

A Livestock Monitoring System for Pomeleigh May Livestock



An Information System to the Faculty of the

College of Computer and Information Science

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In Partial Fulfillment of the

Academic Requirements for the Subject

SYSTEMS ANALYSIS AND DESIGN

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Part I

System Analysis Report

Introduction

Pomeleigh May Livestock is a family-owned corporation specializing in breeding cattle on their farms. The corporation's inventory system has been manual for a long time, which has led to problems such as data manipulation, difficulty in data recovery, and the absence of backup records. As the business has grown, these issues have become more pronounced, and the corporation has recognized the need for a more efficient system to address them.

This system analysis report has comprehensively analyzed the proposed monitoring system and its expected benefits for Pomeleigh May Livestock. The report outlined the technical specifications of the proposed approach, including its architecture, features, and functionality. Additionally, the report explored the potential challenges and risks associated with implementing the system and recommendations for mitigating those risks. Finally, the report concluded by assessing the project's overall feasibility, including its

cost-effectiveness, the potential return on investment, and impact on the corporation's operations.

The Organization

Pomeleigh May Livestock is a business owned by a family-owned corporation. In that corporation, there are seven members, who are also the board of directors. This business specializes in breeding cattle on their farm. The business is in Barangay Tambler, General Santos City. The business employs cowboys who care for the cattle and hoard them during inventory. This business originated from the parents of the incorporators, who used to have a meat shop at the public market in General Santos City. Because of this, their passion for raising livestock was started. They rented a ranch and bred cattle from selected stocks. When the father retired from managing the ranch, the children took over the venture in September 2020.

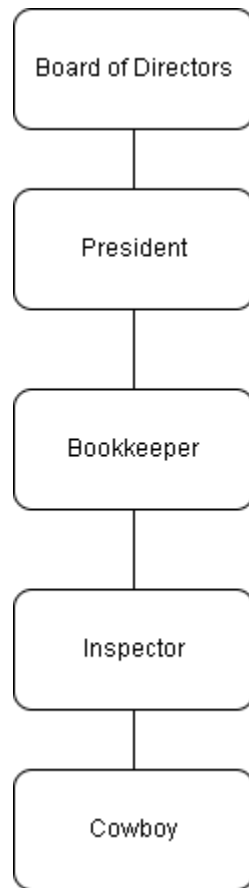


Figure 1.1
Organizational Structure

Figure 1.1 illustrates the organizational structure of the corporation. There are six boards of director, a president under them, and employees under the president, which are the cowboys, inspector, and a bookkeeper.

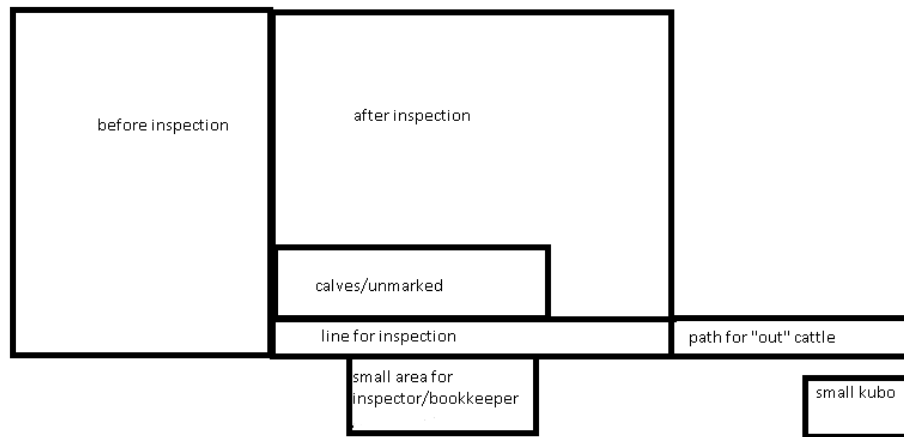


Figure 1.2

Floor Plan of fenced area

Figure 1.2 illustrates the floor plan of the fenced area of the ranch. On the left side is the area where the cows are herded before the inspection. Then, the cattle are moved a few at a time inside the line for inspection. After being inspected, calves or unmarked cattle are moved to the area above the line for inspection. Otherwise, they are moved to the vast area above the area for unmarked cattle. On the right is a path for the cattle when they are considered "out," which leads to a truck for transportation. Below there are two small Kubo-like areas. Below the line is where the inspector and bookkeeper do their job, spectators such as the owners could also stay there. On the bottom right, that Kubo is for eating meals.

Vision

To breed quality livestock

Mission

Grow the population by 1000 heads by 2030.

Business Environment

The Pomeleigh May Livