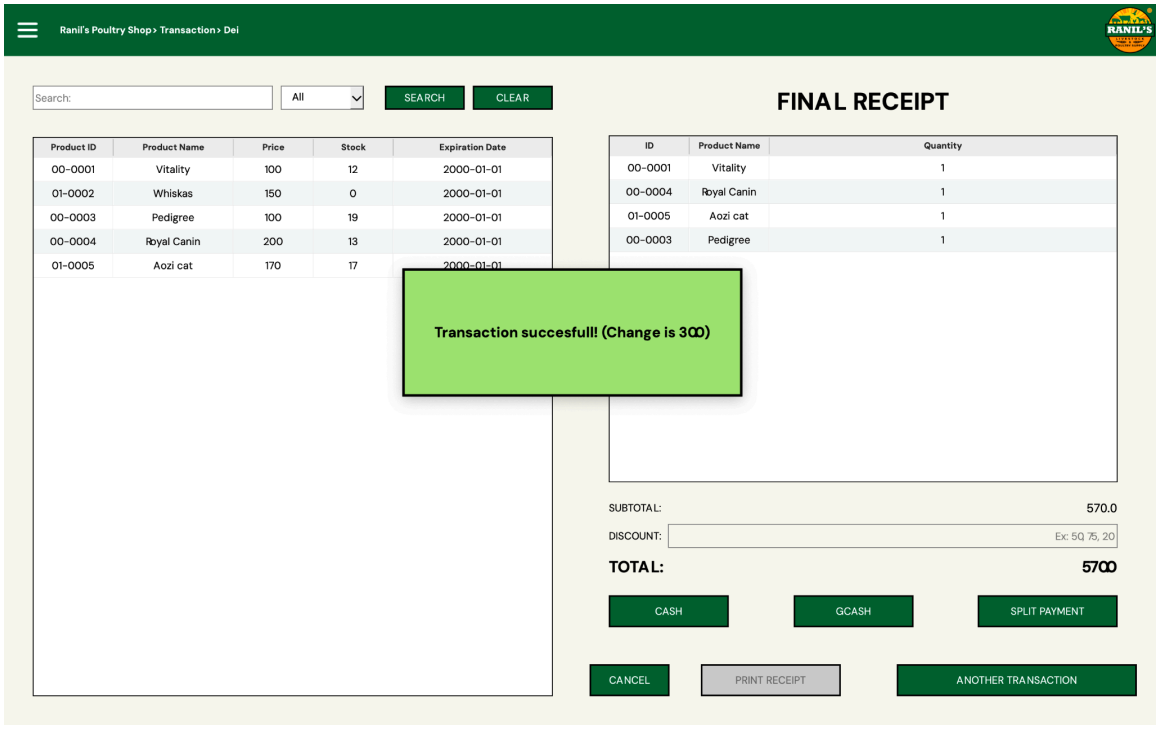

Figure 85 Display Change

After inputting the payment, the system will display the change if there is any.

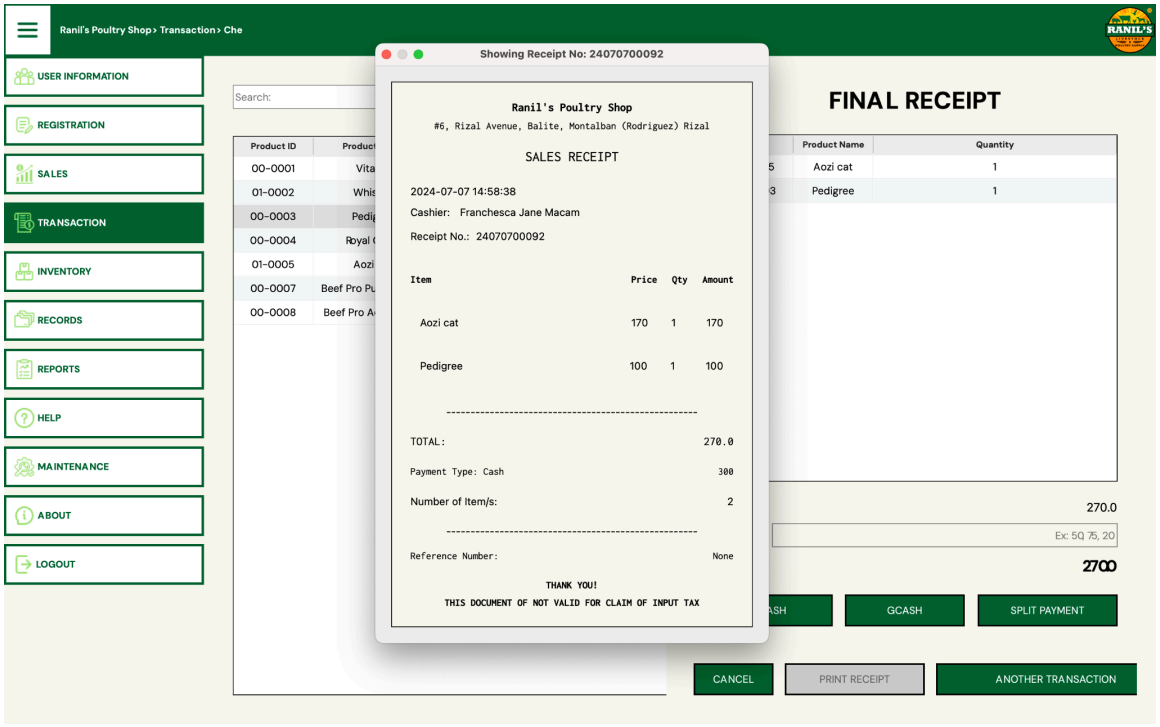

Figure 86 Display Receipt - cash payment

After a successful transaction, the system will display the receipt.

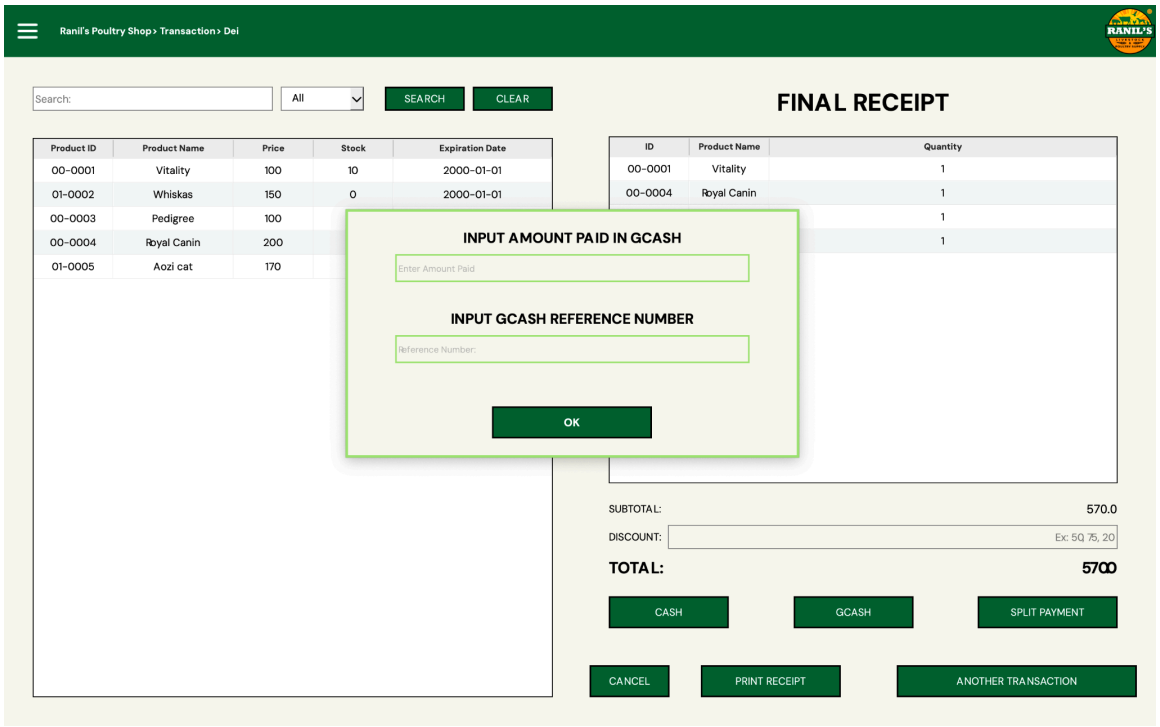

Figure 87 Gcash Payment

If Gcash payment, the system will display an input amount paid in gcash and reference number where the user will input the amount paid and the reference number based on the Gcash app of the customer after payment.

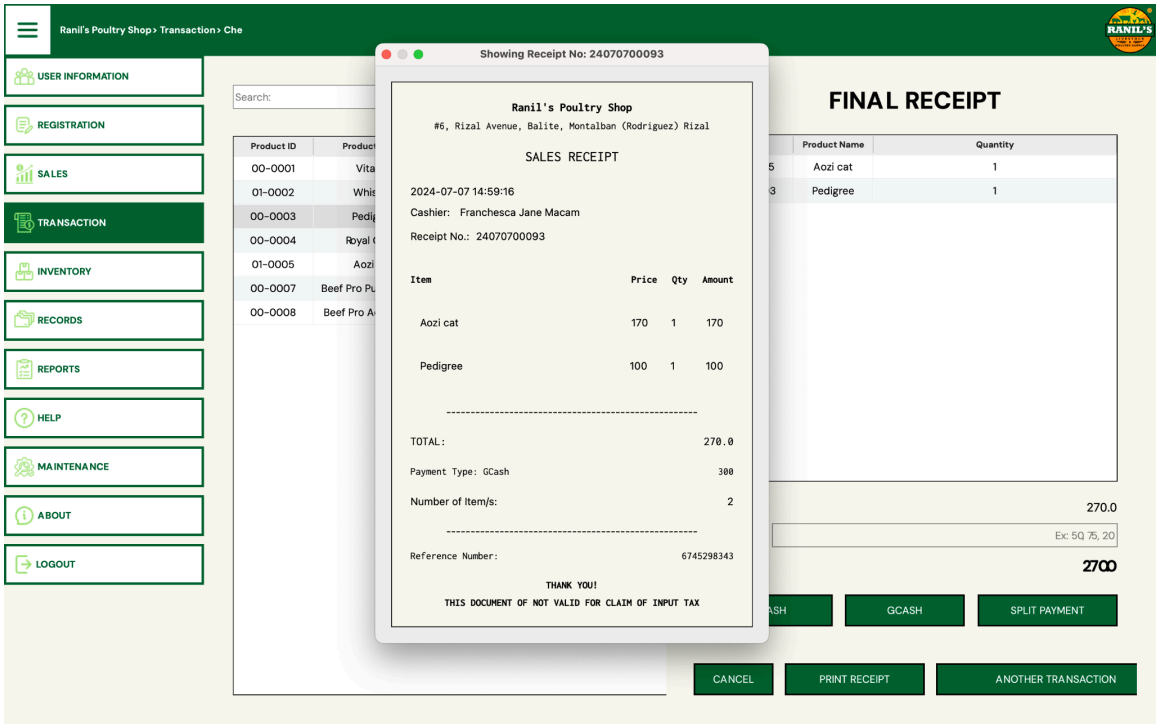

Figure 88 Display Receipt - gcash payment

After a successful transaction, the system will display the receipt.

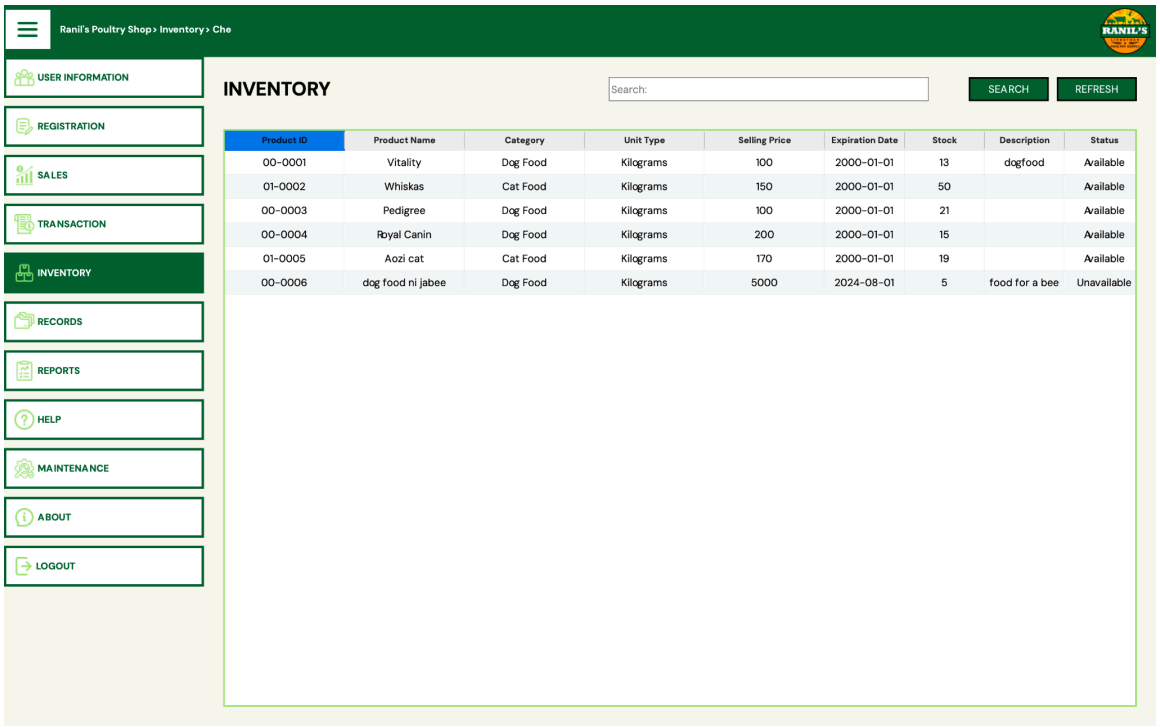

Figure 89 Inventory

The system will display inventory.

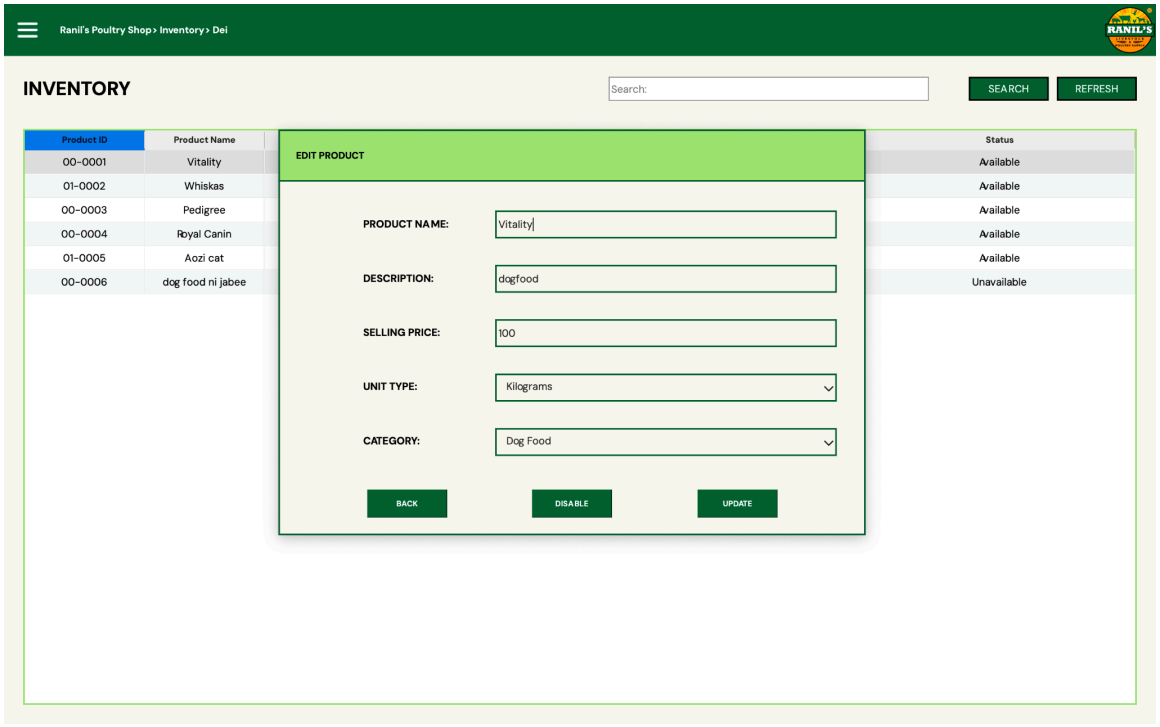

Figure 90 Edit Product Details - Inventory

The products details can be edited if clicked. The user can update, edit, and disable a certain product.

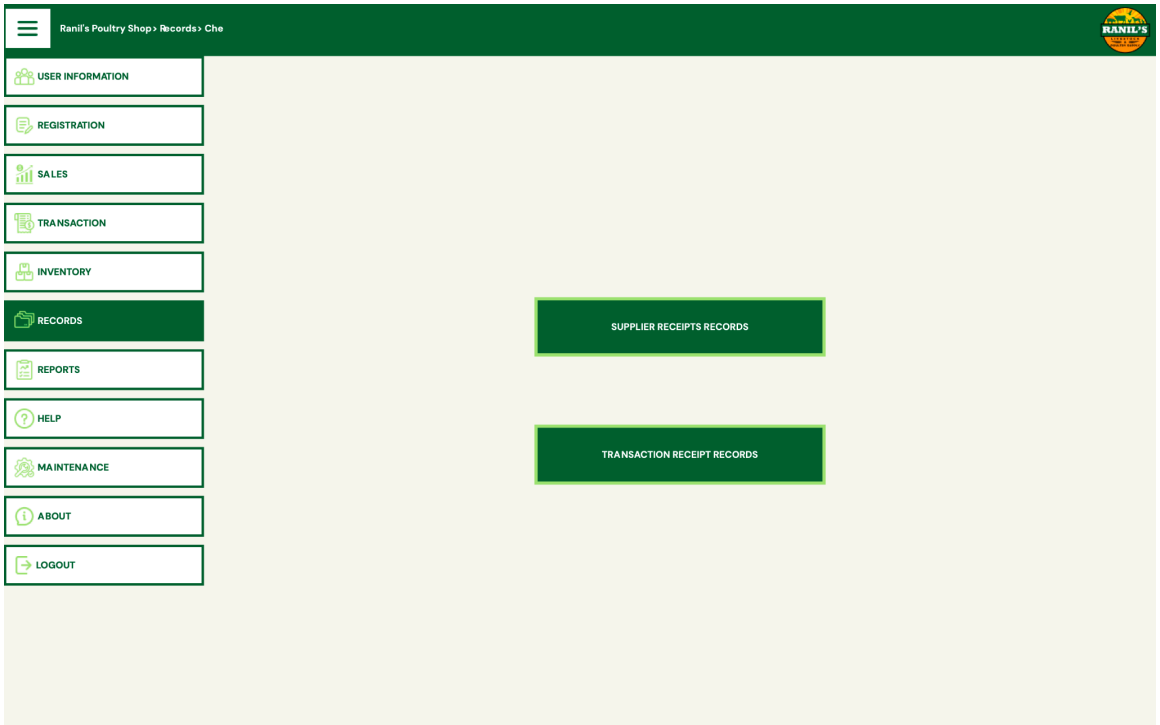

Figure 91 Records

Records page where the system will display a “supplier receipt records” and “transaction receipt records” button.

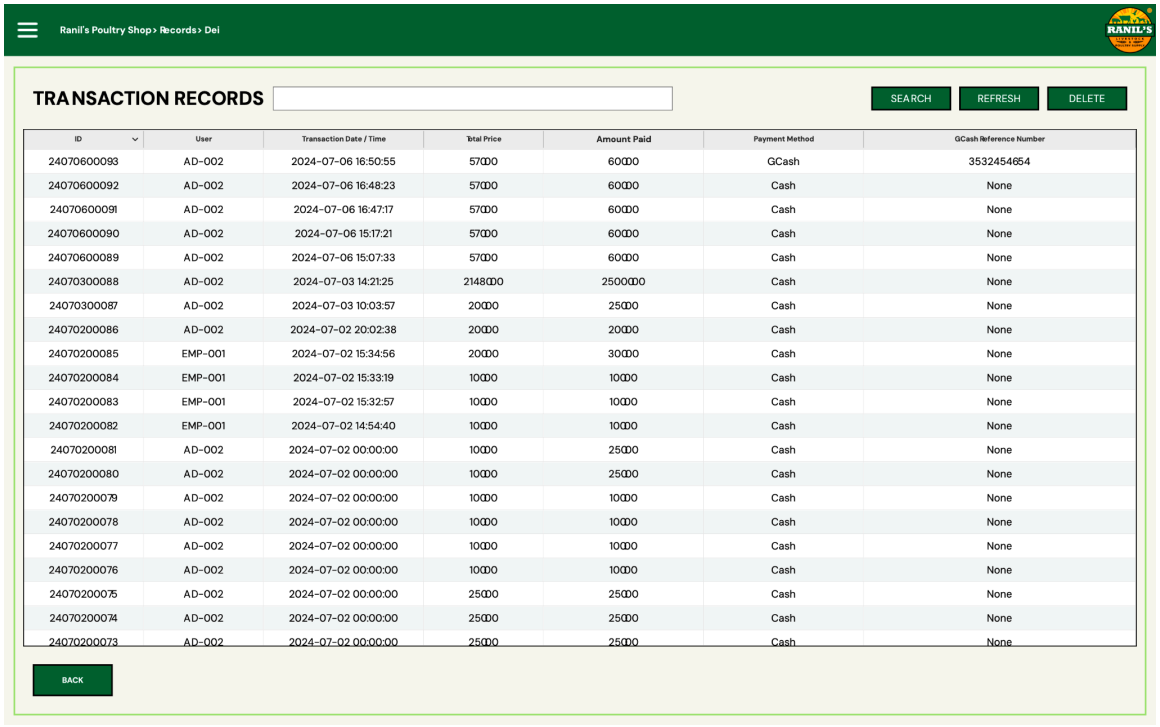

Figure 92 Transaction Receipt Records

The system will display transaction receipt records if the user clicks the "Transaction Receipt Records" button.

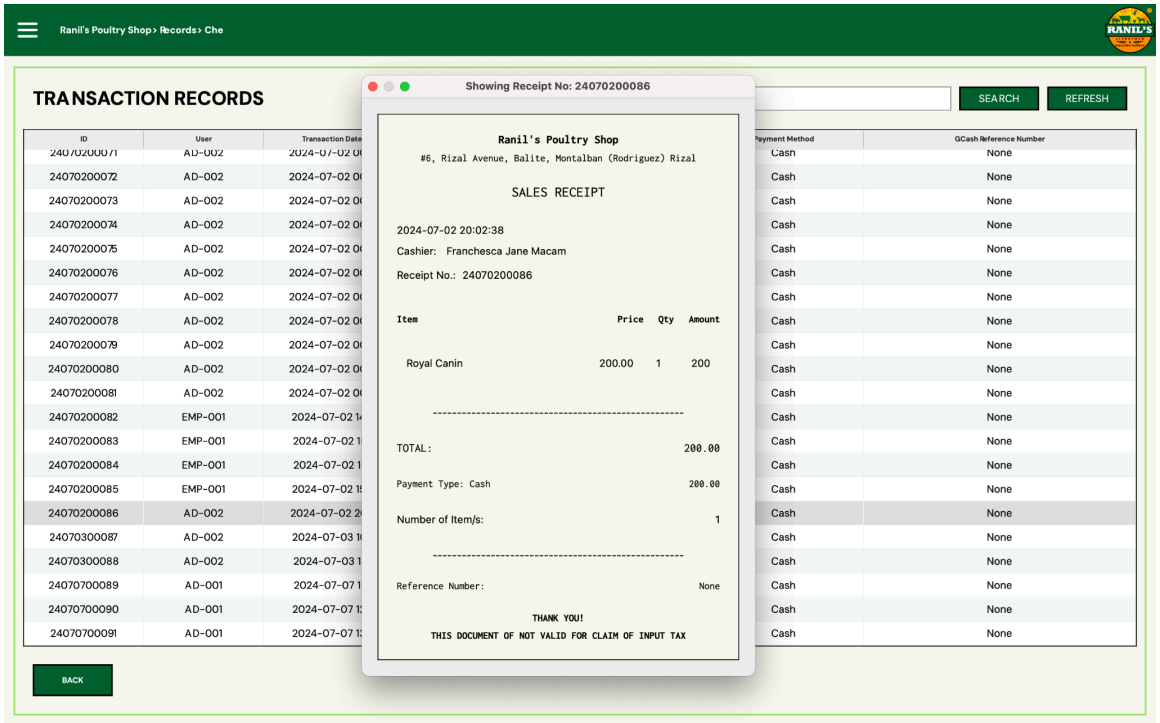

Figure 93 Display transaction receipt details

The records were clickable (double click) and will display the receipt details.

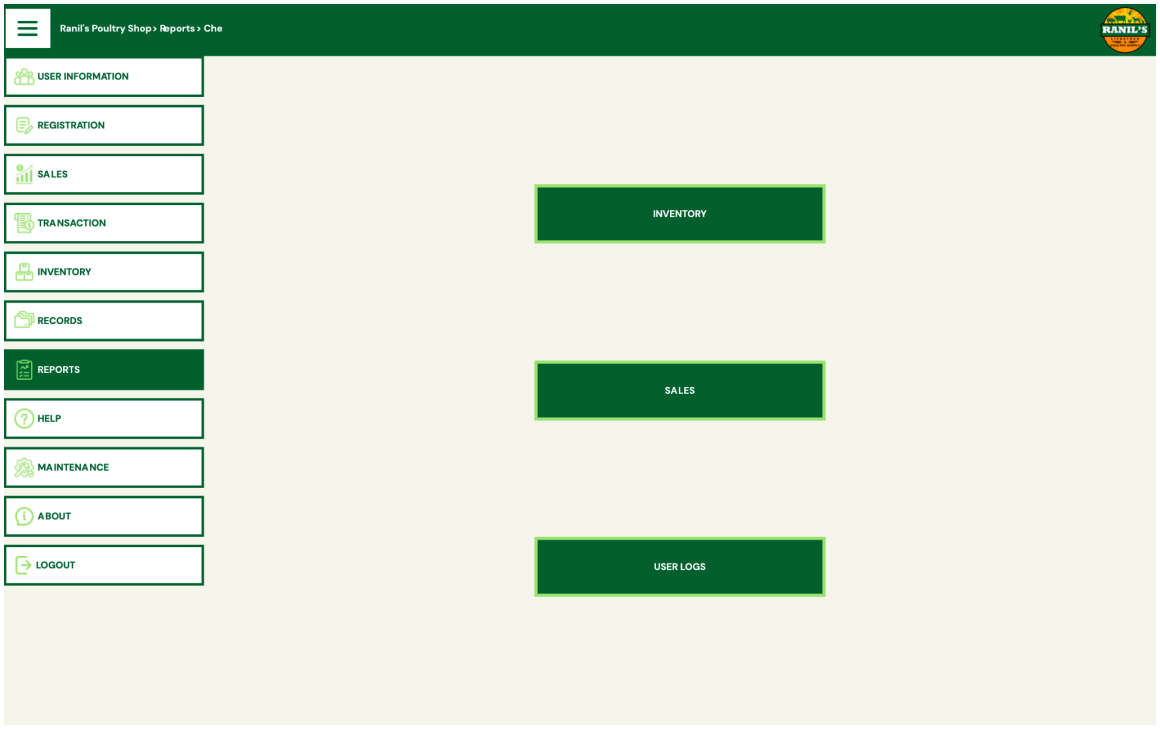

Figure 94 Reports

Reports page where the system will display an "inventory", "sales", and "user logs" button.

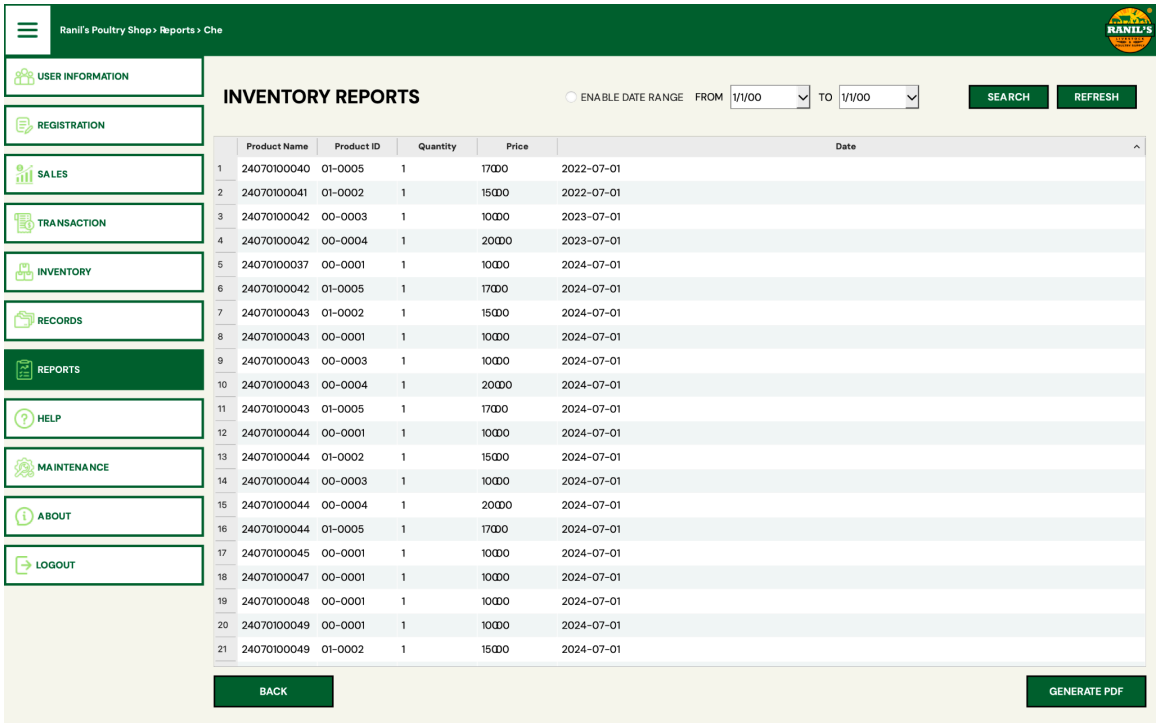

Figure 95 Inventory Reports

The system will display inventory reports if the user clicks the "inventory" button.

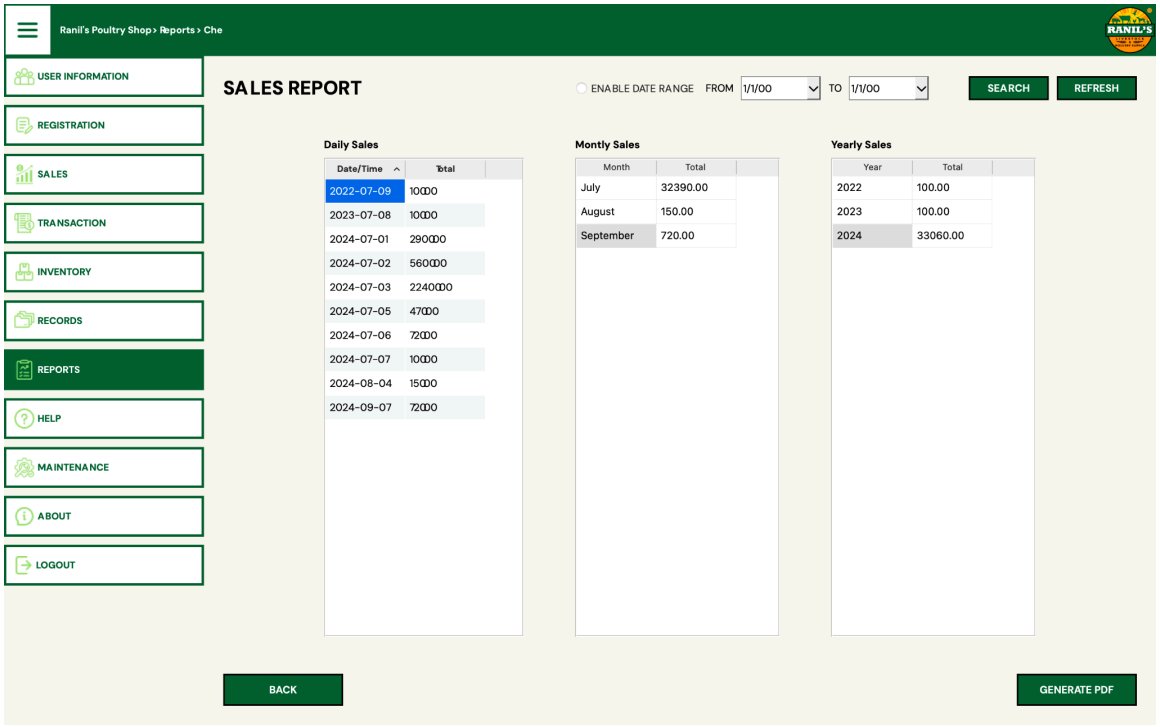

Figure 96 Sales Reports

The system will display sales reports if the user clicks the "sales" button.

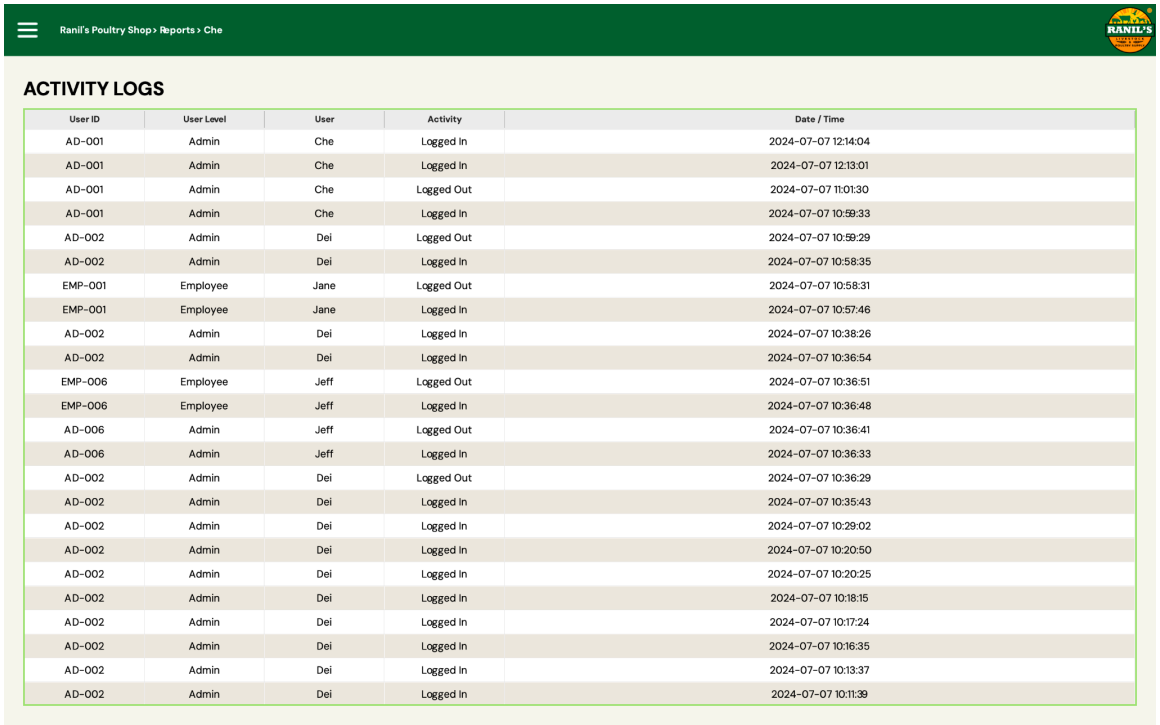

Figure 97 User Logs

This displays the user logs information to monitor each user's login and logout activities.

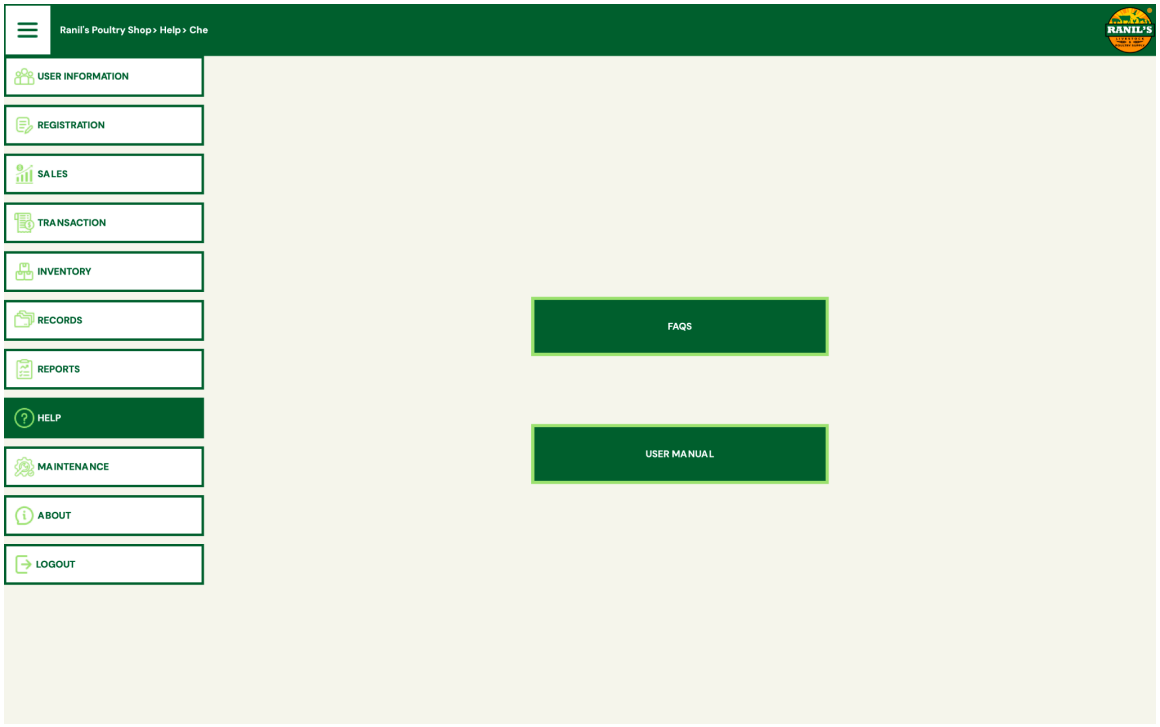

Figure 98 Help

Help page where the system will display a “FAQs” and “User’s Manual” button.

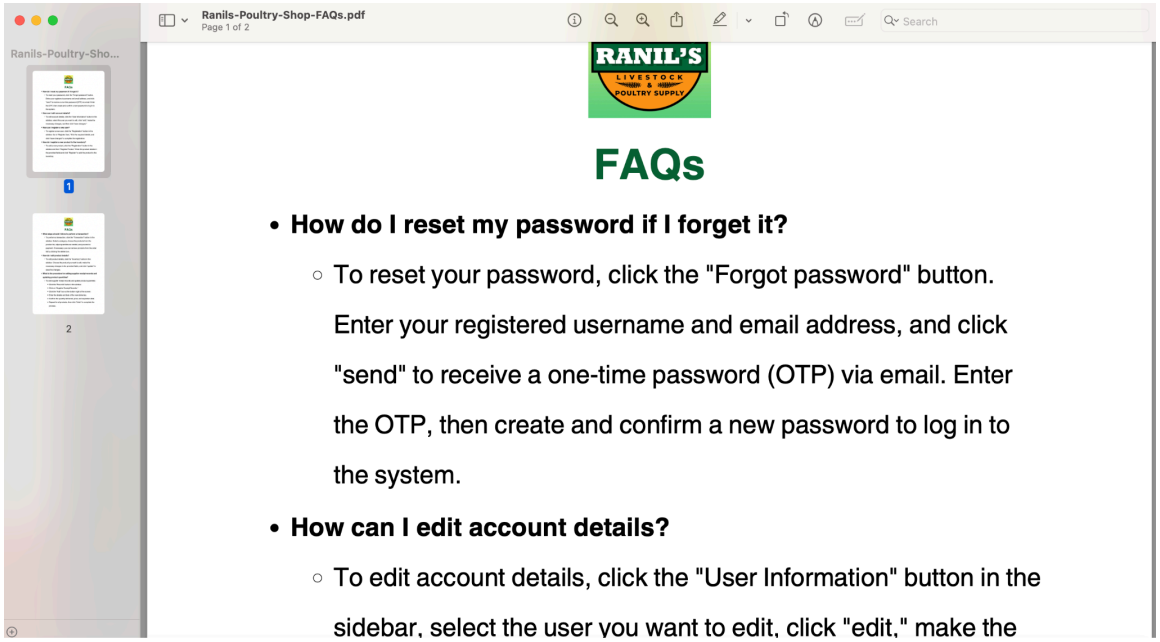

Figure 99 FAQs

The system will display a PDF document containing FAQs.

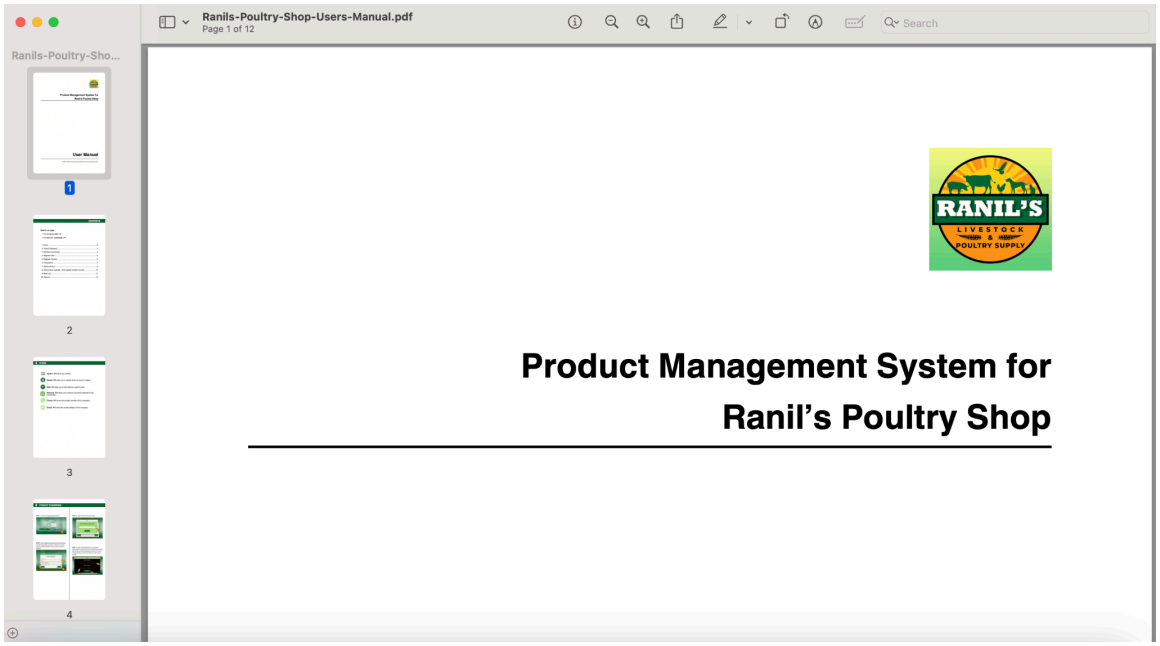

Figure 100 User's Manual

The system will display a PDF document containing User's Manual.

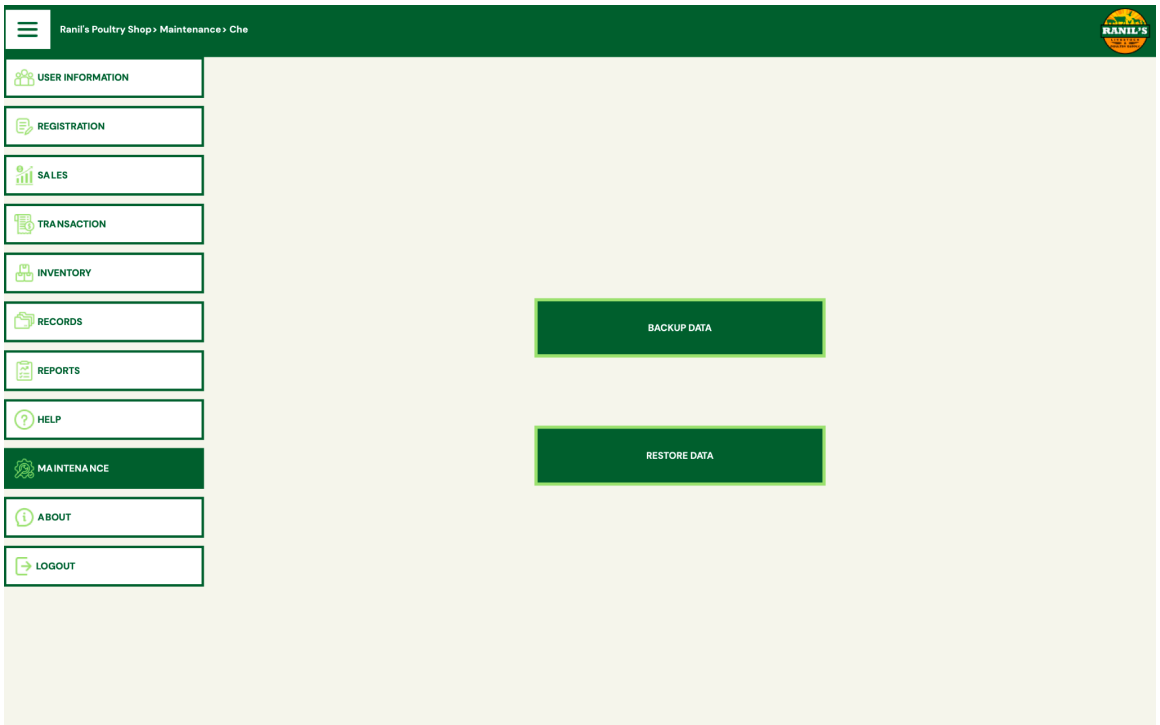

Figure 101 Maintenance

Maintenance page where the system will display a "Back up Data" and "Restore Data" button.

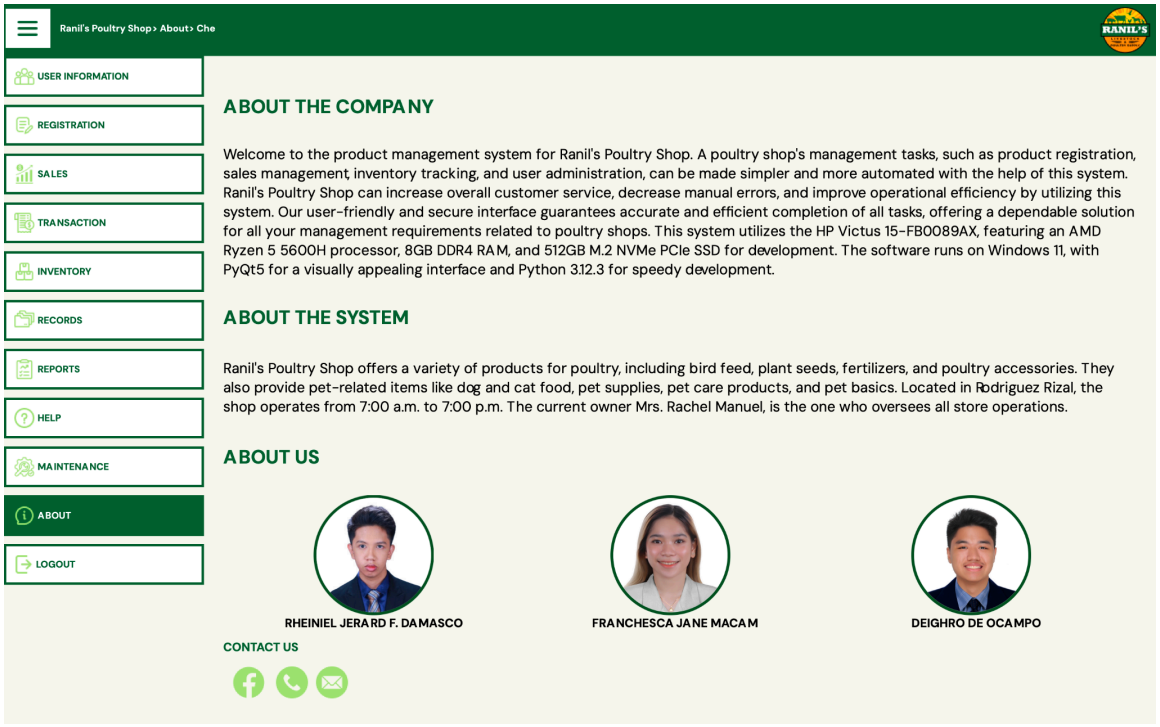

Figure 102 About

The system will display the information about the company, about the system and about the developers.

Chapter 3

Methodology

In research, methodology acts as the foundational framework. The methodology is the strategic blueprint for any research study, laying out the full plan for data gathering, analysis, and interpretation. This chapter will include the Software Process Model, Data Gathering Instruments and Procedures, Feasibility Study such as in Technical, Operational, and Economical, Gantt Chart, and Cost Benefit Analysis (CBA) in the proposed system. These core ideas and frameworks characterize the proponent's approach, offering light on the purposeful choices made to ensure the study's validity and dependability. The proponents explore the landscape of research design, data collection methods, procedures, and analytical methodologies.

Software Process Model

The incremental model came from Craig Lairman and Victor Basili's excerpt in Iterative and Incremental Development: A Brief History. The model is a software process model that breaks down a project into smaller, and more manageable increments. The model is designed, implemented, and tested incrementally until the product is complete. The product will be considered finished after it has complied with the requirements (indeed.com, 2023). Each increment will go through design, coding, testing, and feedback phases before being added to the initial product. This method allows the development team to work with the clients to learn more about what the clients expect from the software. The earliest use of the model is NASA's 1960's Project Mercury. Another use of this model is between the years 1977 to 1980 by the Federal Systems Division (FSD). They applied Iterative and Incremental Development (IID) in a series of

17 iterations over 31 months, with 8 weeks per iteration.

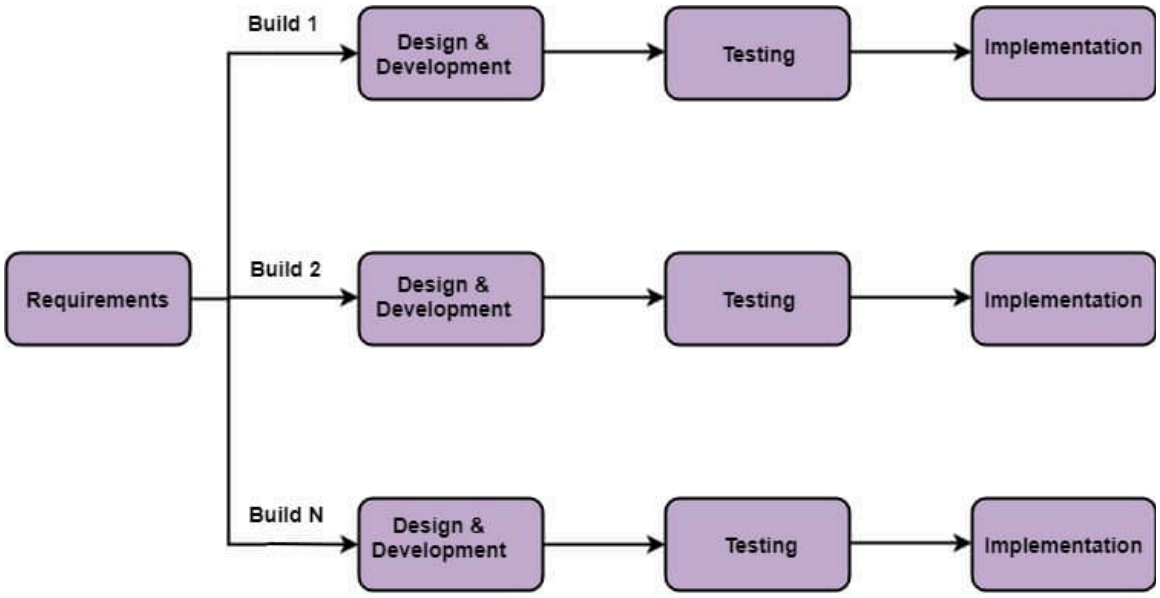

Figure 103 Incremental Model

The first phase of the model is the requirements. They are the features and functionalities that the software must have. This is essential for developers due to it defines what the software should do. Following the requirements phase is Build 1, where panels for design and development, testing, and implementation lie.

The design and development phase is one of the most vital components of the incremental model. The design part deals with the creation of blueprints of the software product. Meanwhile, the development part is where the design or the blueprint is implemented. Typically, the flow of the panel will begin with a high-level overview of the software, including the key features of the software, and then proceed to create designs for each component. After design completion, the development part begins by implementing them through coding.

The testing phase refers to the assessment of the product produced by the design & development panel. This panel will execute tests that aim to verify if the components are working as intended and not malfunctioning if they encounter errors. The errors found in this panel will be fixed in the design & development panel and then go through testing again before moving to the implementation panel.

The implementation phase implements the designed feature to the overall project. For Build 2 and Build 3, the same steps are followed with Build 2 adding supplemental features to Build 1 and Build 3 doing the same to Build 2.

System Architecture

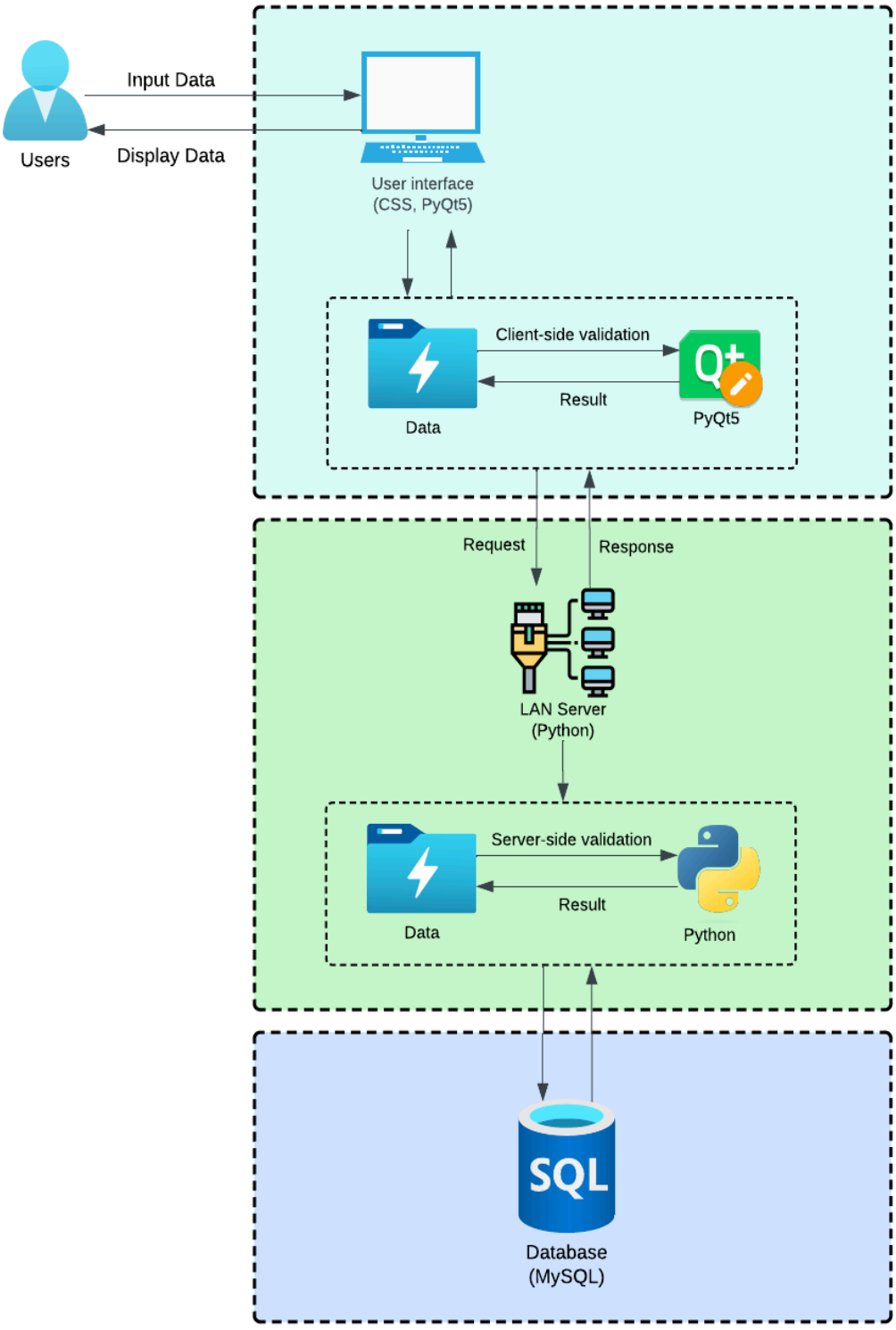

Figure 104 System Architecture

This system architecture for the Product Management System for Ranil's Poultry Shop is designed to ensure efficient data processing, validation, and user interaction through a multi-layered approach. The architecture consists of three main components: the Presentation Tier, Logic Tier, and Data Tier.

The User Interface is where the user inputs data and receives display data. It includes a user-friendly interface developed using CSS for styling and PyQt5 for creating graphical user interface elements. The initial data validation happens here, making sure everything is correct before sending the data to the server. This provides immediate feedback to the user and reduces server load. The LAN Server is the middle layer that connects the user interface with the database. It uses Python 3.12.3 to handle requests from the user interface and send back responses. This ensures everything is correct before any data is saved or retrieved from the database. This extra validation step helps catch any mistakes that the first check might have missed. The Database is where all the important information is stored. It uses MySQL 8.4.0 to manage data about products, transactions, inventory, and more. The database makes sure that data is stored safely and can be quickly accessed when needed. MySQL 8.4.0 database efficiently manages and retrieves data as requested by the server, ensuring quick access and data consistency.

The data flow of this architecture is where the user inputs data through the user interface, which checks it and sends it to the server. The server then validates the data again before storing or retrieving it from the database. Finally, the results are sent back through the server to the user interface, where users can see the information. This architecture ensures that the Product Management System for Ranil's Poultry Shop is easy to use, reliable, and efficient. It provides a user-friendly interface, dual-layer

validation (client-side and server-side) enhances data integrity and security, strong data validation, and efficient data management, making it well-suited for managing a poultry shop.

In the Logic Tier, the system employs the ABC Algorithm to optimize sales and inventory management. The ABC Algorithm categorizes inventory items into three classes: A, B, and C. Class A items are the most valuable, contributing to a significant portion of the sales and requiring tight control and accurate records. Class B items are of moderate value, with less stringent controls compared to Class A. Class C items are the least valuable, representing a smaller portion of sales and needing minimal management effort.

By using this algorithm, the system can prioritize resources and efforts on the most critical items, ensuring efficient inventory management and improved sales strategies. This strategic approach helps Ranil's Poultry Shop maintain optimal stock levels, reduce holding costs, and maximize overall profitability.

Data Gathering Instruments and Procedures

1. Interview - A qualitative research approach that uses asking questions to gather data. Two or more persons participate in interviews, one of them is the interviewer who asks the questions (George, 2022).

   There were two interviews conducted by the proponents. The first interview was conducted as an initial interview where the proponents asked minimal questions to the owner of the business to gather information about the background of the business and what are their daily operation processes and procedures in handling product management. The second interview was a follow-up interview where the

proponents gathered additional information to add to their research paper. In conducting the interview, the proponents first ask the interviewee (owner) about his/her availability. The proponents will travel to the location of the interviewee when the interviewee is available for the interview and will ask questions about what they want to know more. The interviews were recorded so that the proponents could transcribe them and make their study accurate.

2. Observation - a method of collecting data that involves observing events, behaviour, or physical traits as they occur in the natural environment. The proponents also observed how things worked in the business when they conducted the interview. They roamed around the store to have accurate information when writing the research paper and to witness how the processes are done within the store.
3. Internet - According to the definition of GCFGlobal.org, the Internet is a worldwide network of electronic gadgets. This enables the user to access information and international communication. It is associated with computers, denoted by the term "going online," signifying their link to the internet. The proponents used the Internet to look for sources and references of information that are available online.

Feasibility Study

This feasibility study investigates if the Product Management System for Ranil's Poultry Shop could be implemented. The goal of the feasibility study is to determine how poultry products are managed, tracked, and presented in a retail setting. By evaluating the system's technical, operational, and economic feasibility, the proponents aim to find ways

to improve customer satisfaction, productivity, and overall business performance in the evolving poultry field. This study provides insights into the benefits and feasibility of implementing a computerized product management system customized to the specific requirements of a poultry shop, which serves as an essential foundation for decision-making.

Technical Feasibility

To determine if it would be feasible and practical to put such a system into place, this study provides a technical feasibility evaluation. This study aims to provide insights into the technical foundation required for the successful deployment of a Product Management System for Ranil's Poultry Shop through a thorough examination of hardware and software requirements, development tools, integration capabilities, security measures, and emerging technologies.

The operating system that will be used in this proposed system will be Windows 11 64-bit. This operating system version can manage the workload of the proposed system since it is the most reliable and efficient. It also has an upgraded security feature with TPM 2.0 and Windows Hello. In addition, it was developed in Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook laptop with Intel Core™ i5 i5-13500HX 2.50 GHz, it has 8GB DDR5 SDRAM and 512GB M.2 NVMe PCIe NVMe and a smooth layout with the updated Sidebar and Start Menu. Lastly, the front end will be built with Python, and the back end will be built with MySQL.

Operational Feasibility

Operational Feasibility will determine how well a Product Management System for Ranil's Poultry Shop integrates with current procedures and enhances overall operational efficiency. The proposed system requires training to make transitioning to the new Product Management System simple to accomplish. A user-friendly interface that will be built into the system will ensure that the owner, employees, and users can operate the system easily, complete tasks quickly, and experience as little knowledge as possible with the new interface by incorporating features such as clear navigation, readable text, and adaptable interfaces.

Maintenance and help will also be the necessary components of the proposed system. In addition, this evaluates the system's real-time adaptability by looking at how well it handles product changes, pricing, and inventory management. A strong foundation for operational feasibility in the poultry shop industry can be developed by addressing important operational considerations, which will provide users with a thorough understanding of how the new system matches and enhances current poultry shop operations.

Economical Feasibility

The study focuses on the economic feasibility of the implementation of a Product Management System for Ranil's Poultry Shop. Specifically, the study aims to investigate the possible expenses and advantages that the system may have for the poultry shop's financial stability. In addition, this study aims to provide users with crucial information for well-informed decision-making of

business operations by carrying out a comprehensive cost-benefit analysis, evaluating return on investment (ROI), and considering financial resources.

The costs included in the implementation of the proposed system are the following: electricity, hardware costs, software development costs, operations, and maintenance costs, licensing, upgrades, and training costs. The proposed system will be more expensive than the current system of the poultry shop but is more effective and reliable in the long run. The system's economic feasibility is essential to the poultry shop's survival and success in the competitive poultry industry.

Cost Benefit Analysis (CBA)

When developing a system, all components must be taken into consideration, especially the expenses that will be incurred, this is done to be able to estimate and determine the benefits that the company will gain from the project.

I. Hardware Cost

Specifications	Recommended Requirements	Quantity	Unit Price	Cost
Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook	Laptop	1	₱82,649.00	₱82,649.00
• Intel® • Core™ i5 • i5-13500HX • 2.50 GHz	Processor	1		
8GB DDR5 SDRAM	RAM	1		
512GB M.2 NVMe PCIe NVMe	Solid State Drive	1		

Total: ₱82,649.00

Source:

https://www.acer.com/ph-en/predator/laptops/helios/helios-neo-16/pdp/NH.QLUSP.004

II. Software Development Cost

Personnel	No. of Personnel	Salary
Programmer	2	40,000.00
System Analyst	1	35,000.00

Total: ₱75,000.00

Source: https://ph.indeed.com/

Personnel Salary for 60 Days:

Programmer: 20,000 / 60 = ₱333.33

System Analyst: 35,000 / 60 = ₱583.33

III. Operational Cost

A. System Cost

Items	Specification	Costs
Operating System	Windows 11 Home Single Language 64-bit	Free
Front End	Python 3.12.3	Free
Back End	MySQL 8.4.0	Free

Total: ₱0.00

Source: https://pcx.com.ph/

B. Utility Expenses

Particulars	Cost
Electricity	226.71
Internet	1,500.00

Total: ₱1,726.71

Computer Usage: 9.45 / day for 12 hours in 30 days.

Source:

- www.meralco.com.ph
- https://appliancecalculator.meralco.com.ph/
- https://www.convergeict.com/fiberx/

C. Training Cost

Personnel	Amount per day	Days	Hours	Total
Administrator	300.00	1	5	900.00
Employee	300.00	1	5	900.00

Total: ₱1,800.00

(60.00 / hour * 5 Hours) * 3 Days = ₱900.00

Summary Cost

Description	Amount
I. Hardware Cost	82,649.00
II. Software Development Cost	75,000.00
III A. System Cost	0.00
III B. Utility Expense	1,726.71
III C. Training Cost	1,800.00

Total Costs: ₱161,175.71

Estimated Benefits:

Accuracy and efficiency of the software at approximately 90%

Total estimated Benefits = ₱161,175.71 * 90%

Total = ₱145,058.14

Payback Period

Payback Period = (Total Cost / Total Estimated Benefits) * 12

= (161,175.71 / 145,058.14) * 12

= 13.33

Total = 13 months or 1 year and 1 month

Return of Investment (ROI)

Return of Investment = (Total Estimated Benefits / Total Cost) * 100

= (145,058.14 / 161,175.71) * 100

Total = 90%

Since the poultry shop doesn't have a working computer the proponents suggest that the Poultry Shop will purchase a new whole computer to use and operate the system created by the proponents with the specifications provided in Hardware Cost Table. Purchasing a computer that has similar parts or more powerful parts will ensure that the developed system will be run and can be operated smoothly with no delays and can communicate with other computers. This can also enable the owner and employees to do tasks with the system such as viewing stocks, processing payments, viewing reports, etc. Displayed above are the software development costs that are taken into consideration which present the roles needed and their corresponding salaries for the successful creation of the system. Moreover, the operations costs are distributed within four categories which are system costs, stationeries and suppliers, utility expenses, and training costs. Displayed above we can see the software necessary to implement the system which includes the Operating system, the front end, and the back end of the programming languages. Additionally, the utilities used are displayed, which focuses on keeping the system running at the open hours of the store. Also presented above are the costs for training the personnel needed for operating the software. Those personnel are

the Admin and the employee for both to be knowledgeable about the system and take advantage of it, it will take two hours for five days. Overall, a summarized table of expenses is displayed above, keeping track of all the budget and transactions of the poultry shop and calculating the estimated benefits, payback period, and return on investment.

The expected benefits came to ₱129,016.71 based on the computations that the proponents have done; the payback period is 13 months, or one year and one month, and the investment yielded a 90% return. As a result, the poultry will be able to provide its services with much greater efficiency and efficacy thanks to the proposed system. In 13 months, the business's investments will yield long-term returns of almost 90%.

Materials

To ensure the efficient and effective operation of the automated product management system, it is essential to consider both hardware and software requirements. Both hardware and software are essential to the development of the system where hardware must have robust servers, sufficient storage, and enough processing power for the system to function and a secure operating system, a database management system to manage data efficiently, etc as a software requirement. The specifications listed below are the minimum requirements for the development of the Product System Management for Ranil’s Poultry Shop:

- Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook
    - Intel Core™ i5 i5-13500HX 2.50 GHz
    - 8GB DDR5 SDRAM
    - 512GB M.2 NVMe PCIe NVMe

- Windows 11 Home 64-bit
- Python 3.12.3
- PyQT5
- MySQL 8.4.0

In the development of the system, the developers use the Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook, which offers a range of powerful features and benefits. It comes with an Intel Core™ i5-13500HX 2.50 GHz processor and 8GB DDR5 SDRAM, providing robust performance and efficient multitasking capabilities while the 512GB M.2 NVMe PCIe NVMe SSD ensures fast data access and quick boot times.

The software runs on Windows 11 64-bit, which is easy to use and provides a modern and user-friendly operating system with enhanced security features and support for the latest hardware. PyQt5 is used for the front end in creating a visually appealing graphical user interface and Python 3.12.3 is the main programming language, known for its simplicity and readability, which speeds up development and debugging processes. MySQL 8.4.0 serves as the database management system, offering reliable and efficient data management storage.

These tools, combined with their high performance, speed, and reliability, are ideal for the automated product management system, ensuring security, user-friendliness, visual appeal, and efficient data management.

Testing and Operating Procedure

Unit Testing

When it comes to testing the actual system, unit testing is an important aspect of software development, where individual components of a software

application are tested independently to ensure they perform as expected. This method helps identify and fix bugs early in the development process, improving code quality and reliability. The goal of unit testing is to ensure each unit performs as intended and meets requirements before integrating into the larger system (Bakharev, 2024; GeeksforGeeks, 2024). Unit testing was implemented in this project where the developers tested the whole system per unit to see if all the buttons and textboxes were functional and doing what it was intended to do. Also, to verify that they produced the expected output for a given set of inputs. The developers added clickable buttons after the sidebar was created in the User Interface, they tested if the buttons were functional and would display different modules where the system will be redirected to.

Module Testing

Module testing is also an important part of the software development life cycle, ensuring the reliability and functionality of individual software components or modules. It evaluates individual modules or components of a software application in isolation to verify their performance and meet specified requirements. It is typically conducted by software developers during the early stages of software development, helping to catch issues early and make debugging and troubleshooting more manageable (Salami, 2024). Module testing in the actual system is implemented by systematically testing each of the modules to know if they function correctly both independently and in connection with other modules. Developers created sample objects to test the software where they added sample products and their information to the database in the inventory

module. The developers use this sample to test if the information will be displayed correctly and if it's editable using the actual system, not just in the database.

Integration Testing

Integration testing is a software testing method where software components are integrated and tested as a unified group to identify defects caused by code conflicts between modules. This testing detects communication issues between software components, often occurring after unit testing and before system testing (Katalon, 2023). Integration testing in the actual system is implemented by systematically combining and testing multiple modules to ensure they work together as intended. An example of this is when the developers register users using the registration module in the system. This testing will identify if the functions connecting the registration module and security module will display the registered users in the security module wherein the user can view and edit the information that has been registered.

White Box Testing

White Box Testing is a software testing technique that focuses on the software's internal logic, structure, and coding. It allows testers to inspect and verify the software's inner workings, infrastructure, and integrations (Akhtar, 2023). It provides access to source code and design documents, allowing them to design test cases that verify the software's correctness at the code level. It is also known as transparent or open box testing (GeeksforGeeks, 2024). The developers conducted white box testing using Python where they individually tested all

possible paths, scenarios and test cases for each certain module such as inventory module, sales, transaction, etc. With this, the developers can only focus on a small area of the code to implement the algorithm which is ABC Classification Algorithm that will be implemented in the inventory management module.

Black box testing

Black box testing is a software testing methodology where a tester analyzes an application's functionality without understanding its internal design (Ashtari, 2022). It involves observing output generated by the system, identifying expected and unexpected user actions, response time, usability, and reliability issues (Hasson, 2023). This testing was implemented by the developers in the security module's login feature. Test cases include entering valid and invalid credentials to verify if the system correctly allows different levels of access to authorized users and denies access to unauthorized ones. This testing ensures that the login system works securely and reliably for users, without needing to know exactly how authentication and authorization mechanisms were programmed internally.

Software Evaluation

Software evaluation is a critical aspect of the software development lifecycle, ensuring that the software meets the required standards and satisfies user needs. In this research paper, the evaluation is based on five core criteria derived from the ISO 25010 standards: Security, Robustness, Maintainability, Functionality, and User-friendliness. This detailed evaluation ensures a comprehensive assessment of the software, highlighting its strengths and areas for potential improvement. Each criterion has been

rated based on specific attributes, providing a clear overview of the software's quality and effectiveness.

- Security refers to how well a product or system protects information and data from security vulnerabilities. This includes measures to ensure that only authorized users have access to sensitive information and that user activities are monitored. The software requires six-digit PIN codes for secure access and uses role-based access control to limit data access based on user roles and permissions. The software also features user logs for monitoring activity.
- Robustness is the software's ability to cope with invalid inputs or unexpected user interactions, ensuring it operates reliably under various conditions. It provides clear error feedback, efficient input handling, and error recovery. The system's search and filter functions handle user input efficiently, and its error recovery feature allows users to continue their tasks without interruption.
- Maintainability refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment and requirements. The software has its ease of updates, smooth error handling, and data backup and restore capabilities. It allows users to update product details and prices without technical assistance, ensuring the software remains stable and reliable.
- Functionality refers to how well the system can provide use to meet the intended task or purpose, ensuring that all functions work correctly and efficiently. The system's Help and About information provide user guidance, while buttons, checkboxes, and textboxes validate data input. The system has button

functionality and data processing, indicating successful processing and saving of user input.

- User-friendliness refers to how easy the software is for users to understand and achieve their goals in their specific tasks, emphasizing intuitive design and ease of use. The software's intuitive interface allows users to quickly navigate tasks and find what they need. New users can easily learn the software without much training, and proper labeling ensures users know what to click to avoid confusion.

5-Point Likert Scale

According to Tripathi (2024), a 5-point Likert scale is a psychometric response technique that enables respondents to indicate their level of agreement on a five-point scale. The scale includes the following points: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. This method is used to assess respondents' attitudes, opinions, and agreement with survey questions or statements, thereby evaluating the quality, likelihood, importance, and understanding of specific items or services.

Table 1 5 Point Likert Scale

RANGE	SCALE	WEIGHT
4.51 - 5.00	Strongly Agree (SA)	5
3.51 - 4.50	Agree (A)	4
2.51 - 3.50	Fairly Agree (FA)	3
1.51 - 2.50	Disagree (D)	2
1.00 - 1.50	Strongly Disagree (SD)	1

Sampling tools

The purposive sampling technique will be employed by the proponents to select respondents for the software evaluation. Using the purposive sampling technique, respondents were chosen as they have particular qualities or experiences that are important for the research. This means the proponents choose these groups on purpose to get useful information from both people who work in IT and those who do not. This way, the study can understand different perspectives and experiences related to the topic being studied. The sample consists of 20 respondents, divided equally between 10 IT professionals with a degree in any computer-related subject and who have at least one (1) year of experience and above in the IT field, aged from 25 to 60 years old, and 10 non-IT professionals who are customers of the business within the area, aged from 18 to 60 years old.

Mean

The mean is a fundamental concept in mathematics and statistics, representing the average or most typical value within a set of numbers. In statistical analysis, it serves as a measure of central tendency, alongside the median and mode, and is also known as the expected value. The mean is determined by adding all the numbers in a set and then dividing by the total count of numbers (Taylor, 2023).

This study utilized the calculation of the mean to gain insights into the system's strengths and areas needing improvement. By averaging the responses, the proponents could identify common perceptions and evaluate overall satisfaction. Additionally, they compared the means of responses between IT professionals and non-IT professionals to highlight any significant differences in their evaluations and experiences with the system.

This comparison enabled them to understand various points of view and modify improvements as a result of this comparison.

Survey Questionnaire

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	**5**	**4**	**3**	**2**	**1**
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.					
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.					
3. The software includes user logs features that track user activities and access, to help with monitor activity.					

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	**5**	**4**	**3**	**2**	**1**
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.					
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.					
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.					

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	**5**	**4**	**3**	**2**	**1**
1. The software allows the user to easily update product details and prices without needing technical help.					
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.					
3. The system can back up and restore data in case of crashing or disruptions.					

Functionality – it refers to how well the system can provide use to meet the intended task or purpose.	**5**	**4**	**3**	**2**	**1**

1. The Help and About information offers user guidance, while buttons, checkboxes, and textboxes validate data input by ensuring correct actions, appropriate options, and input.					
2. All buttons within the system perform their intended actions correctly.					
3. The system successfully processes and saves what the user inputs within the system.					

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	**5**	**4**	**3**	**2**	**1**
1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.					
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.					
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.					

Work Plan

Figure 105 Gantt Chart

The proponents have utilized a Gantt chart to visually represent the timeline and progress of the proposed project. The Gantt chart helped them plan and organize tasks by breaking them down into manageable segments, each with a specific duration. This visual tool provided a clear overview of the project's schedule, making it easier for them to manage their time effectively and ensure that they stayed on track with their proposed project goals.

Algorithm Implementation

The system will be utilizing the ABC Classification Algorithm. The algorithm classifies items into three categories: A, B, and C. This classification will be used to determine the items that are of importance to the shop. Items that are sold frequently and in large quantities are classified as Category 'A' due to their high movement rate. Category ‘B’ has a moderate movement rate meaning that these items are bought sometimes. Category ‘C’ items are those that are sold rarely or only in niche circumstances, which makes them the least important category since they do not make a profit as well as the previously mentioned categories.

The classification process involves several steps. First, each item's monthly consumption value is calculated using the formula: Monthly consumption value = Monthly number of units sold × Cost per unit. Next, the items are sorted in descending order based on their monthly consumption values. Then, the total monthly number of units sold and the total monthly consumption value are computed. Finally, the items are categorized based on their position after sorting. This categorization follows the 80-15-5 split threshold derived from the Pareto Principle, which states that 20% of inventory items typically contribute to 80% of the inventory’s total value.

The algorithm will be implemented in the Inventory and Sales Management part of the system. It will be used to categorize the products to identify which items are selling well, and which are not. This data could affect the decision-making towards buying stocks of the product, preventing stockouts due to high demand and cutting the amount of slow-moving products to help with reducing costs in the shop and freeing up inventory space.

The ABC Classification Algorithm will be used in the Inventory and Sales Management system to categorize items into three categories: A, B, and C. The system calculates monthly consumption values for each item, sorts them descendingly, and calculates the total monthly number of units sold and consumption value. The algorithm follows the Pareto Principle, which states that 20% of inventory items contribute to 80% of the total value. This data can help make informed decisions about buying stocks, preventing stockouts, and reducing costs and freeing up inventory space.

Chapter 4

Results and Discussions

This chapter includes the findings, results, and analysis of data gathered by the proponents from the respondents. Further information will be provided along with the analysis before the study.

Project Development

The project was developed to create a product management system for a poultry shop located in Rodriguez, Rizal. The preliminary stage mainly consists of visits to the poultry shop, surveying the shop, and conducting two interviews with the shop owner regarding their existing problems with their manual system. The following step after gathering the company's information is planning the system that will be created.

The planning stage is composed of three stages: First is defining the problems that will be addressed by the system; which problems will be tackled by which module, which problems will not be addressed by the system, and which group of people would benefit by the creation of the system. The second stage consists of designing different diagrams that will be used to supplement the creation of the system. Written narratives for how the existing system would do certain processes and how the proposed system would do and what the proposed system would handle each process efficiently. The flowcharts for each module are also defined here. The third and final stage of planning involves choosing the Software Process model that will be used in the development of the program, the feasibility study for the system is also included in this phase as well as the Cost Benefit Analysis. The chosen algorithm for the program that will help with inventory and sales management is the ABC Classification Algorithm. This algorithm classifies products into

a category, either Category A, Category B, or Category C that will be based on their monthly consumption value. This information will be used in deciding if the product would see an increase in stocks or a decrease in stocks depending on the performance indicated in the graph.

Monthly Sales for Category A Products:

Graph showing monthly sales for Category A products:

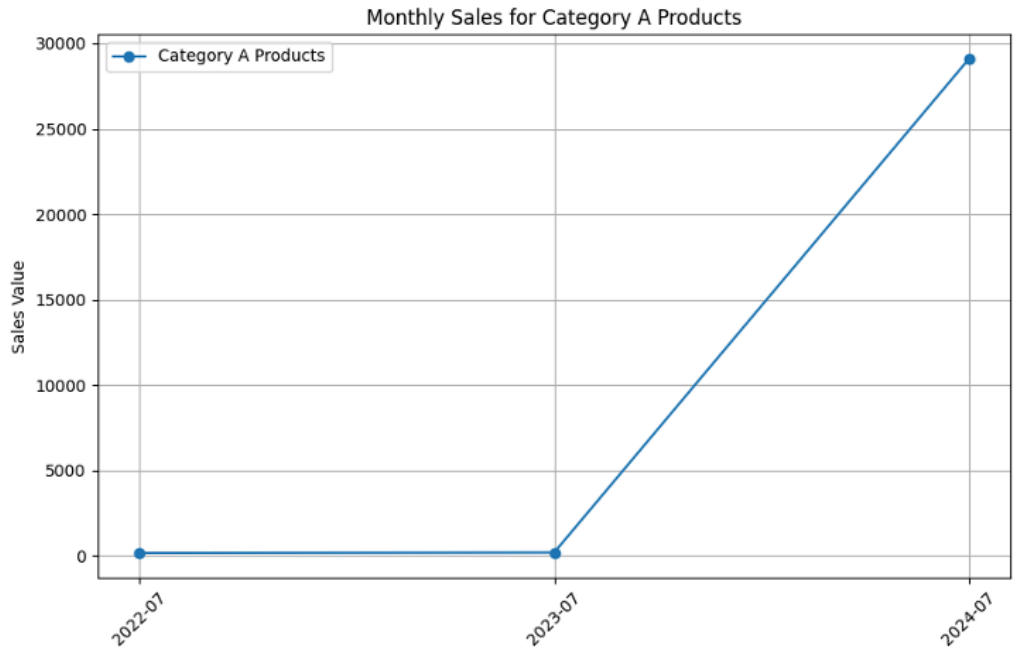

Figure 106 Algorithm Implementation on PDF Report page 1

Graph showing sales of different products labeled with their ABC classification:

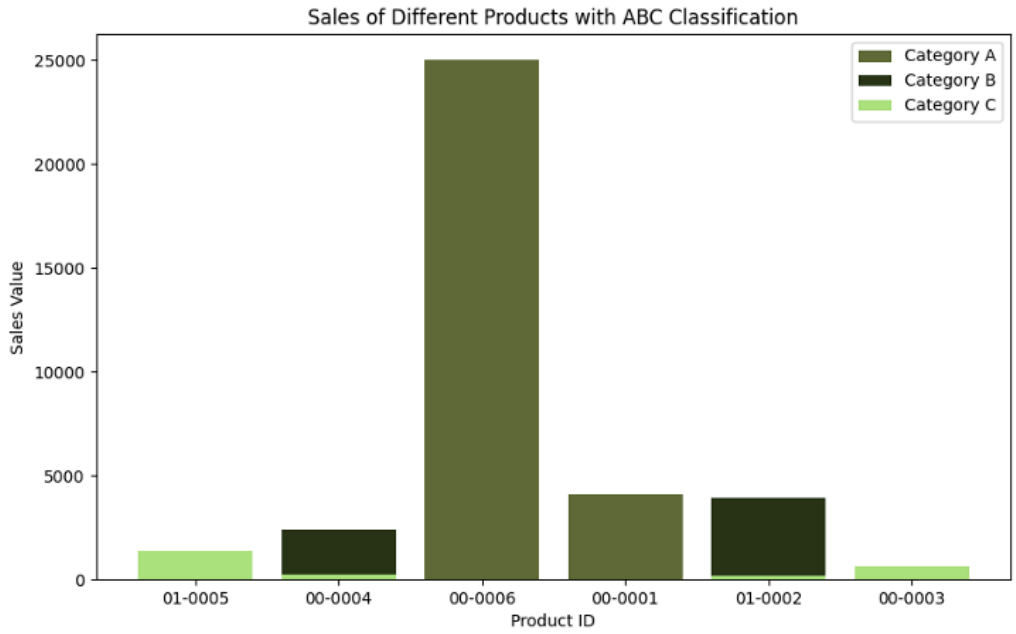

Figure 107 Algorithm Implementation on PDF Report page 2

Project Description

This project aims to develop an automated product management system for a poultry shop business. The system will consist of twelve modules which are security, registration and verification, login, search, transaction, record-keeping, sales management, inventory, reporting, maintenance, about, and help. The system will use LAN technology to connect devices. The security module ensures that only authorized personnel can access the system, while the registration module allows the owner to register new products and users. The login module requires a username and a six-digit PIN code for access, with a forgotten password link available. The search module allows

users to easily search for information, data, and products using keywords, numbers, or filters.

The transaction and sales management modules will be interconnected, processing and tracking sales, handling daily transactions, and generating total transactions for each customer. The inventory module will manage stock levels and ensure product availability. The record-keeping module will organize receipt records and data. The reporting module will generate, manage, and present various reports, while the help module provides on-screen assistance and support. The maintenance module ensures smooth system operation, robust security, data backup, and system updates.

Project Structure

This user interface of the system is simple and easy to use and understand because of its uniform color scheme and clear navigation labels. The interface looks clean, organized, and user-friendly, making it easy for users to navigate and perform their tasks efficiently, and since the design is minimalistic without too much clutter, this can enhance usability and reduce the learning curve for new users. The menu is laid out on the left side of the screen with different sections featuring Security, Registration, Sales, Transaction, Inventory, Records, Reports, Help, Maintenance, and About screens. This categorization helps users quickly find the functionality they need. The green, cream, and a touch of golden-yellow color scheme, along with the logo at the top right corner, suggests a focus on branding and a consistent look and feel, which is important for user experience.

The system utilizes the Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook featuring an Intel Core™ i5 i5-13500HX 2.50 GHz processor and 8GB DDR5

SDRAM, it delivers strong performance and efficient multitasking. The 512GB M.2 NVMe PCIe NVMe SSD ensures rapid data access and quick boot times and is operating on Windows 11.

Project Capabilities and Limitations

This section identifies and discusses the uniqueness of the system, what difference it brings to the table when compared to other product management systems, and what limitations the system has.

The capabilities of this system are its implementation of the ABC Classification Algorithm which automatically sorts products by their monthly consumption value. This classification algorithm would identify good-performing products and classify them as Class A, Class B, or Class C. Another capability of the system is that the Inventory reports include graphs that show how well the products have been performing and thus will help determine which products have been moving fast and doing well. The product details can be edited in the inventory module which enables ease of access. When dealing with forgotten passwords, the system provides email verification that enables the user to reset their password upon successful input of the one-time password. The Inventory module allows search features among different categories such as Product ID, Product Name, Category, Selling Price, Expiration Date, and Stock. When creating a new account or inserting a new product into the system, a User ID or Product ID is automatically assigned to the user or product. For database security, the system is capable of creating a backup database with a button click and the system can also restore the database from the file that was created from the previous backup.

The limitations of the system focus on certain parts of a product management system. Therefore the system does not have a product marketing element, product research element, and other elements regarding the product's marketability. In relation to this limitation, the security protocols implemented in the system were only basic protocols, advanced security measures like measures against SQL Injection were not implemented. The system will operate on a Local Area Network only, meaning that the system will not be accessible online. Returns and Exchanges are outside the scope of this system. This means that the system will not account for any transactions made by either returns or exchanges. Another limitation of the system is that other payment options such as bank transfers, and debit and credit card payments will be included in the system. A limitation that was discovered upon evaluation of the system by IT Professionals was that audit trails were needed to be displayed in the user logs, meaning that every action that the user committed would be shown in the user logs. Another limitation that was drawn from the evaluation of a non-IT Professional was that there was no legal basis for the implementation of the software if it was to be deployed in the field.

Project Evaluation

The criteria given below were used to determine the result of the conducted survey.

RANGE	SCALE	WEIGHT
4.51 - 5.00	Strongly Agree (SA)	5
3.51 - 4.50	Agree (A)	4
2.51 - 3.50	Fairly Agree (FA)	3
1.51 - 2.50	Disagree (D)	2
1.00 - 1.50	Strongly Disagree (SD)	1

Table 2 Security according to Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	4.70	Strongly Agree (SA)	1
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	4.60	Strongly Agree (SA)	2.5
3. The software includes user logs features that track user activities and access, to help with monitor activity.	4.60	Strongly Agree (SA)	2.5
Average Mean:	4.63	Strongly Agree (SA)	

Table 2 indicates that Information Technology (IT) professionals have a high level of agreement on security measures, with an average mean score of 4.63 on a Likert scale where "Strongly Agree" is the highest rating. This suggests that the majority of IT professionals surveyed strongly believe in the importance and effectiveness of the security protocols being evaluated.

Table 3 Security according to Non-Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	4.70	Strongly Agree (SA)	2.5
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	4.80	Strongly Agree (SA)	1
3. The software includes user logs features that track user activities and access, to help with monitor activity.	4.70	Strongly Agree (SA)	2.5
Average Mean:	4.73	Strongly Agree (SA)	

Table 3 shows that non-IT professionals feel secure when it comes to the security criteria, with an average rating of 4.73 on a Likert scale interpreted as "Strongly Agree" which is the highest. This high average suggests that most participants strongly agree that security measures are effective and satisfactory.

Table 4 Robustness according to Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	4.60	Strongly Agree (SA)	1.5
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	4.60	Strongly Agree (SA)	1.5
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	4.40	Agree (A)	3
Average Mean:	4.53	Strongly Agree (SA)	

Table 4 shows that IT professionals find the system very robust, as the average mean score is 4.53 on a Likert scale where "Strongly Agree" (SA) is the highest rating. This high score indicates that most professionals strongly agree that the system is reliable and performs well under various conditions.

Table 5 Robustness according to Non-Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	4.50	Agree (A)	1.5
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	4.50	Agree (A)	1.5
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	4.40	Agree (A)	3
Average Mean:	4.46	Agree (A)	

Table 5 shows that non-IT professionals generally find the robustness of a system to be very high, with an average rating of 4.46 out of 5. This score falls into the "Agree" category on the Likert scale, indicating that most respondents believe the system is reliable and performs well under various conditions. This suggests a strong confidence in the system's ability to handle tasks without failure or issues.

Table 6 Maintainability according to Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software allows the user to easily update product details and prices without needing technical help.	4.80	Strongly Agree (SA)	1
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	4.60	Strongly Agree (SA)	2
3. The system can back up and restore data in case of crashing or disruptions.	4.30	Agree (A)	3
Average Mean:	4.56	Strongly Agree (SA)	

Table 6 reflects IT professionals' opinions on maintainability, with an average score of 4.56 out of 5. This high score suggests that the majority of IT professionals "Strongly Agree" that the systems or software in question are easy to maintain. The strong agreement indicates confidence in the system's maintainability, implying that it is well-designed, with clear documentation and efficient code, making it easier for IT professionals to modify to improve, correct, or adapt to changes in the environment as well as requirements.

Table 7 Maintainability according to Non-Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software allows the user to easily update product details and prices without needing technical help.	4.70	Strongly Agree (SA)	1
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	4.30	Agree (A)	3
3. The system can back up and restore data in case of crashing or disruptions.	4.50	Agree (A)	2
Average Mean:	4.5	Agree (A)	

Table 7 shows how non-IT professionals view maintainability, with an average rating of 4.5 which “Agree” is on the Likert scale. It means that they generally agree that the systems or processes they work with are easy to maintain. This suggests that even those without IT expertise find the maintenance aspects manageable and uncomplicated.

Table 8 Functionality according to Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	4.50	Agree (A)	1
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	4.70	Strongly Agree (SA)	2.5
3. The sidebar works properly and links to specific modules based on what the user enters.	4.70	Strongly Agree (SA)	2.5
Average Mean:	4.63	Strongly Agree (SA)	

Table 8 indicates a high level of agreement with its functionality as interpreted by IT professionals. On average, professionals rated it at 4.63, suggesting a strong agreement of its effectiveness and usability. This score reflects the surveyed professionals' general "Strongly Agree" opinion, which shows satisfaction with the system’s functionality and performance in their IT contexts.

Table 9 Functionality according to Non-Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	4.50	Agree (A)	3
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	4.80	Strongly Agree (SA)	1.5
3. The sidebar works properly and links to specific modules based on what the user enters.	4.80	Strongly Agree (SA)	1.5
Average Mean:	4.70	Strongly Agree (SA)	

Table 9 signifies a high level of functionality as evaluated by non-IT professionals, with an average mean rating of 4.7 on a Likert scale, indicating strong agreement. This suggests that non-IT individuals find the system's functionalities highly effective and suitable for their needs, reflecting a positive reception among users outside the IT field.

Table 10 User-friendly according to Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	4.70	Strongly Agree (SA)	2
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	4.70	Strongly Agree (SA)	2
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	4.70	Strongly Agree (SA)	2
Average Mean:	4.70	Strongly Agree (SA)	

Table 10 presents data indicating a high level of agreement among IT professionals regarding user-friendliness. The average mean score of 4.7 suggests a strong agreement among respondents who strongly agree with the statement on a Likert scale, indicating that IT professionals believe that the system presented is user-friendly.

Table 11 User-friendly according to Non-Information Technology (IT) Professionals.

Items	Mean	Interpretation	Rank
1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	4.80	Strongly Agree (SA)	2.5
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	4.80	Strongly Agree (SA)	2.5
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	5.00	Strongly Agree (SA)	1
Average Mean:	4.86	Strongly Agree (SA)	

Table 11 illustrates how non-IT professionals recognize user-friendliness. On average, they rated it at 4.86, which indicated “Strongly Agree” in the concept based on the Likert scale. This suggests that the majority find the interface or system easy to use and intuitive, aligning well with their expectations and needs without requiring specialized technical knowledge.

Table 12 Mean Perception Profile of Information Technology (IT) Professionals

Criteria	Mean	Scale	Rank
Security	4.63	Strongly Agree (SA)	2.5
Robustness	4.53	Strongly Agree (SA)	5
Maintainability	4.56	Strongly Agree (SA)	4
Functionality	4.63	Strongly Agree (SA)	2.5
User-friendly	4.70	Strongly Agree (SA)	1

Table 12 shows that IT professionals strongly agree with the different criteria they have evaluated. They rate security, robustness, maintainability, functionality, and

user-friendliness very positively, all averaging between 4.53 to 4.7 on the Likert Scale where 5 indicates the highest agreement or “Strongly Agree”. This indicates strong agreement among IT professionals regarding the importance and satisfaction with these critical attributes of the presented system.

Table 13 Mean Perception Profile of Non-Information Technology (IT) Professionals

Criteria	Mean	Scale	Rank
Security	4.73	Strongly Agree (SA)	2
Robustness	4.46	Agree (A)	5
Maintainability	4.50	Agree (A)	4
Functionality	4.70	Strongly Agree (SA)	3
User-friendly	4.86	Strongly Agree (SA)	1

Table 13 shows how non-IT professionals perceive different criteria of the system. They strongly agree that user-friendliness (4.86), security (4.73) and functionality (4.7) are top priorities, indicating they highly value safety, design, and how well a system works. They also agree (4.46 to 4.5) on robustness and maintainability, highlighting their belief in technology's reliability, ease of maintenance, and ease of use, respectively. Overall, these findings suggest that non-IT professionals prioritize technology that is secure, reliable, and easy to use in their work or daily lives.

Chapter 5

Summary, Conclusions, and Recommendations

The chapter includes the findings from the gathered data, the researcher's conclusion based on the findings, and recommendations on the significance of the study. This synthesizes the understanding from this study on the Product Management System For Ranil’s Poultry Shop. This chapter offers a comprehensive content overview of the research findings with a focus on a summary that covers each aspect of the study. The conclusions drawn are strictly aligned with the objectives of the study, which are based only on supported data to ensure reliability and validity. Additionally, the chapter provides recommendations that are formulated based on the study's results, suggesting more methods for further research, improvements to project designs and specifications as well as ways to apply the findings and improve the developed system. Through the implementation of the summary, conclusions, and recommendations, this chapter summarizes all parts of the study and will be the final part of this research, providing a review of the findings and suggestions for future research based on the data.

Summary of the Study

This project focuses on enhancing the operations of Ranil's Poultry Shop through the implementation of an automated product management system. Located in Rodriguez Rizal, the shop, founded by veterinarian Arthur Tumali and his wife Linda Tumali, offers a variety of poultry products, pet supplies, essentials, and more. Currently managed by owner Rachel Manuel, the shop faces operational challenges exacerbated by manual processes and a lack of data security. These challenges include manual operations, issues

with receipts, and inefficient inventory management, leading to errors in sales tracking and customer dissatisfaction.

The proposed automated system aims to address these issues by providing a secure platform for managing products and transactions. It will include features like automated sales management, real-time inventory tracking, and data backups to ensure operational efficiency and data integrity. By leveraging technology, the project seeks to improve customer service through faster transactions and more accurate inventory management. However, the project acknowledges limitations, such as excluding payroll and accounting systems. The incremental model was also used by developing the system which breaks down a project into manageable increments, designed, implemented, and tested incrementally until the product is complete.

This system is a multi-layered system designed to improve data processing, validation, and user interaction. It consists of three main components: Presentation Tier, Logic Tier, and Data Tier. The proponents have used the incremental model to develop this system, which allows for gradual improvement and addition of features in phases. The incremental model involves three phases: requirements, design, testing, and implementation. The requirements phase identifies software features and functionalities. The design phase involves creating blueprints and coding them. The testing phase ensures components work correctly and corrects errors. The implementation phase incorporates the designed features into the project. The process repeats for Build 2 and 3, adding new features to the previous build for continuous improvement and system expansion.

Data gathering instruments include interviews where the proponents conducted two interviews. Interviews are a primary way to collect information by talking directly to

the interviewee. The first interview was done to gather primary information about the business owner and how the business operates every day. This helped understand the business's background, main activities, and any problems they face. A second interview followed to collect supplementary details. The second interview was used to get more detailed information and clarify anything that was unclear from the first interview. It allowed for asking more specific questions about certain areas of the business. Observational methods were also employed to observe the business's day-to-day activities. Observation means watching how the business operates daily. This method helps see how things really work, how employees do their jobs, and how customers interact with the business. Gathering resources and communication were facilitated through the internet, a global network of electronic devices. The internet was used to find additional information and to communicate easily with others. Online resources like reports and guidelines provided extra details, and the internet made it easy to stay in touch with people, share updates, and get information quickly.

The proposed system will use Windows 11 64-bit, Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook laptop with Intel Core™ i5 i5-13500HX 2.50 GHz, 8GB DDR5 SDRAM and 512GB M.2 NVMe PCIe NVMe SSD. A Python 3.12.3 language for the front end and MySQL 8.4.0 back end. Maintenance and help will be necessary, and real-time adaptability will be evaluated. Unit testing, module testing, integration testing, white box testing, and black box testing are crucial aspects of software development. For the software evaluation, it focuses on five criteria which are security, robustness, maintenance, functionality, and user-friendliness. The purposive sampling technique will be used to select respondents which are IT and non-IT

professionals for the software evaluation, aiming to understand different perspectives and experiences related to the topic being studied.

The project evaluation survey results indicate that both IT and non-IT professionals agree on the effectiveness of a system. IT professionals rated security highly, with a mean score of 4.63, while non-IT professionals rated it even higher at 4.73. Robustness was rated by IT professionals at 4.53, while non-IT professionals gave a slightly lower rating of 4.46. Maintainability was rated by IT professionals at 4.56, with IT professionals finding it easy to maintain. Functionality was rated equally by both groups at 4.63, with IT professionals at 4.70, and non-IT professionals at 4.86. User-friendliness received the highest ratings from both groups, with IT professionals at 4.70 and non-IT professionals at 4.86. Overall, the results suggest a consensus that the system excels in key areas such as security, functionality, and user-friendliness, with strong agreement on robustness and maintainability.

These positive evaluations significantly impact our objectives and feasibility study. The high ratings for security and functionality align perfectly with our goal of creating a secure, user-friendly system accessible only by authorized personnel. The feedback on maintainability and robustness supports the feasibility of implementing and sustaining the system over time. Furthermore, the high scores for user-friendliness and functionality indicate that the system will be well-received by end-users, enhancing its operational feasibility. The strong agreement on these important areas suggests that the system meets the technical and operational requirements effectively, supporting its economic feasibility by ensuring that the system will be efficient, reduce manual labor, and ultimately save costs through improved management and automated processes.

Conclusion

This study identified several key challenges in the poultry shop's current manual system, which include security vulnerabilities, inefficiencies in receipt handling, inaccuracies in sales tracking, lack of a central data repository, and ineffective inventory management.

1. This study aimed to address the lack of security in handling receipts, records, and payments at Ranil's Poultry Shop. The manual system in place was prone to damage, loss, and theft, making sales records and transaction history vulnerable. Additionally, the absence of a secure system allowed unauthorized individuals access to cash, increasing the risk of theft and data alterations. By implementing a computerized system, the proponents were able to develop a security system that focuses on authenticating and authorizing user credentials. It provides two levels of access based on the owner's preferences, allowing for customizable permissions for each user. Also, the proponents were able to implement user logs that are also saved to monitor each user's login and logout activities.
2. This study is also focused on addressing the issues with the current manual work of generating and storing receipts. The existing system is prone to errors in accuracy, legibility, and efficiency due to handwritten receipts, leading to time-consuming processes, discrepancies, and misunderstandings with customers. The proponents were able to solve these problems by developing this system which produces digital receipts and tracks the sale of products, including the date, time, and price. The records are also searchable and more efficient than the manual method.

3. This study also aimed to address the challenges in managing the sales operations. The current manual system has difficulties in manual calculations and tracking sales data. The proponents have solved these issues by developing a sales management module in the system and automated transaction system. The new system simplifies different payment methods such as cash and gcash. It enables computerized data entry, which can help the user to track sales efficiently and reduces the time needed for manual transactions. The proponents were also able to display all products with their prices and quantities, allowing for quick data input and easy calculation of payments and change.
4. Additionally, there is a lack of a central database for managing and storing receipts details, product information, and transaction records. The shop experienced problems like forgotten item prices and quantities and lost receipts. The proponents created a centralized database to store, log, and record all transactions, user information, and actions within the system. This database, consisting of multiple normalized tables, will be a great help for the user of this system. The new system ensures that all receipts are securely recorded and can be easily retrievable since scheduled backups are implemented to secure data against unforeseen errors or hardware failures, ensuring data integrity.
5. Lastly, since the business has struggled with monitoring product quantities and statuses in the inventory, which can lead to frequent stock outs or overstock situations, the proponents were able to develop a real-time inventory tracking. By updating the system and database with every transaction, this enables timely updates on the status and information of each product, helping to avoid

overstocking or running out of stock. Additionally, product information can be easily sorted and searched, providing easier navigation and immediate access to necessary data. The new system monitors the quantities and status of each product in real-time, significantly improving the overall inventory management process of the business.

Recommendations

When the proponents conducted the system evaluation, certain comments and recommendations were given by the IT professionals. Based on the limitations of this study, the following recommendations can be useful for the future development of this system.

1. Developing features for handling returns and exchanges would also significantly improve customer service and satisfaction by providing a complete sales management system that can handle all aspects of transactions, including post-purchase processes.
2. Expanding the system to accept different payment methods, such as bank transfers, debit, and credit card payments, would increase flexibility and convenience for customers, potentially improving sales and customer satisfaction.
3. The system's development recommends an online version for remote access and management, making it more flexible and accessible. This is especially beneficial for businesses expanding beyond LAN networks. Integrating additional components and systems, such as software programs, APIs, and data management techniques, is crucial for seamless functioning and proper functioning.

4. Implement a synchronization mechanism with an external time server using Network Time Protocol (NTP). This ensures that the system's date and time are accurate and consistent, that can minimize potential errors due to incorrect hardware settings.
5. Future developers can implement additional algorithms for various components such as demand forecasting, sales prediction, and customer behavior analysis. This can help in better decision-making and strategy planning.
6. Create a super admin role to ensure the system keeps on running even if the database crashes. This role should have the highest access and control, allowing them to perform important tasks like restoring backups and managing user permissions. The super admin should also have the ability to audit and monitor system activities to preemptively address potential issues.

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APPENDICES

Appendix A

Approved Proposal

ITechnological Institute of the Philippines
Quezon City

College of Computer Studies
Computer Science Department

CS 301 – Software Engineering 1
First Semester S.Y. 2023-2024

CONCEPT PROPOSAL

(1) Proponents

Name	Roles *(Programmer, System Analyst, Designer, etc., please specify)*
1. Damasco, Rheiniel Jerard	Business Analyst, Technical Officer
2. De Ocampo, Deighro	Programmer, Project Manager
3. Macam, Franchesca Jane	System Analyst, System Designer

(2) Title

Product Management System for Ranil's Poultry Shop

(3) Background of the Study *(Brief description of the target beneficiary. The proponents will present the problems encountered by the end users in the procedure of the existing system.)*

Ranil's Poultry Shop is a business that sells poultry-related products such as bird feeds and poultry accessories. They also sell dog and cat foods, pet medicine, pet care, pet essentials, and other products related to pets. It is located at Rodriguez Rizal, operating from 7:00 a.m. to 7:00 p.m. The business started in 1974 by the owner's parents; her father, Dr. Arthur Tumali, a renowned veterinarian in the area, offered free consultations, which became the store's signature service. Her mother, Linda Tumali, retired the same year from being a teacher to help start and support the store after the birth of their firstborn. The shop was also the first to offer those specific services when it was established. The current owner of the store is Mrs. Rachel Manuel, and the origin of the store's name comes from her parents' names. Meanwhile, the owner acts as the cashier of the store most of the time and assigns her sons to serve as her proxy when she has some important errands to run.

The business faces lots of problems caused by its manual system. Written and collecting receipts, lost receipts, lack of data security, manual counting of inventory, and manual computation of sales were stated by the owner. The business only has a single employee who is in charge of measuring the products that the customers ordered and is also responsible for handling the heavy lifting of sacks. When a customer purchases an item, the employee is required to measure it using a measuring cup and a measuring scale. After that, the owner creates a handwritten

receipt to track and verify the purchase, which will be given to the customer as well as a copy for the business. With this, the owner has a hard time collating receipts and finds written receipts time-consuming, which requires a lot of effort. All receipts regarding purchases and inventory are kept for verification, and there were also times that some receipts were lost due to the number of receipts the owner needed to track and collect at the end of the day. When a receipt is lost, it is counted as a loss for the business because the receipts are needed to compute the net gain of the store. In terms of data security, the receipts were placed only in a file organizer on the table, which might be lost if not handled and stored correctly. When it comes to counting inventory, the owner already has a record of what items will be delivered and needs to check them one by one to see if they have the correct items and quantity. Checking, updating, and counting stock repeatedly requires physical labor which is inconvenient and time-consuming. When refilling the inventory, the supplier also provides a receipt when ordering items, and this receipt will be proof of the company's purchase to the supplier. Regarding manual computation of sales, it is prone to human errors like miscounting of money, difficulty in understanding handwriting, maintaining records of sales transactions, and incorrect total sales due to the large number of cash transactions per day.

(4) Project Objectives *(What do you want to accomplish in your investigation? The proponents will present the solutions that will answer all the problems in the existing system.)*

In a competition between different poultry shop businesses, a reliable and effective automated product management system that will be able to keep track of each product sold and its quantity, receipt records, payment records, inventory, and computation of sales per day for Ranil's Poultry Shop will ensure a competitive edge in the market. The proposed system will highlight the implementation of a product management system. The following are the specific objectives of the proposed system:

1. To create a database that will ensure the security of the computerized receipt records with encryption and access controls for the business. This will guarantee that all receipts will be recorded and will not be easily lost due to manually handling them.
2. To develop a computerized record-keeping system for product information gathering that will generate computerized receipts. This will keep track of what and when products were sold and their price and will lessen the chances of misinterpretation of handwriting. It is also searchable, faster, and more efficient than manually writing receipts.
3. To automate a transaction system for efficient payment processing in each transaction. This will speed up transaction processing and reduce the risk of errors like miscalculations.
4. To provide improved and reliable daily sales management. Since the owner explained that she is having a hard time tracking the actual sales coming from the receipts at the end of the day, a computerized data entry of sales and a more reliable sales recording will be beneficial to the business. This will make

tracking sales easier to record and manage for reports.

5. To provide real-time inventory tracking. This will provide timely updates on the inventory to avoid overstocking or running out of stock. Manual sales and inventory tracking may be related to each other, but they both serve different purposes in a business. An inventory that monitors the quantities and status of each specific product or item that is on hand. It is focused on stock factors like item quantities, location, and stock movement.

(5) Expected Output *(Indicate the specific products, processes, or services that the project is expected to produce. The final project must be reliable, efficient, user-friendly, and accessible to all users, especially for PWD personnel.)*

The proponents will develop a product management system for Ranil's Poultry Shop. The system will contain five modules to support the daily operations of the poultry shop. It includes a security module, a transaction module, a record-keeping module, a sales management module, and an inventory module.

The security module will feature a database that will be responsible for verifying the identity of users accessing the system. This will ensure that only authorized personnel can log in to the database, which will have access to view receipt information. This module will also protect the data in the database from disappearing and will identify any suspicious activities. The transaction module will handle the everyday payment transactions of the poultry shop. This module is responsible for managing and processing different types of transactions in the system and ensuring that every transaction is consistent. The record-keeping module will be designed to manage and store computerized receipts for accessible records. This will allow the user to keep track of the data in the receipt, such as items, quantity, date purchased, amount, and payment method. The sales management module will feature sales operations. This module will help the business track and manage sales on a daily basis. This also includes monthly and yearly sales tracking. Lastly, the inventory module will identify the current status of items within an organization's inventory. This module will record which specific product needs restocking, which also works hand in hand with the generation of receipts that will automatically affect inventory by subtracting the items from the receipt in the available inventory and will include the generation of reports that can help in making business decisions. The inventory module will be responsible for storing and displaying the current stock of the products, which will prevent sudden stock shortages from happening.

(6) Significance of the Study *(Contributions of the project/study. This section justifies the study. It should include a statement of the study's contribution to pushing back the existing frontiers of knowledge. It should also include the potential beneficiaries of the research and the possible uses of the result.)*

This project aims to significantly increase Ranil's Poultry Shop system's reliability, productivity, and efficiency. With the current manual system that they already have, this project will contribute to making every transaction and inventory efficient and easy to do and access. Ranil's Poultry Shop will also have a competitive advantage through

its efficient product management system, which can also improve customer service and overall business performance. Having this system can also reduce operational costs such as paper, storage, markers, and manual labor. This system can benefit users such as staff, employees, and the owner. This shows that even a small and long-term business like Ranil's Poultry Shop can adapt to modern changes in our technology and environment. The following people will benefit from the study:

- Owner, Staff, and Employees - they are the ones who will certainly benefit from this project since they will be the ones who use and experience the computerized and improved system daily. This will save them time and improve customer service. This system will improve and reduce operational costs and provide real-time updates on sales transactions and inventory.

- Persons with Disabilities (PWD) Personnel - This project aims to be user-friendly to all users, including PWD personnel. The accessibility of the system will give PWD employees a better working environment.

- Customers - Customers of Ranil's Poultry Shop will also benefit from this project by making their purchases correctly, having a lesser waiting time, and having better customer service.

- Suppliers - Suppliers are the ones who deliver raw materials for inventory management in the shop. This project will help maintain the levels of stock and avoid overstocking or running out of stock.

- Proponents - The proponents will be able to benefit from this project by allowing them to devise System Analysis and Development (SAD), which will help to improve their skills in system analysis.

- Future researchers - This project proposal contains information that can help researchers in the future in different fields. This can also serve as a case study or a review of related literature in their research paper since this proposal only contains correct and accurate information.

(7) Target Beneficiaries *(Who are the clientele and what are the expected outcomes/effects of using the project output?)*

The target beneficiaries of the proposed system are the owner, employees, staff, suppliers, and customers of Ranil's Poultry Shop.

(8) Remarks *(To Be Filled out by the Faculty In-Charge)*

- with signed letter from the beneficiary
- title is approve

Approved by:

10/12/2023
Ms. Karren V. de Lara
Faculty In-Charge

Noted by:

10/13/2023
Ms. Hazel San Loverez-Patilano
Program Chair, CS Dept.

Appendix B

Letter of Endorsement

July 03, 2024

Tourism Infrastructure and Enterprises Zone Authority
6th floor, Tower 1 Double Dragon Plaza
Double Dragon Meridian Park
Macapagal Avenue corner EDSA Extension
1302, Bay Area, Pasay City

Dear Ma'am/Sir,

We, the students of the Technological Institute of the Philippines (TIP) taking up Bachelor of Science in Computer Science (BSCS), would like to ask your permission to allow the undersigned proponents to conduct a system evaluation within your company.

Our team has developed a system as part of our Software Engineering 2 (CS 304) course, aimed at automating the product management system of Ranil's Poultry Shop located in Montalban, Rizal. To ensure the system meets potential users' needs and expectations, we request your cooperation in evaluating the system through a survey questionnaire. This evaluation is crucial for us to gather accurate and valuable feedback to refine and enhance the system to better serve its intended purpose. The survey will provide your staff an opportunity to share their insights and experiences with the system, helping us identify areas for improvement and ensuring that the system is secure, reliable, and efficient in processing information.

We assure you that any information gathered through this survey will be used strictly for academic purposes and will remain confidential. Your participation will significantly contribute to the success of our project and the development of a robust system that can benefit the target company and related businesses in the industry.

We would be deeply grateful if your company would accept this request and allow your staff to participate in the survey.

Thank you for your kind consideration. God bless and more power.

Respectfully yours,

Damasco, Rheiniel Jerard

De Ocampo, Deighro

Macam, Franchesca Jane

Noted by:

7/3/2024

Ms. Karren V. de Lara
Faculty In-Charge

Received by:

RAQUEL S. DELA CRUZ
July 3, 2024

October 02, 2023

Mrs. Rachel T. Manuel
Owner
Ranil's Poultry Supply
6, JP Rizal Avenue, Balite, Rodriguez, Rizal

Dear Madam,

We, the students of the Technological Institute of the Philippines (TIP) taking up Bachelor of Science in Computer Science (BSCS), would like to ask your permission to allow the undersigned proponents to conduct an interview in your company.

The proponents are engaged to conduct a research study regarding your existing manual Sales and Inventory System as a partial requirement for Software Engineering 1 (CS 301). In line with this study, the proponents would like to gather accurate and helpful information through conducting an interview and observation method which will guide in analyzing and designing an automated system that will benefit your company. The proposed system will enable you to provide a secure, reliable, and efficient processing of information as well as provide timely reports needed by the organization in its decision-making.

The proponents will be very grateful to your company if you will accept this project proposal and rest assured that any gathered information will be used strictly for study purposes only and will remain confidential.

Hoping for your kind consideration. God bless and more power.

Respectfully yours,

Damasco, Rheiniel Jerard

De Ocampo, Deighro

Macam, Franchesca Jane

Noted by:

Ms. Karren V. de Lara
Faculty In-Charge

Ms. Hazel San Loverez-Patilano
Program Chair, CS Dept.

Received by:

RACHEL T. MANUEL

Appendix C

Interview Transcribe

Date: October 4, 2023
Time: 10:00 PM - 11:30 PM
Location: Ranil's Poultry Supply, Rodriguez, Montalban
Participants: Owner - Mrs. Rachel Manuel
Proponent 1 - Rheiniel Damasco

Proponent 1: Good Evening, I am Rheiniel Damasco from TIP, this interview is for our project in Software Engineering, and you will be asked questions. You are aware that this session is being recorded for our transcript and all the information that will be gathered here is for our project and will be kept confidential.
Owner: Okay. Good Evening.
Proponent 1: What is your name?
Owner: I am Rachel Manuel,
Proponent 1: Okay. The first question is the history of the name of your shop.
Owner: Yes, the name of our shop is Ranil's Poultry Supply. It came from the names of my parents. The name of my father is Arthur, so the RA in the beginning of his name, got switched around and became RA—AR, got swapped. So the NIL part came from Linda, LIN became NIL, and they combined it and became Ranil.
Proponent 1: Okay, thank you. What are the products that you sell in your shop?
Owner: Hmm… Cat food, dog food. Poultry supply—ah, poultry feeds food for chicken used in cockfights, and the Broiler 45 days that are being nurtured, just like the ones that we buy from the market. Then, fertilizers, and seeds, we also sell chicks.
Proponent 1: Okay, so, in your opinion, how much—how many transactions do you have per month?
Owner: Per month, maybe about… 1000, more or less, something around that.
Proponent 1: What about per day?
Owner: Per day is 35-40.
Proponent 1: Ah, there are a lot.
Proponent 1: So when did your business start?
Owner: It started in 1974, I wasn't born yet—
Proponent 1: That was a long time ago…
Owner: —because my dad was a veterinarian.
Proponent 1: Ah…
Owner: My mother was a teacher, so my dad became an agent for medicine, then he made my mother stop working as a teacher when my sister was born, our firstborn in 1974. So they started this… this business. After all, my father knows what medicine to give for this, what medicine to give for that… So they included feeds, so when the business…They gave a consultation—free consultation to the customers, so when the customers asked: "Doc, what's the cure for this?" They would know what medicine to buy. So that became our edge in our (business), we were the first here to build a poultry supply, and my daddy was a famous vet here back then.
Proponent 1: Ahh, okay. So next question: What is the procedure for selling per item?
Owner: Per item… The feeds are measured per kilo, they can also be bought one-fourth or one-half. Then for the medicine, and other agricultural products like pesticides, seeds, and chicks, they are sold per piece. The feeds are sold per kilo, they can also be bought

per sack if they want wholesale.
Proponent 1: So at the end of the day, do you calculate the products sold on that day?
Owner: Yes, the sales…—I have a record of the sales.
Proponent 1: Regarding the sales, do you write the receipt, is it written by hand?
Owner: Yes, it is written by hand.
Proponent 1: Ah… So the next question is: How do you manage your inventory?
Owner: The inventory is managed monthly. Every end of the month, that's when I start counting. Ah… I, it needs to be balanced to the receipts, in the invoices, in the delivery receipts. It needs to be matched versus the ending inventory.
Proponent 1: Okay, okay… So, how many employees do you currently have?
Owner: Only one, currently, it needs to be a man; one male then… Because he will lift(products) sometimes he lifts 50 sacks—50 kilos that is equivalent to 1 sack because usually 50…
Proponent 1: Ah, so he does the heavy lifting?
Owner: Yes, he does the heavy lifting, measuring feeds, taking care of the chicks, like putting them in the cage, feeding them… Only one(employee) because we only are a small business.
Proponent 1: So he's also the cashier?
Owner: I am, I am(the cashier). Because I am hands-on in the business, I don't leave—we only have one day off. That's the only time to leave(the shop) or run some errands. But we are open for 6 days from 7 AM to 7 PM.
Proponent 1: Ah… 12 hours…
Owner: Yes.
Proponent 1: Ah okay, okay. So the next question is: In your opinion, is there a problem—ah I mean… Do you notice any hardships or difficulties in your system? For example, getting the total…and…yes, in getting the total.
Owner: Yes, that's my (problem) because it is still being done manually. Time-consuming, and you have to keep a lot of paper. Unlike when a system is available, everything will be displayed, the sales will be displayed, the inventory will be displayed…But here it's still manual, it's kind of time-consuming, and there are many papers(records) that will need to be kept.
Proponent 1: Is there an issue where a receipt, for example, got misplaced or got lost?
Owner: Yes there are, but rarely. Because I put them(in a container), they are organized in a container. In the time of my parents, they are old and they are not familiar with these systems. They do not conduct inventory and other stuff, (like) accounting, but when I took over, I saw to it that files were properly sorted, inventory, cash flow, I have; Income statements… Accounting stuff…
Proponent 1: Ah…So, still referring to the current question, for example, if a receipt got lost, do you include it in the total loss? Because the receipt got lost…
Owner: Yes you still have to include it because it can be used to determine if we profited or what… If you(business) profited this month, I will just include the estimate, since I know the monthly…
Proponent 1: So the last question will be uhm, confidential…So, are there cases where your employee; let's say has a different way of measuring products like he overmeasures feeds… Are there cases of fraudulence?

Owner: Yes there are. But it was not during my time(currently). It was back then when my parents managed the shop. That time, they had an employee who had worked there for so long, and they trusted so much that they didn't know(the employee's actions). Then when I took over, only then was it revealed that there were such actions: I saw medicines stored in different places, only to know that they(employees) would get those(medicines) from those places, for example in the cabinet then they would sell it outside. In my parents' time, they had no inventory or cash flow, they did not record their sales every day. So they didn't determine (the losses), but now, since I already have access to the inventory, I already know about the losses, and I always am hands-on in counting the stocks every day, on what products are lacking, what piece of what stock needs replenishment, all of that is mine(work). So that leaves my employee to manage everyday sales, that's all that's assigned to him. But when it comes to ordering, receiving, and signing receipts, that's my job. That's my responsibility,.because if you have a business, you need to be hands-on, not just ordering your employees to work. But there, (gestures to her sons), I can trust them to watch over the shop since I trust him.
Proponent 1: For the last question, the last follow-up question is: Where do you order supplies or what is the process of ordering supplies?
Owner: In ordering, I ordered what my parents would order before, our suppliers are still the ones who supply us now. Sometimes some peddlers offer better prices and products or the quality of products. I would avail from them. Then some agents who offer… If the offer is good, I would order from them, but I still purchase from my old suppliers because they have been trusted since the time of my parents. We would get supplies from them, so I stayed loyal to them. If any good offers come, that's when I add suppliers.
Proponent 1: Okay, that is all, thank you for your time.
Owner: Okay, thank you too, for your effort and time. (laughs) Glad to help you.
—----------

Date: October 14, 2023
Time: 4:30 PM - 5:30 PM
Location: Ranil's Poultry SupplyRodriguez Montalban
Participants: Owner - Mrs. Rachel Manuel
Proponent 1 - Rheiniel Damasco
Proponent 2 - Deighro De Ocampo

Proponent 1: Good afternoon, I am Rheiniel Damasco, and he is—
Proponent 2: Deighro De Ocampo
Proponent 1: We will be conducting a follow-up interview about our project in Software Engineering.
Owner: Yes, good afternoon.
Proponent 1: What is your name, and what is your affiliation to the store?
Owner: I am Rachel Manuel, and I am the owner of Ranil's Poultry Supply.
Proponent 1: Okay. So the first question is: How does the system in the shop work? From the movement of the feeds… How does that… the process of how you sell items?
Owner: Ahh… How we sell items. So when the customer walks in, they will point to the item that they wish to buy. Then, the helper will prepare(the products), then after the

helper is done, only then will ask me to compute it. He will dictate the items that he has prepared, then I will compute it.
Proponent 1: For the next question, have you encountered any back orders?
Owner: Hmm… Yes, just like the chemicals used for agriculture: pesticides. Only the two of us(competitors) sell that here. So when I don't have a stock of the item or the competitor doesn't have either. They will just put up an order for me to buy, then they will come back for the item.
Proponent 1: So the next question is: What do you do with the returns of the customer? The ones that the customer returns.
Owner: Ahh okay. For the returned items, I always check if they have been used or if it has been damaged. I already recognize if the item is sold by me, I know that. So if the item is in good condition, for example: Medicine, if they haven't been opened or used, the item will be eligible to be put on sale again. Then for the feeds, you can return them to their respective containers, if they haven't been used at all, and for me(store policy), the time frame should be within 24 hours only. Because it's been opened, it will be exposed to other(elements). For example, the product had specks of dirt… So I can't sell them anymore.
Proponent 2: Do you ask for the receipt of that item?
Owner: The others ask for receipts, the others don't.
Proponent 2: Ah, so if they don't ask for a receipt, you don't entertain them?
Owner: Yes.
Proponent 1: So, the next question is: What do you do for expired products?
Owner: Throw them away. Just like last time, numerous boxes of medicine expired: 200 pieces, I threw them away.
Proponent 2: So it's a loss on your part?
Owner: Yes, you can't avoid it, all businesses have losses like that.
Proponent 2: Regarding that, do you ask suppliers for that product?
Owner: You order again, but you have to pay for it.
Proponent 2: Ah, but you'll be buying less of what you usually buy?
Owner: Yes. When it comes to slow-moving stocks, I don't order much of them.
Proponent 2: How many days will it take for the order to arrive?
Owner: It depends on the supplier. There's a supplier, that when you order, it will be delivered the same day because they're located in San Mateo, just like our feeds—
Proponent 2: Ahh.
Owner: For our medicine, I think it's from Marikina or Quezon City, they have a schedule: Wednesday and Saturday.
Proponent 2: Ahh. Okay.
Proponent 1: So the next question is: If ever you hire an employee, preferably, what would be the age and gender of them?
Owner: Ahh okay, so if I hire a helper, it must be a male. Because there is an abundance of measuring, sometimes they lift 1 bag that measures 50 kilograms. He must be capable of lifting 50 kilos. He must be fast on his feet, mindful of prices. But most of the time I help him.
Proponent 1: In lifting?

Owner: Yes…No… For example, he is lifting supplies, I would be measuring products for sale, since when I was a kid, I got used to measuring products. That's why I help him. That's why I only look for one(employee), it doesn't need to be many.
Proponent 2: Ah…
Proponent 1: So the next question is, if you ever add additional items for sale, what products would that be?
Owner: Fast-moving products, products that customers search for, or if I got news of—Some agents, the middlemen, say " Maam, this(product) sells fast.". I check first if this product is in demand, or if I know it will be profitable. What I consider first is the price, because here in Montalban, they like cheap items. For the others, they prefer quality even though it's expensive. People have different preferences after all.
Proponent 2: Is there a customer that requests… For example a specific feed?
Owner: Yes there are, "Ma'am do you have this(feed)?" so if I don't have that and I know that people will avail them, then I buy. But if I notice that only that specific customer will benefit from it, I redirect them to another store saying: "No, I don't have that. You can go to another poultry supply for that." Because if only one customer buys it, I won't be able to sell it to other customers, and it might expire on me. I don't…
Proponent 2: Have you experienced dealing with 'bulk-buy' here?
Owner: For now, no.
Proponent 2: But in the past, there was?
Owner: In the past, yes, there were.
Proponent 2: In the past yes, so how many was it? For example one sack…
Owner: Yes, it still occurs even today, but they buy it one by one.
Proponent 2: Okay.
Proponent 1: Do you offer different services aside from selling feeds? For example… conducting a check-up… For chickens. (Laughs)
Owner: (Laughs) We don't have (services) like that anymore. But before, it was because my father was a veterinarian. Just like what I told sir(Proponent 1) last time. Uhm, there was a consultation fee. But at present, they ask me: "Sister, what's the medicine for this?"Sometimes I can answer because when my father was around, I heard what the treatment was, what medicine he provided… It can be effective and pleasing. Sometimes, the customer returns saying "Sister, my dog got better with the medicine that you told me to buy.". See? I became a…(inaudible) but today, we don't have that service unless… I tell them that I'm not a vet, but based on my experience I have a dog too. So if something happens, I'm not responsible, this, for example, is for first-aid only. They consented nonetheless, and I managed to treat the dog well. But that should not be allowed since I'm not a vet. But I ask for their—
Proponent 2: Consent…
Owner: Consent yes, if they want to follow what I told them, it's fine but if they don't it's also fine. They should take it to a vet, especially when I know that the dog hasn't eaten in three days, I recommend them to see a vet.
Proponent 1: So the next question is related to the question before, do you only have a single supplier? Or…
Owner: I have various suppliers, for feeds: I have two, when one doesn't have stock available, you need to have an alternative, a backup, because if you run out of stock,

you'll not make any sales. I have a different supplier for medicine, as well as for fertilizers, chicks too…
Proponent 2: Has there been a time that the stock was depleted because of the amount of customers buying?
Owner: Yes. You can't really—Actually, my stockroom is large, but the problem is I have rats, I don't want to stock up.
Proponent 2: Ahh… because…
Owner: Because they nibble on them, the rats contaminate my stock… So I don't want that, so I only stock up a little. There was a time when you couldn't predict a person because sometimes they'd buy one bag. So—
Proponent 2: So you run out of stock.
Owner: Yes, then I run out of stock. But just as I said, I have a backup, I have a supplier nearby. Just like when I came outside, there was a delivery. That guy(delivery guy) has a poultry supply nearby, and he delivers stock here too, if I lack a product "Sir, I lack (this) product, can I borrow, or can I buy one bag." He provides it, so it's okay.
Proponent 1: So the next question is related to what you said. How do you maintain the quality of your products?
Owner: Quality… Yes. I check every day, because sometimes when rats do something, they leave droppings, so they must be removed. When it comes to medicine, I check every week to list down the items that are expired then I dispose of them. The medicine must not be exposed… Every night, when we close, we seal them—you saw the sacks earlier, right? We seal them and then cover them so that the quality does not deteriorate.
Proponent 1: Uhh… So the next question is: For payment, do you accept GCash? What is the process of those transactions?
Owner: It's addressed to my personal GCash. Then I have a QR code or my number displayed. Sometimes, someone orders and sends payment to my GCash, and then I make my helper deliver it to the customer, for the ones living nearby.
Proponent 1: Do you still give them a receipt when dealing with GCash transactions?
Owner: Yes. Especially when it comes to delivery.
Proponent 1: So the next question is: Do you have additional challenges?
Owner: Challenges… Yes, because we have many competitors due to it being easy to put up. For example, you have a pet dog, so you know what the food of the dog—
Proponent 2: The needs of the dog
Owner: Yes. it's easy to establish. Even sari-sari stores these days sell pet foods, dog food, and cat food.
Proponent 2: Uh… So overall, I just noticed that you sell different products aside from feeds and medicine.
Owner: Fertilizers…
Proponent 2: Do those have a brand? Do they have different brands?
Owner: Yes.
Proponent 2: So they have the same measurement?
Owner: Kilo, per kilo.
Proponent 2: Ah… Okay, I saw a chicken leash…
Owner: Yes, chicken leashes.
Proponent 2: So you also sell accessories.
Owner: Yes, they are bought piece by piece.

Proponent 2: Are they being sold piece by piece?
Owner: Yes, piece by piece.
Proponent 1: So the next question: Do you plan to expand to other places… In the world perhaps?
Owner: (Laughs) In the world? Just like in the US? (Laughs). For now, not yet because I am the only one, unless somebody manages it.
Proponent 1: Your son…
Owner: My son, not yet. I don't expect him to run the business. And for me, the business isn't all that special anymore, because there are a lot of competitors. And many people don't take care of chickens, or pigs. Since the pandemic, a lot have stopped taking care of poultry.
Proponent 2: Ah…Did your sales go up after the pandemic subsided?
Owner: Yes. It did go up, unlike during the pandemic, it did go up.
Proponent 2: Are you done? (Referring to Proponent 1)
Proponent 1: Not yet, I still have more.
Proponent 2: Ah… Okay.
Proponent 1: So the next question is: do you have competitors nearby?
Owner: (Laughs) Yes. Plenty.
Proponent 1: And how many are they? Estimated.
Owner: Hmm… Four.
Proponent 1: So before, you were the only one that sells here?
Owner: Yes.
Proponent 2: Oh, so you were the first one who sold here?
Owner: We were the first ones here… 40…48 years since this store has opened
Proponent 2: This store is older than us (Referring to Proponent 1)
Owner: Yes. It was my parents who established this store.
Proponent 1: So for this last question: What is the impact of the pandemic on the poultry shop?
Owner: Just like other businesses, it had a large impact: Our sales lowered because others couldn't afford to care for poultry anymore since almost every individual lost their jobs, and they didn't take care of pets anymore.Like chickens… Especially the pigs, because of the emergence of swine flu. A lot of feeds had gone bad…
Proponent 2: Ah… It's the feeds…
Owner: Yes. Also the number of people going out… So the sales decreased.
Proponent 2: The delivery service… Does it have a fee?
Owner: None.
Proponent 2: Ah, so the delivery is free, even if they order anything.
Owner: Yes.
Proponent 2: Is it possible that only one person handles the transactions? For example, you measure it, then it comes to you…
Owner: It's difficult because the orders come in simultaneously— just like this time of day, they come in simultaneously. It's difficult when you are the one who measures the products and also you will be the one responsible for handing out change, then you measure products again. Sometimes the customers get angry when they don't get served immediately.

Proponent 2: So what happens is, they got the products, then they show it to you then they pay?
Owner: Yes, or maybe when the helper has it, it's already lined up then he says the contents of the order. He dictates it to me.
Proponent 2: Then you write it down on the receipt, then repeat it for the others.
Owner: Yes, that's all.
Proponent 1: Related to the impact of COVID-19, how—what did you do to somehow sell products amidst the pandemic?
Owner: We set up a Facebook page where they view the products, and then we also advertise there, for example, Me. I have chicks for sale, I advertise it there since I'm not a techie. Now I'm planning to—I asked my son to help me with Lazada, Shopee, and others…
Proponent 1: Ah… So you have plans to expand to Shopee and Lazada if ever?
Owner: Yes, if ever.
Proponent 2: Have you had any plans on adding more products?
Owner: Yes, hopefully. If ever those products arrive that are saleable: The one that's guaranteed to be sold…Saleable.
Proponent 1: That's the last one.
Proponent 2: That's the last one? Do you have any questions? (Referring to Proponent 1)
Proponent 1: None, how about you?
Proponent 2: None also, I'm thinking of one right now.
Proponent 1: If you have something in mind…
Proponent 2: The questions are based on the products because we will be creating a Product Management System. So I'm thinking about how we will be creating that product in the future because there is still a part two to this. So as of now, that's all my questions. How about Rheiniel?
Proponent 1: None.
Proponent 2: None? So, the last question is can we view your products? Like an overview of the products?
Owner: The existing products, like the ones on display?
Proponent 2: Yes, I'll just take a look at it.
Owner: Ah, yes. No problem.
Proponent 2: That's all? So that marks the end of it.
Proponent 1: That's all. Thank you for your time.
Proponent 2: Thank you for your time.

Appendix D

Requirements Traceability Matrix

Table 14 Requirements Traceability Matrix

Requirements Traceability Matrix						
Test Area		**Items**	**Met (Count)**	**Unmet (Count)**	**Remarks**	**Responsibility**
1	Login	5	5	0	Done	Chesca
2	Forgot Password	9	9	0	Done	Chesca & Rheiniel
3	Security	10	10	0	Done	Deighro & Chesca
4	Main Menu	3	3	0	Done	Deighro & Rheiniel
5	Registration	9	9	0	Done	Chesca
6	Sales	4	4	0	Done	Chesca, Deighro & Rheiniel
7	Transaction	13	13	0	Done	Deighro & Chesca
8	Inventory	6	6	0	Done	Chesca, Deighro & Rheiniel
9	Search	3	3	0	Done	Chesca, Deighro & Rheiniel
10	Record-Keeping	5	5	0	Done	Chesca, Deighro & Rheiniel
11	Reports	2	2	0	Done	Chesca, Deighro & Rheiniel
12	Maintenance	4	4	0	Done	Deighro
13	About	1	1	0	Done	Chesca
14	Help	3	3	0	Done	Chesca, Deighro & Rheiniel
	Total	**77**	**77**	**0**		

Table 15 Detailed Requirements Traceability Matrix

Module	R#	Requirements	Status (Met/Unmet)	Remarks	Responsibility
Login	1.1	Login page will accept input for email and password.	Met	Done	Chesca
	1.1.1	Event Flow: 1 - User will access the Login page 2 - User submits email and password 3 - System validates the credentials and if the account status is approved and active	Met	Done	Chesca
	1.2	Inactive and Rejected accounts shall not be able to login to the system. Validation Message for an invalid account: “Incorrect username and/or password.”	Met	Done	Chesca
	1.3	System shall validate the email and password against the registered user accounts.	Met	Done	Chesca

	1.4	On successful login, the system shall redirect the user to the Main menu.	Met	Done	Chesca
Forgot Password	2.1	Display a forgotten passcode form if the user clicks the forget passcode link.	Met	Done	Chesca & Rheiniel
	2.1.1	Event Flow: 1 - The user will access the forgot password form 2 - The user submits username and email for the OTP 3 - Invalid email is not acceptable and only accepts Gmail accounts. 4 - Validation Message for an invalid account: “Invalid!”	Met	Done	Chesca & Rheiniel
	2.2	Display verification code form	Met	Done	Chesca & Rheiniel
	2.2.1	Event Flow: 1 - The system will wait for the verification code for the user to enter. 2 - User submits OTP came from the email 3 - System validates the OTP	Met	Done	Chesca & Rheiniel
	2.3	Display a reset passcode form	Met	Done	Chesca & Rheiniel
	2.3.1	Event Flow: 1 - The user will access the reset password form after clicking the send button 2 - User submits new password and confirm password 3 - Unmatched password will not be accepted by the system	Met	Done	Chesca & Rheiniel
	2.4	Validation Message for unmatched password: “Password Unmatched!”	Met	Done	Chesca & Rheiniel
	2.5	Success Message for successful password reset: "Successful!"	Met	Done	Chesca & Rheiniel
	2.6	Update and save the new passcode in the database if verification is successful.	Met	Done	Chesca & Rheiniel
Security	3.1	Ensure users have different levels of access to the system to make changes and secure data.	Met	Done	Deighro & Chesca
	3.2	Handle user logs	Met	Done	Deighro & Chesca
	3.3	Handle user information	Met	Done	Deighro & Chesca
	3.4	Allow the user to pick between displaying user information or user logs.	Met	Done	Deighro & Chesca
	3.4.1	Event Flow: 1 - Display user logs list if chosen by the user.	Unmet	Done	Deighro & Chesca

		2 - Display a list of user accounts if the user information is chosen by the user.			
	3.5	Allow the user to select an account to view detailed personal information and levels of access.	Met	Done	Deighro & Chesca
	3.6	Provide an edit button to allow editing of personal information of the user.	Met	Done	Deighro & Chesca
	3.7	Success Message for successful changes: "Successful!"	Met	Done	Deighro & Chesca
	3.8	Verify changes made to user information.	Met	Done	Deighro & Chesca
	3.9	Display an error message and redirect to editing or inputting new data if verification of changes is unsuccessful.	Met	Done	Deighro & Chesca
Main Menu	4.1	Display main menu page with the logo as a background and a sidebar as navigation	Met	Done	Deighro & Rheiniel
	4.2	Allow the sidebar to slide to maximize the screen	Met	Done	Deighro & Rheiniel
	4.3	Handle and display all module pages per button	Met	Done	Deighro & Rheiniel
Registration	5.1	Prompt the user to choose what to register in the database (new product or new user).	Met	Done	Chesca
	5.2	register new user	Met	Done	Chesca
	5.2.1	Event Flow: 1 - User will access the register user form 2 - Allow the user to input user details (full name, contact details, email address, age, date of birth, etc.)	Met	Done	Chesca
	5.3	register new product	Met	Done	Chesca
	5.4	Event Flow: 1 - The user will access the registered product form 2 - Allow the user to input product details (product ID, unit type, category, details, etc.) 3 - Drop-down menu for unit type selection 4 - Add button and display pop up with text box for additional unit types (eg. kg, pc, ml, grams, etc) 5 - Drop-down menu for category selection 6 - Add button and display pop up with text box or additional category (eg. dog food, pet essential, cat food, etc)	Met	Done	Chesca
	5.5	Verify changes made.	Met	Done	Chesca
	5.6	Success Message for successful changes: "Successful!"	Met	Done	Chesca

	5.7	Display an error message and redirect to the initial registration choice if verification of the registration is unsuccessful.	Met	Done	Chesca
	5.8	Update the database and display a preview of the new accounts/products if the admin passcode verification is successful.	Met	Done	Chesca
Sales	6.1	display current sales	Met	Done	Chesca, Deighro & Rheiniel
	6.2	display daily sales	Met	Done	Chesca, Deighro & Rheiniel
	6.3	display monthly sales	Met	Done	Chesca, Deighro & Rheiniel
	6.4	display yearly sales	Met	Done	Chesca, Deighro & Rheiniel
Transaction	7.1	Display product category lists	Met	Done	Deighro & Chesca
	7.2	Display product list per category	Met	Done	Deighro & Chesca
	7.3	Input customer's order	Met	Done	Deighro & Chesca
	7.3.1	Event Flow: 1 - Select a product 2 - The system will check product availability 3 - Display error if the product is not available 4 - Add/Reduce quantity 5 - Done button for successfully adding an ordered product 6 - Clear button for clearing process made 7 - Calculate product price depending on the quantity 8 - Add and calculate discount if any 9 - Display total price	Met	Done	Deighro & Chesca
	7.4	Payment method selection	Met	Done	Deighro & Chesca
	7.4.1	Event Flow: 1 - Input cash payment amount 2 - Input Gcash payment details (reference number)	Met	Done	Deighro & Chesca
	7.5	Cash payment	Met	Done	Deighro & Chesca

	7.5.1	Event Flow: 1 - Input payment 2 - Display change (if any) 3 - Display transaction summary 4 - Edit button for editing any transaction order 5 - Checkout button for successful transaction	Met	Done	Deighro & Chesca
	7.6	Gcash payment	Met	Done	Deighro & Chesca
	7.6.1	Event Flow: 1 - Input amount paid in gcash 2 - Input Gcash payment reference number	Met	Done	Deighro & Chesca
	7.7	Generate and display receipt	Met	Done	Deighro & Chesca
	7.8	Store receipt details in database	Met	Done	Deighro & Chesca
	7.9	Another transaction button for next customer.	Met	Done	Deighro & Chesca
Inventory	8.1	Display lists of all inventory of products registered	Met	Done	Chesca, Deighro & Rheiniel
	8.2	Display detailed product information (Product ID, name, Quantity, etc)	Met	Done	Chesca, Deighro & Rheiniel
	8.3	Display 3-dotted button option to edit/update/disable product	Met	Done	Chesca, Deighro & Rheiniel
	8.4	Verify changes made.	Met	Done	Chesca, Deighro & Rheiniel
	8.5	Success message: "Updated Successfully"	Met	Done	Chesca, Deighro & Rheiniel
	8.6	Implement ABC Classification Algorithm	Met	Done	Chesca, Deighro & Rheiniel
Search	9.1	Input search term	Met	Done	Chesca, Deighro & Rheiniel
	9.2	Display user search term if found in database	Met	Done	Chesca, Deighro & Rheiniel
	9.3	System will not display the searched term if not found	Met	Done	Chesca, Deighro & Rheiniel

Record-Keeping	10.1	Display option to choose supplier or transaction receipts	Met	Done	Chesca, Deighro & Rheiniel
	10.2	Supplier receipts	Met	Done	Chesca, Deighro & Rheiniel
	10.2.1	Event Flow: 1 - Access list of supplier receipts 2 - Implement an add button for supplier receipt entry 3 - Access adding supplier receipt details form 4 - Implement an add button for product details (eg. Product name, quantity, price) 5. Access the product list and add required details	Met	Done	Chesca, Deighro & Rheiniel
	10.3	Save supplier receipt details in the database	Met	Done	Chesca, Deighro & Rheiniel
	10.4	Display a list of transaction receipts	Met	Done	Chesca, Deighro & Rheiniel
Reports	11.1	Display option to choose inventory or sales reports	Met	Done	Chesca, Deighro & Rheiniel
	11.2	Compile and display reports based on user preferences	Met	Done	Chesca, Deighro & Rheiniel
Maintenance	12.1	Prompt user to specify location of executable update	Met	Done	Deighro
	12.2	Event Flow: 1 - Check for availability of executable file 2 - Display "no executables for update" message if none found 3 - Prompt user if they want to update the system 4 - Update the system and display "System has been updated"	Met	Done	Deighro
	12.3	Initialize back up and restore	Met	Done	Deighro
	12.4	Event Flow: 1 - Check for availability of hard disk file 2 - Choose a hard disk file 3 - Initialize back up and restore	Met	Done	Deighro
About	13.1	Display developers' information and contact details.	Met	Done	Chesca

Help	14.1	Display user manual	Met	Done	Chesca, Deighro & Rheiniel
	14.2	Implement search functionality within user manual	Met	Done	Chesca, Deighro & Rheiniel
	14.3	Display answer to user query based on manual search	Met	Done	Chesca, Deighro & Rheiniel

Appendix E

User's Manual

Product Management System for Ranil's Poultry Shop

User Manual

Please read the user manual carefully and use this system properly.

Figure 108 Title Page

CONTENTS

Search on page

- For windows: **Ctrl + F**
- For MacOS: **command + F**

Figure 109 Table of Contents

1 HARDWARE AND SOFTWARE SPECIFICATIONS

HARDWARE

- Predator Helios Neo 16 PHN16-71-59FC Gaming Notebook
  - Intel Core™ i5 i5-13500HX 2.50 GHz
  - 8GB DDR5 SDRAM
  - 512GB M.2 NVMe PCIe NVMe

SOFTWARE

- Windows 11 Home 64-bit
- Python 3.12.3
- PyQT5
- MySQL 8.4.0

Figure 110 Hardware and Software Specifications

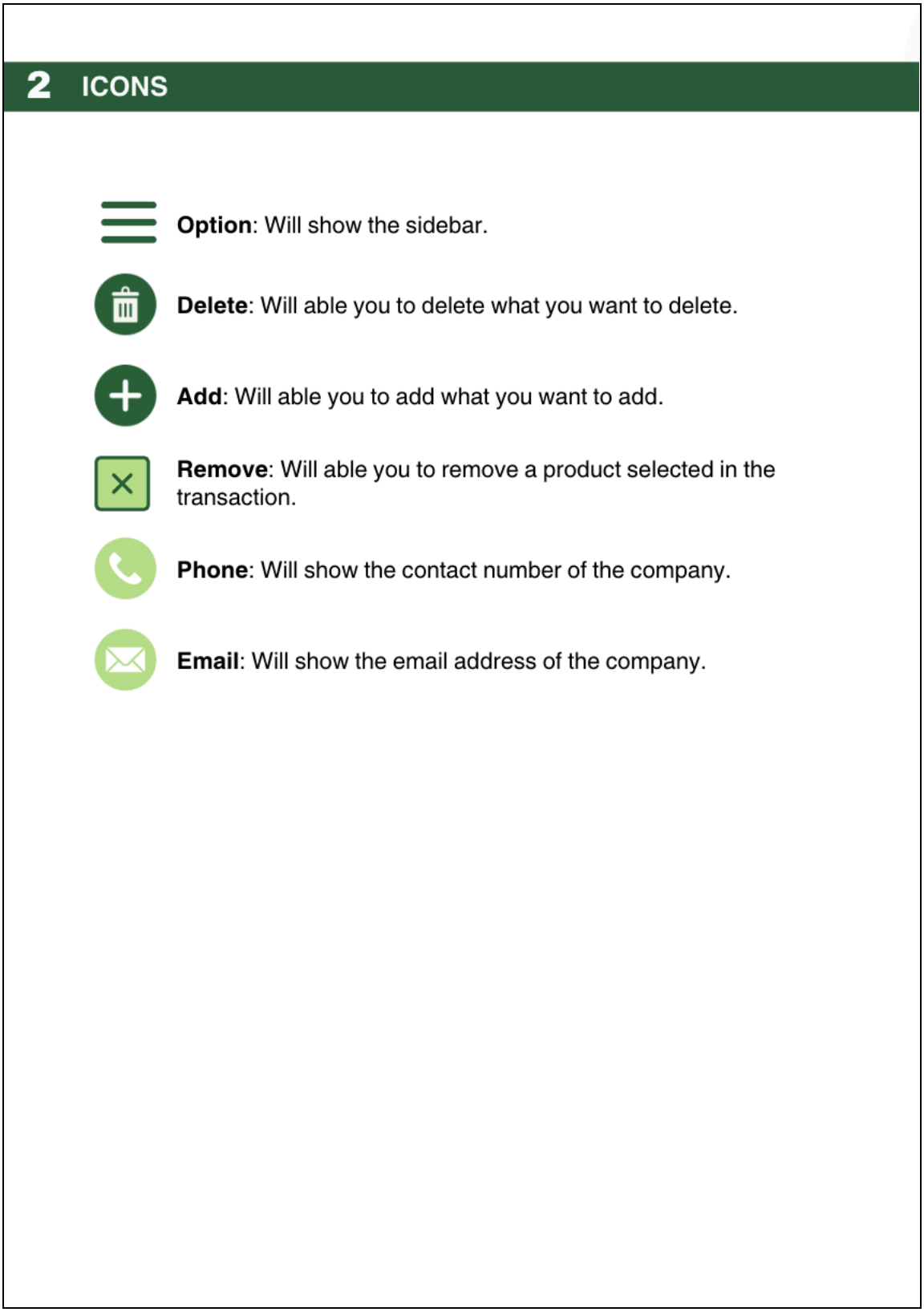
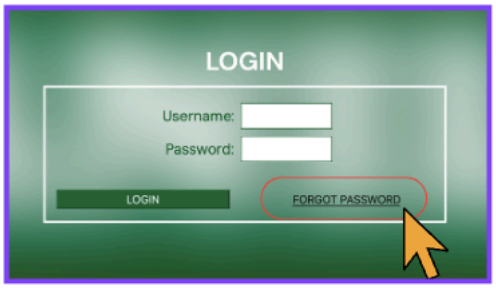


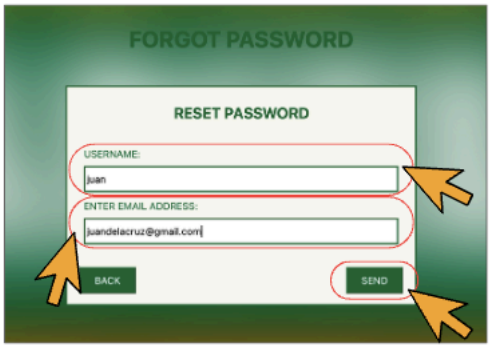
Figure 111 Icons

3 FORGOT PASSWORD

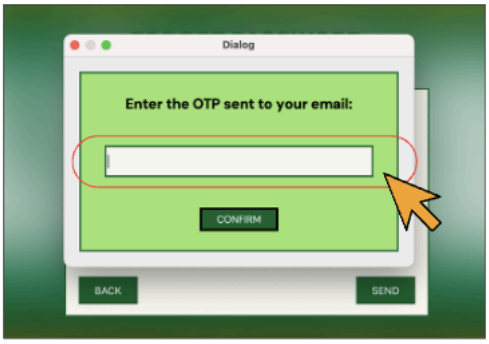
STEP 1: Click the "Forgot password button"



STEP 2: Input registered username and email address into the field provided and click on "send" for one time password (OTP) verification that is sent to the email inputted



STEP 3: Input the OTP sent to your email



STEP 4: Enter a new password for your account. Retype again to ensure that you remember the password that you input on the first text field and click on "confirm". The password you choose will able you to log in to the system.

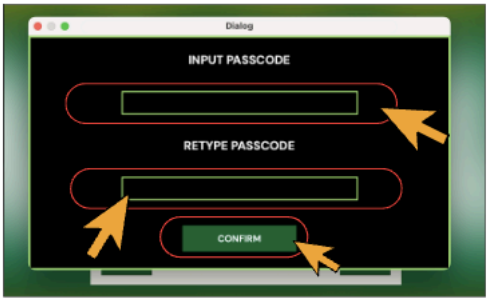
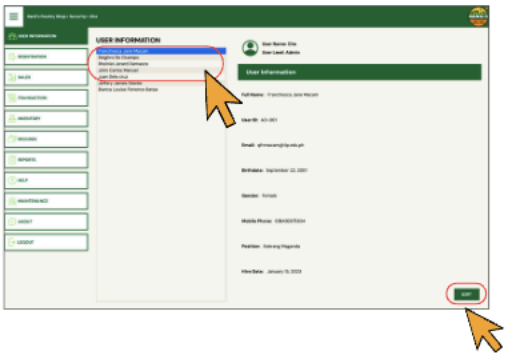


Figure 112 Forgot Password

4 EDIT ACCOUNT DETAILS

STEP 1: Click the “User Information” button in the sidebar.

STEP 2: Select a user you want to edit and click on “edit” to allow editing of account information.

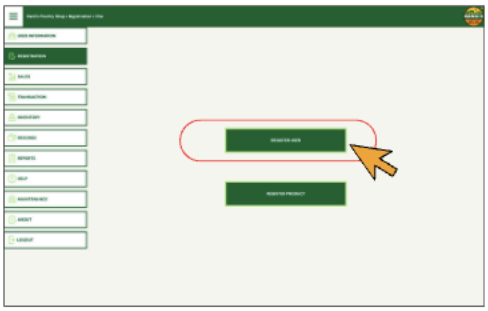


STEP 3: Edit the text field you want to edit and click on “save changes”.

5 REGISTER USER

STEP 1: Click the “Registration” button in the sidebar.

STEP 2: Click the “Register User” under the registration page.



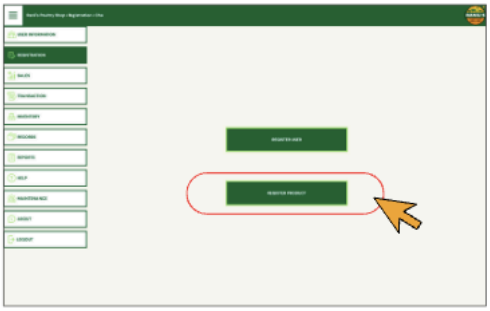
STEP 3: Input details into each field provided and click on “save changes” to register a new user.

Figure 113 Edit Account Details and Register User

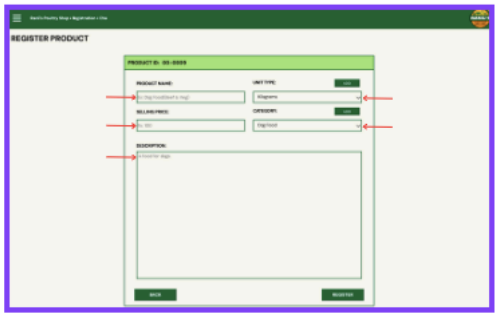
6 REGISTER PRODUCT

STEP 1: Click the “Registration” button in the sidebar.

STEP 2: Click the “Register Product” under the registration page.

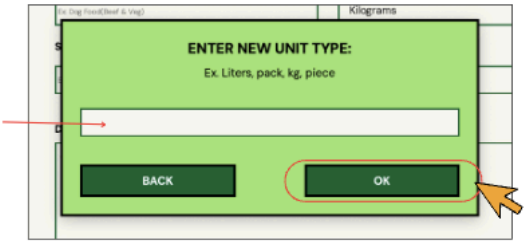


STEP 3: Input details into each field provided and click on “Register” to register a new product.



STEP 4: If you want to add a new unit type, click on the “Add” button to add a new unit type you need that is not in the list.

STEP 5: Input unit type into each field provided and click on “OK” to add new unit type.



STEP 6: Click on the “Add” button to add a category that you need that is not in the list.

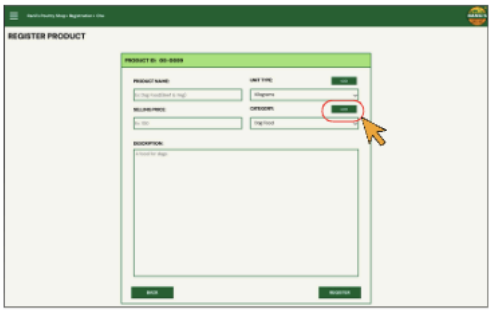
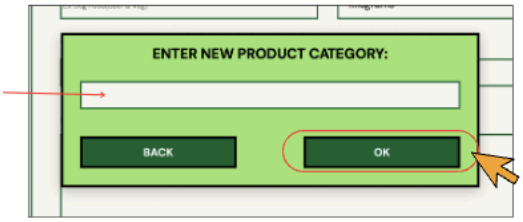


Figure 114 Register Product

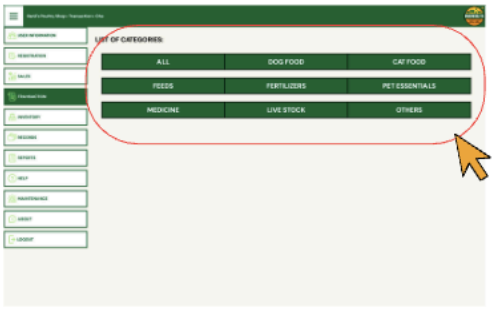
7 TRANSACTION

STEP 7: Input a category into each field provided and click on "OK" to add a new category.



STEP 1: Click the "Transaction" button in the sidebar.

STEP 2: Choose a category.



STEP 3: Select a product/s in the product list. The selected product/s will be added in the order list in the right side of the screen.

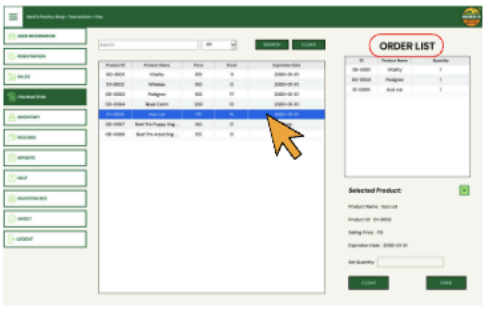
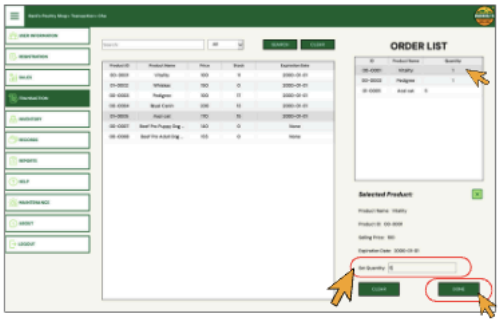
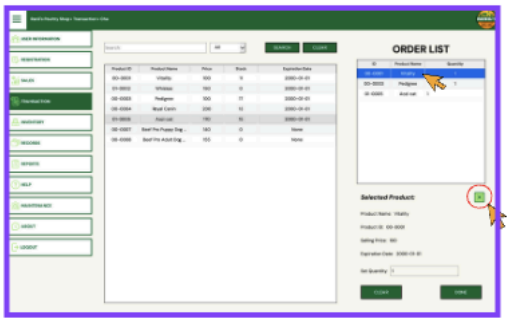


Figure 115 Register Product continuation and Transaction

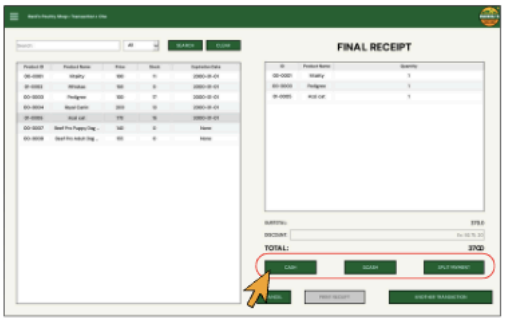
STEP 4: Select a product in the order list to change its quantity and click on “done” to proceed to payment.



STEP 5: If you want to remove a selected product from the order list, click on the certain product from the order list and click on the delete icon.



STEP 6: Select a payment method.



STEP 7: Input payment into the text field and click on “Another Transaction” after the payment to create another transaction.

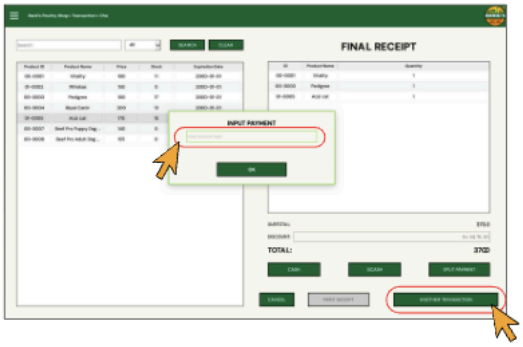
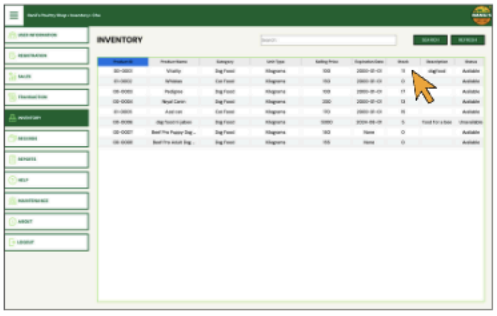


Figure 116 Transaction continuation

8 EDIT INVENTORY

STEP 1: Click the "Inventory" button in the sidebar.

STEP 2: Choose a product you want to edit.



STEP 3: Select a product and input details on what you want to edit and click on "update" to allow editing of product information.

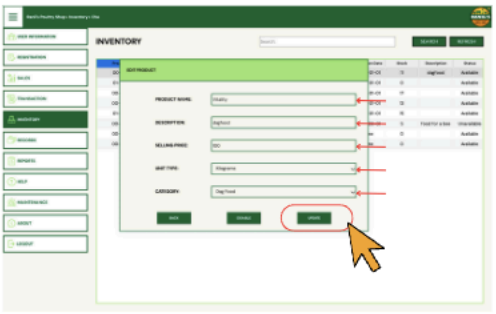


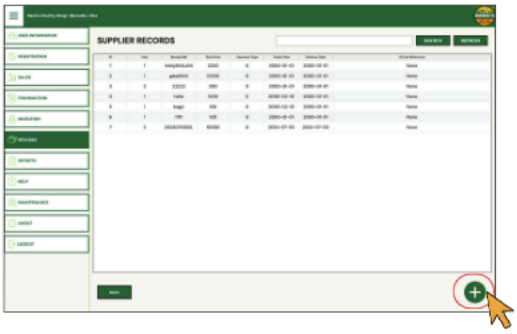
Figure 117 Edit Inventory

9 ADD PRODUCT QUANTITY & ADD SUPPLIER RECEIPTS

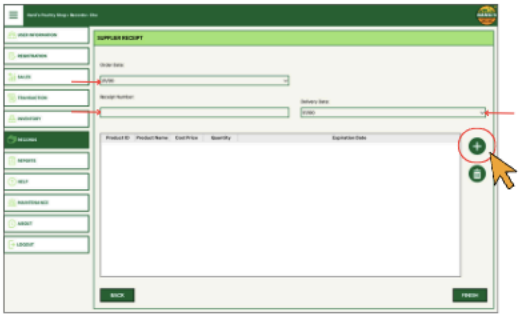
STEP 1: Click the "Records" button in the sidebar.

STEP 2: Click on "Supplier Receipt Records".

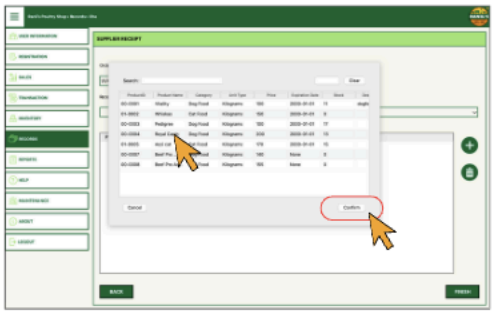
STEP 3: Click on Add Icon on the right bottom part of the screen to add receipt. The quantity will be increased if there is newly delivered product from the supplier.



STEP 4: Input details into each text field and date field provided and click on add icon button to add newly delivered products.



STEP 5: Choose a product you ordered that was received from the supplier and click on "confirm" to proceed.



STEP 6: Enter quantity delivered, price bought, and expiration date on the text field and date field and click on "confirm" to proceed.

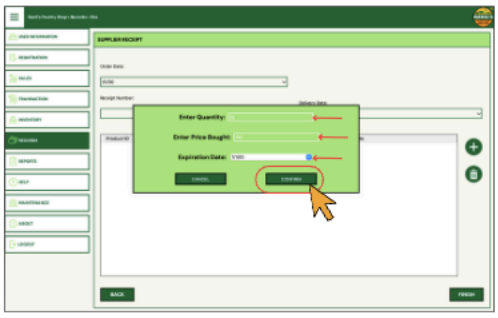
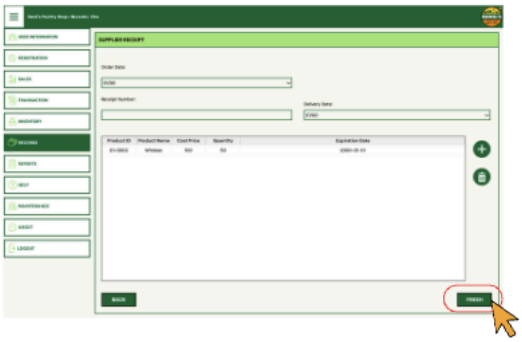


Figure 118 Add Product Quantity & Add Supplier Receipts

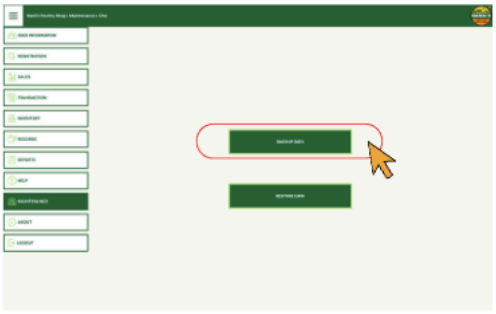
10 BACK UP

STEP 7: Keep on doing step 4 until all the products bought are listed in the table and click on "finish" to complete the process.



STEP 1: Click the "Records" button in the sidebar.

STEP 2: Click the "Maintenance" button in the sidebar.



STEP 3: Look for the file that will be placed in the user's desktop with a file named Backup_File_(Date backed up - Month_Day_Year).

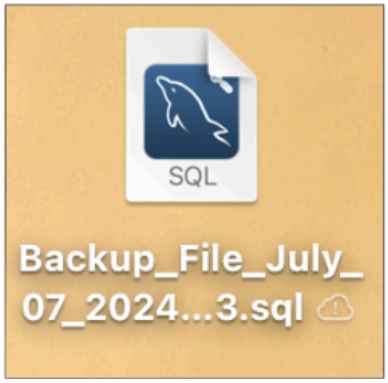
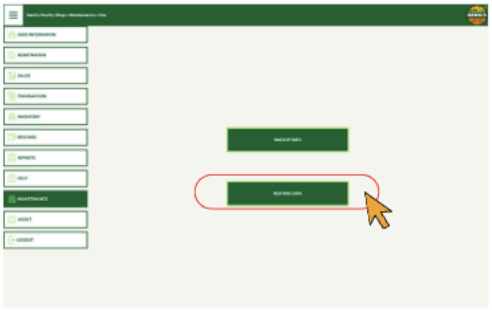


Figure 119 Add Product Quantity & Add Supplier Receipts continuation and Backup

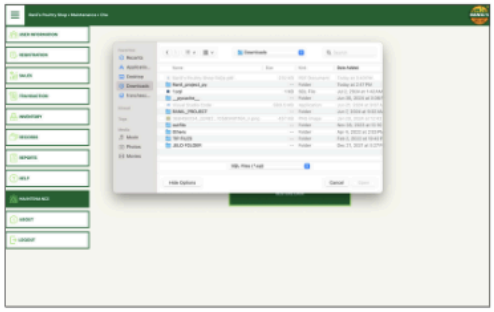
11 RESTORE

STEP 1: Click the "Records" button in the sidebar.

STEP 2: Click the "Restore" button in the sidebar.



STEP 3: Look for an sql file in the user's folder.



12 DEVELOPER'S INFORMATION

DE OCAMPO, DEIGHRO
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Computer Science Department
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qd-deocampo@tip.edu.ph

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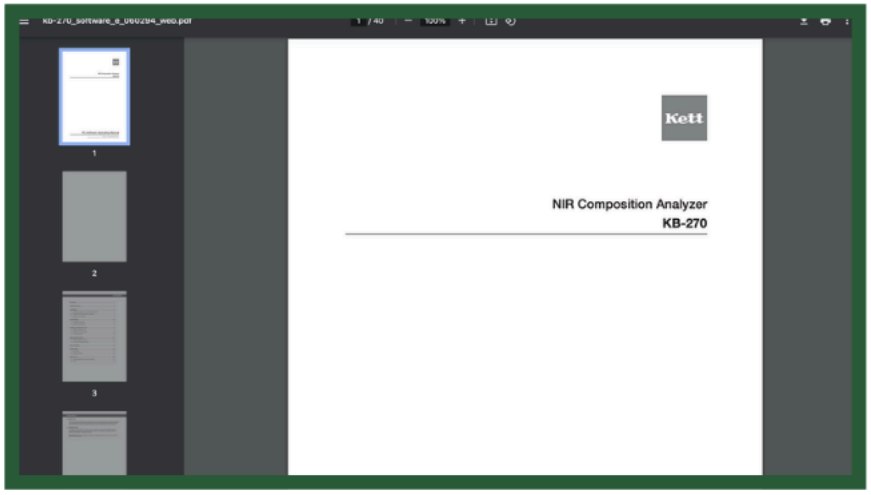
Backend and Project Documentation
Computer Science Department
Technological Institute of the Philippines Quezon City
qrjfdamasco@tip.edu.ph

Figure 120 Restore and Developer's Information

13 REFERENCES



https://koueitrading.com/global/wp-content/uploads/2020/07/kb-270_software_e_060294_web.pdf

https://www.bhphotovideo.com/lit_files/116441.pdf

Figure 121 References

Appendix F

Summary of Respondents Profile

IT Professional Respondents Profile

#	Name	Address:	Position:	Age:	Sex	Educational Attainment:
1	Joel C. Catain	TIEZA	IT Technician	41	M	College Graduate - BSIT
2	Mary Rose U. Loperez	Bacoor, Cavite	Web Graphic Designer	34	F	College Graduate - BSIT
3	Tom Derek Segarra	Pasay City	Software Developer	38	M	College Graduate - BSCS
4	Grace Mendez	TIEZA	Supervising Data Controller	51	F	College Graduate - BS Computer Management
5	Angie Simbulan	Santo Tomas Batangas	Project Manager / System Analyst	45	F	College Graduate - BS Computer System Design Programming
6	LA Carido	Marilao Bulacan	Programmer	33	M	College Graduate - BSIT
7	Emmanuel Placido	Pandi Bulacan	Programmer	26	M	College Graduate - BSCS
8	Meriel S. Tada	Malolos Bulacan	Systems Analyst	37	F	College Graduate - BSCS
9	Jezon Gonzales	Baseco Compound	Programmer	38	M	College Graduate - BSCS
10	Ram Jae Sanchez	Quezon City	Webmaster	29	M	College Graduate - BSCS

Non-IT Professional Respondents Profile

#	Respondent's Name:	Address:	Position:	Age	Sex	Educational Attainment:
1	Travis H. Allan	TIEZA	Information Chief	52	M	College Graduate - B.S Psychology
2	Lalaine B Taray	Dasma City, Cavite	Information System Researcher	41	F	College Graduate - BSE Major in Mathematics
3	Frances Eternos	Taytay, Rizal	Sr. Computer Specialist	39	F	College Graduate - BS HRM
4	Marlette Boado	Malate Manila / TIEZA	Travel Tax Officer	40	M	College Graduate - AB Comm
5	Joseph Ray G. Abion	Caloocan City	Sr. Travel Tax Officer B	39	M	College Graduate - AB Polsci
6	Norida M Laroya	TIEZA	Travel Tax Officer	35	F	College Graduate - Fin. Ma.
7	Anjelo Padilla	Fortune, Marikina City	Student	23	M	College Level - BSBA
8	Matthew Reinard D. Buesa	San Mateo Rizal	Student	19	M	College Level - BSIT
9	Kristella Pauline D. Buesa	San Mateo Rizal	Senior Special Project Management Officer	26	F	College Graduate - BS ENSE
10	Ruzzete Ann D. Buesa	San Mateo Rizal	Student	20	F	College Level - BSITM

Appendix G

Summary of Respondents' Evaluation

Evaluation of Proposed System Made by IT Professionals

Security

Weighted Mean = Q1 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q2 = [6(5) + 4(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.60

Q3 = [6(5) + 4(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.60

= 4.70 + 4.60 + 4.60 = 13.90 / 3

= 4.63

Robustness

Weighted Mean = Q1 = [6(5) + 4(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.60

Q2 = [6(5) + 4(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.60

Q3 = [4(5) + 6(4) + 0(3) + 0(2) + 0(1)] = 44/10 = 4.40

= 4.60 + 4.60 + 4.40 = 13.60 / 3

= 4.53

Maintainability

Weighted Mean = Q1 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.80

Q2 = [6(5) + 4(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.60

Q3 = [5(5) + 3(4) + 2(3) + 0(2) + 0(1)] = 44/10 = 4.30

= 4.80 + 4.60 + 4.30 = 13.70 / 3

= 4.56

Functionality

Weighted Mean = Q1 = [5(5) + 5(4) + 0(3) + 0(2) + 0(1)] = 45/10 = 4.50

Q2 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q3 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

= 4.50 + 4.70 + 4.70 = 13.90 / 3

= 4.63

User-friendly

Weighted Mean = Q1 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q2 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q3 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

= 4.70 + 4.70 + 4.70 = 14.10 / 3

= 4.70

Evaluation of Proposed System Made by Non-Information Technology (IT) Professionals

Security

Weighted Mean = Q1 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q2 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 46/10 = 4.80

Q3 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

= 4.70 + 4.80 + 4.70 = 14.20 / 3

= 4.73

Robustness

Weighted Mean = Q1 = [5(5) + 5(4) + 0(3) + 0(2) + 0(1)] = 45/10 = 4.50

Q2 = [5(5) + 5(4) + 0(3) + 0(2) + 0(1)] = 45/10 = 4.50

Q3 = [4(5) + 6(4) + 0(3) + 0(2) + 0(1)] = 44/10 = 4.40

= 4.50 + 4.50 + 4.40 = 13.40 / 3

= 4.46

Maintainability

Weighted Mean = Q1 = [7(5) + 3(4) + 0(3) + 0(2) + 0(1)] = 47/10 = 4.70

Q2 = [4(5) + 5(4) + 1(3) + 0(2) + 0(1)] = 43/10 = 4.30

Q3 = [5(5) + 5(4) + 0(3) + 0(2) + 0(1)] = 45/10 = 4.50

= 4.70 + 4.30 + 4.50 = 13.50 / 3

= 4.50

Functionality

Weighted Mean = Q1 = [6(5) + 3(4) + 1(3) + 0(2) + 0(1)] = 45/10 = 4.50

Q2 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 48/10 = 4.80

Q3 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 48/10 = 4.80

= 4.50 + 4.80 + 4.80 = 14.10 / 3

= 4.70

User-friendly

Weighted Mean = Q1 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 48/10 = 4.80

Q2 = [8(5) + 2(4) + 0(3) + 0(2) + 0(1)] = 48/10 = 4.80

Q3 = [10(5) + 0(4) + 0(3) + 0(2) + 0(1)] = 50/10 = 5.00

= 4.80 + 4.80 + 5.00 = 14.60 / 3

= 4.86

Appendix H

Answered Software Evaluation Form

(IT Professional)

Date: JULY 03, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: JOEL C. CATAIN Age: 41
Address: TIEZA - DOUBLEDRAGON PLAZA MACAPAGAL AVE. PASAY CITY Gender: M
Position: IT TECHNICIAN

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[✓] College Graduate Course: BSIT

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

THE USER INTERFACE OF THE SOFTWARE SYSTEM IS INTUITIVE AND USER-FRIENDLY, MAKING IT EASY TO NAVIGATE AND PERFORM TASKS EFFICIENTLY.

JOEL CATAIN

Respondent's Signature over Printed Name

Date: JULY 3, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

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Part I - Respondent's Profile:

Name: MARY ROSE U. LOPEREZ Age: 34
Address: BACOOR, CAVITE Gender: F
Position: WEB / GRAPHIC DESIGNER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[/] College Graduate Course: B.S. I.T.

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		✓			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		✓			
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.		✓			
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.			✓		

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.		✓			

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	/				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	/				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	/				

Comments / Suggestions:

Mary Rose U. Lopez

Respondent's Signature over Printed Name

Date: Jul 3, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Tom Derch Cegarra
Address: Pasay City
Position: Software Developer
Age: 38
Gender: Male

Educational Attainment:

[ ] High School
[ ] College Level — Course: _____
[x] College Graduate — Course: BSCS
Other (please specify): _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		/			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		/			
3. The software includes user logs features that track user activities and access, to help with monitor activity.		/			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		/			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		/			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		/			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.		/			
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		/			
3. The system can back up and restore data in case of crashing or disruptions.			/		

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		/			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.		/			
3. The sidebar works properly and links to specific modules based on what the user enters.		/			

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4 /	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.		✓			
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.		✓			
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.		✓			

Comments / Suggestions:

change format of date and price, Total,
~~Font size and print preview~~

Tom Derick Segarra
Respondent's Signature over Printed Name

Date: 07/03/24

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

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Part I - Respondent's Profile:

Name: GRACE MENDEZ Age: 47
Address: TIEZA Gender: F
Position: SUPERVISING DATA CONTROLLER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[X] College Graduate Course: BSC - COMP. MNGT.

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

GRACE B. NUENDEZ

Respondent's Signature over Printed Name

Date: 07-03-2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

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Part I - Respondent's Profile:

Name: ANGIE SIMBULAN Age: 45
Address: 301 SAN FELIX SANTO TOMAS BATANGAS Gender: FEMALE
Position: PROJECT MANAGER / SYSTEM ANALYST

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[/] College Graduate Course: COMPUTER ~~PROGRAMMING~~ SYSTEM AND DESIGN PROGRAMMING

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5 ✓	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	/				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	/				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	/				

Comments / Suggestions:

PRINTING IN REPORTS MUCH MORE PREVIEW
PUT * FOR THE REQUIRED FIELD

ANGELITA P. LIMBULAN
Respondent's Signature over Printed Name

Date: 07/03/2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: L A CARIDO Age: 33
Address: MARILAO BULACAN Gender: M
Position: PROGRAMMER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[X] College Graduate Course: IT

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5 ✓	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

L.A. Carido

Respondent's Signature over Printed Name

Date: 07/05/24

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: EMMANUEL PLACIDO Age: 26
Address: MALIBU MATANDA PANDI BULACAN Gender: M
Position: PROGRAMMER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[x] College Graduate Course: BS COM SCI

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

IT IS BETTER TO HAVE THE TRANSACTION INFORMATION OF EVERY RECEIPT. AND ALSO AUDIT TRAIL IS A MUST. GOOD WORK KEEP IT UP. MAY THE CODE BE WITH YOU.

EMMANUEL S. PLACIDO

Respondent's Signature over Printed Name

Date: _____

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Meriel S. Tada Age: 37
Address: Malolos Bulacan Gender: F
Position: Systems Analyst

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[✓] College Graduate Course: Bs Comp. Science

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		✓			
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.		✓			
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.		✓			
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.		✓			
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.		✓			

Comments / Suggestions:

Include Audit Trail Feature

Meriel Tada

Respondent's Signature over Printed Name

Date: 07-03-2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Jezon Gonzales Age: 38
Address: Baseco Compound Gender: MALE
Position: Programmer

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[x] College Graduate Course: Computer Science

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	/				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	/				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	/				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	/				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	/				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	/				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	/				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	/				
3. The system can back up and restore data in case of crashing or disruptions.	/				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	/				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	/				
3. The sidebar works properly and links to specific modules based on what the user enters.	/				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

Jerby Vezon Gonzales

Respondent's Signature over Printed Name

Date: July 3, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Lam Jae Sanchez Age: 29 yrs
Address: Quezon City Gender: M
Position: Webmaster

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[ ] College Graduate Course: B.S. C.S.

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		✓			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		✓			
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.		✓			
3. The sidebar works properly and links to specific modules based on what the user enters.		✓			

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.		✓			
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.		✓			
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.		✓			

Comments / Suggestions:

Ram Kyle Sanchez

Respondent's Signature over Printed Name

(Non-IT Professional)

Date: 07/03/24

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Anjelo Padilla Age: 23
Address: 72 Phase 3 San Miguel Fortune Marikina City Gender: M
Position: Student

Educational Attainment:

[ ] High School
[✓] College Level Course: BSBA Other (please specify): _____
[ ] College Graduate Course: _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.			✓		
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

Anjelo Padilla

Respondent's Signature over Printed Name

Date: 07/03/24

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, **"Product Management System For Ranil's Poultry Shop"**. Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: RUZZETE ANN D. BUEJA Age: 20
Address: SAN MATEO, RIZAL Gender: F
Position:

Educational Attainment:

[ ] High School
[✓] College Level Course: BSITH Other (please specify):
[ ] College Graduate Course:

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

RUZZEL ANN D. BUGSA

Respondent's Signature over Printed Name

Date: July 3 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

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Part I - Respondent's Profile:

Name: Matthew Reinard D. Buesa Age: 19
Address: San Mateo Rizal Gender: Male
Position: _____

Educational Attainment:

[ ] High School
[X] College Level Course: BSIT Other (please specify): _____
[ ] College Graduate Course: _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

MATTHEW BERNARD D. BUESA

Respondent's Signature over Printed Name

Date: July 05, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Kristella Pauline D. Bueso Age: 26
Address: San Mateo, Rizal Gender: F
Position: Senior Special Project Management Officer

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[/] College Graduate Course: BS Psych

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5 ✓	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.			✓		
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

A few Bi buttons not functioning but due to different OS (originally coded in windows); overall, almost 99% of all the features & functions were properly working.

KRISTELLA PAULINE D. BUESA

Respondent's Signature over Printed Name

Date: JULY 3, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: NORIDA M. LAROYA Age: 35
Address: C/O TEZA Gender: F
Position: TRAVEL TAX OFFICER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): _____
[✓] College Graduate Course: FIN. MA.

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		✓			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.		✓			
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓	✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.		✓			
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.		✓			
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

NORIDA M. LARROYA

Respondent's Signature over Printed Name

Date: _____

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: JOSEPH RAY G. ABION
Address: CALOOCAN CITY
Position: SR. TRAVEL TAX OFFICER B

Age: 39
Gender: M

Educational Attainment:

[ ] High School
[ ] College Level Course: _____
[x] College Graduate Course: AB POL. SCI.

Other (please specify): _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		✓			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		✓			
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.		✓			
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.		✓			
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.		✓			
3. The sidebar works properly and links to specific modules based on what the user enters.		✓			

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

JOSEPH RAY G. ABION

Respondent's Signature over Printed Name

Date: 07/03/2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: MARLETTE BOADO Age: 40
Address: MALATE, MANILA / TIEZA Gender: F
Position: TRAVEL TAX OFFICER

Educational Attainment:

[ ] High School
[ ] College Level Course: _____ Other (please specify): LL.B
[x] College Graduate Course: AB COMM

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.		✓			
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.		✓			
3. The software includes user logs features that track user activities and access, to help with monitor activity.		✓			

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.		✓			
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.		✓			

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.		✓			
3. The sidebar works properly and links to specific modules based on what the user enters.		✓			

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.		✓			
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.		✓			
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

MARLETTE BOADO

Respondent's Signature over Printed Name

Date: _____

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Frances Etemos
Address: Taytay, Rizal
Position: Sr Civilian Specialist

Age: 39
~~Gender:~~ Sex: F

Educational Attainment:

[ ] High School
[ ] College Level Course: _____
[x] College Graduate Course: BS Math

Other (please specify): _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.		✓			
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.		✓			
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.		✓			
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1
	✓				

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

Comments / Suggestions:

Frances Ebernos

Respondent's Signature over Printed Name

Date: July 3, 2024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

The project aims to develop and implement a reliable product management system for Ranil's Poultry Shop, enhancing operational efficiency, quality, and error reduction. This will automate manual tasks such as handwritten transaction receipts, manual counting of inventories, keeping the receipts safe, etc. The system offers a secure login with different levels of access, a module for product details, and handles daily sales and transactions. It also displays product names, prices, quantities, and other information for transactions and inventory, with a secure database for data storage. The system also tracks inventory in real-time, preventing overstocking, improving overall efficiency, and generating receipts for record keeping. This automated system aims to improve security, efficiency, profitability, customer service, and experiences.

Part I - Respondent's Profile:

Name: Lalaine B. Taray
Address: Magna City Cavite
Position: IS Researcher

Age: 41
Gender: F

Educational Attainment:

[ ] High School
[ ] College Level — Course: _____
[/] College Graduate — Course: BSE Major in Mathematics

Other (please specify): _____

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	/				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	/				
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Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	/				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	/				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.		✓			

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	/				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	/				
3. The system can back up and restore data in case of crashing or disruptions.	/				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	/				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	/				
3. The sidebar works properly and links to specific modules based on what the user enters.	/				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	/				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	/				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	/				

Comments / Suggestions:

Congratulations

Lalaine B. Ortaray

Respondent's Signature over Printed Name

Date: 7-31024

Dear Respondents,

We, **Rheiniel Jerard F. Damasco, Deighro De Ocampo, and Franchesca Jane Macam,** are college students from Technological Institute of the Philippines – Quezon City currently taking up Bachelor of Science in Computer Science, and are conducting a software evaluation for our Software Engineering 2 study, entitled, "**Product Management System For Ranil's Poultry Shop**". Rest assured that your response will be kept confidential. Thank you for your kind consideration.

Researchers:

Rheiniel Jerard F. Damasco

Deighro De Ocampo

Franchesca Jane Macam

Software Description:

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Part I - Respondent's Profile:

Name: TRAVIS H. ALLAN Age: 52
Address: TIEZA Sex ~~Gender~~: M
Position: INFORMATION CHIEF

Educational Attainment:

[ ] High School
[ ] College Level Course: _____
[✓] College Graduate Course: B.S. BUKMICOM

Other (please specify): Master in Science in Tourism Dest Mgt.

Part 2 – Questions:

Directions: Kindly rate the "**Product Management System For Ranil's Poultry Shop**" using the criteria below and put a check on the rate that you can give for each item.

Scale:
5 – Strongly Agree (SA)
4 – Agree (A)
3 – Fairly Agree (FA)
2 – Disagree (D)
1 – Strongly Disagree (SD)

Criteria	Rating				
Security - it refers to how well a product or system protects information and data from security vulnerabilities.	5	4	3	2	1
1. The software requires six (6) digit PIN codes ensuring that only authorized users can access sensitive information.	✓				
2. The system limits what different users can see and do, restricting data access based on user roles and permissions.	✓				
3. The software includes user logs features that track user activities and access, to help with monitor activity.	✓				

Robustness – the software's ability to cope with invalid inputs or unexpected user interactions.	5	4	3	2	1
1. The system clearly tells users when invalid data is entered, error messages will pop up providing clear feedback to users.	✓				
2. The system's search and filter functions, including characters and numbers, efficiently handle user input within the requirement of the system.	✓				
3. The system quickly recovers from errors and allows users to continue their tasks without interruption.	✓				

Maintainability - it refers to how well a product or system can be modified to improve, correct, or adapt to changes in the environment as well as requirements.	5	4	3	2	1
1. The software allows the user to easily update product details and prices without needing technical help.	✓				
2. The software handles errors smoothly and changes made within the software do not cause it to crash or malfunction.	✓				
3. The system can back up and restore data in case of crashing or disruptions.	✓				

Functionality - it refers to how well a product or system works to meet the needs when used in specific situations.	5	4	3	2	1
1. The buttons, menus, navigation, and text boxes can perform what it is intended to do and function properly.	✓				
2. The inventory module's buttons for updating stock levels respond quickly and work as expected.	✓				
3. The sidebar works properly and links to specific modules based on what the user enters.	✓				

User-friendly – it means how easy the software is for users to understand and achieve their goals in their specific tasks.	5	4	3	2	1

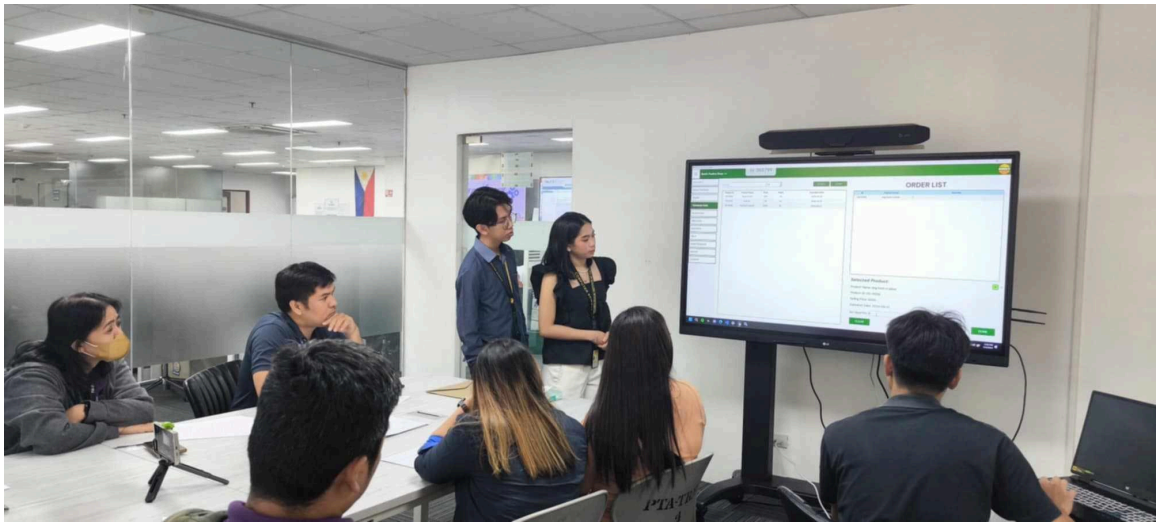
1. The software's interface is intuitive, allowing users to navigate tasks easily and find what they need quickly.	✓				
2. The software is easy to use, and users can find what they need quickly. New users can learn to use the software easily without much training.	✓				
3. The buttons are properly labeled ensuring the user will know exactly what to click and will not confuse the user.	✓				

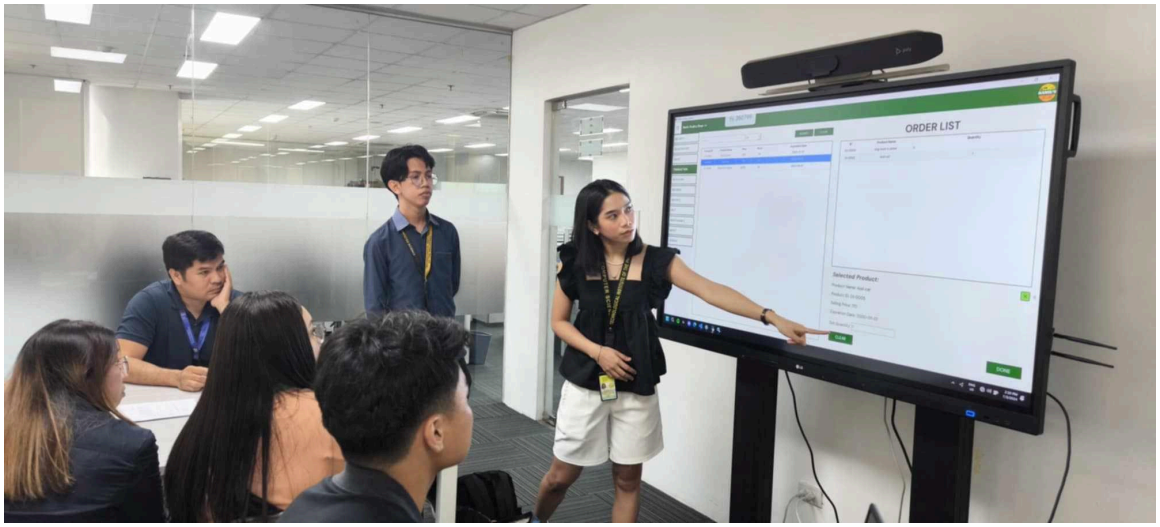
Comments / Suggestions:

Legal Basis Back-up
Legal structure & Applicability

Travis H. Allan
TRAVIS H. ALLAN

Respondent's Signature over Printed Name


ORDER LIST


ORDER LIST

Appendix I

Curriculum Vitae

DEIGHRO, DE OCAMPO

Computer Science Undergraduate

+63 908 139 1924

ddeighro@gmail.com

Taytay, Rizal

ABOUT ME

A Computer Science undergrade that aspires to be a data scientist that has competent logical thinking, programming skills and problem-solving skills. I want to create meaningful change with the knowledge I have and be motivated to do it with the interests that I have.

EDUCATION

Tertiary:

Technological Institute of the Philippines
2021 - Present

Secondary:

SHS
College of San Benildo - Rizal
2019 - 2021

JHS
College of San Benildo - Rizal
2015 - 2019

Primary:
College of San Benildo - Rizal
2009 - 2015

SKILLS & QUALIFICATIONS

- Understands Java, JavaScript, CSS, HTML and SQL.
- Works with multiple IDEs
- Well versed in Microsoft Office products
- Familiar with Adobe Products (Photoshop, Premier)

WORK EXPERIENCE

2020-2021
College of San Benildo - Rizal
Basic AutoCAD class
Learned to use a 3D modeling software

INTEREST

Programming

Photography

Video and Photo Editing

LANGUAGE

English

Filipino

AWARDS & HONORS:

With Honors
2018 - 2019, College of San Benildo - Rizal
2020- 2021, College of San Benildo - Rizal

Awardee of MVP Academic Excellence Awards
2018 - 2019, Meralco

MACAM, FRANCHESCA JANE

Computer Science Undergraduate

+63 949 307 5834

franchesca.macam@gmail.com

San Mateo, Rizal

ABOUT ME

A Computer Science undergraduate aspiring to be a data scientist that has competent logical thinking and problem-solving skills. I want to fulfill what I want to do in business by applying my knowledge in Computer Science field.

EDUCATION

Tertiary:

Technological Institute of the Philippines
2021 - Present

Secondary:

SHS
APEC Schools, Concepcion Dos
2018 - 2020

JHS
Valeriano E. Fugoso
2014 - 2018

Primary:

Valeriano E. Fugoso
2008 - 2014

WORK EXPERIENCE

2021
Boba Vibes Milktea Shop Lilac | 73 Lilac St.,
SSS Village Marikina City
Cashier / Barista

Learned to handle product management and sales management. Learned how to make a milk tea and a cheesecake and other beverages a milk tea shop sells.

AWARDS & HONORS:

Merit Awardee, APEC Schools
2018 - 2020

Excellence Awardee, APEC Schools
2018 - 2020

LANGUAGE

English

Filipino

INTEREST

UI Design

Marketing

Finance

SKILLS & QUALIFICATIONS

Project Management

Software development

Technical writing

Design UI

Resourceful

Teamwork

Desicion Making

DAMASCO, RHEINIEL JERARD F.

Computer Science Undergraduate

+63 915 497 4346

rheiniel.j@gmail.com

San Mateo, Rizal

ABOUT ME

A Computer Science undergraduate that aims to be both a Data Analyst, and a System Analyst. This will help me sharpen my skills in communication, analysis, and problem-solving

EDUCATION

Tertiary:

Technological Institute of the Philippines
2021 - Present

Secondary:

SHS
Technological Institute of the Philippines
2018 - 2020

JHS
St. Matthew College
2014 - 2018

Primary:

St. Matthew College
2008 - 2013

LANGUAGE

English

Filipino

AWARDS & HONORS:

Merit Awardee
2018 - 2020

With Honors
2018

WORK EXPERIENCE

2022
Pixelerate Photo Studio | L2 C5A, Marcos Highway, Santolan, Pasig City

Provisional Photo Editor

Collaborated with senior photo editors to retouch and enhance images for media rejects, ensuring visual consistency and quality. In addition, utilized Adobe Photoshop to perform precise image retouching to achieve visual excellence

INTEREST

UI Design

Database Management

Photo and Video Editing

SKILLS & QUALIFICATIONS

Project Management

System Analysis

Technical Writing

UI Design

Photo Editing

Video Editing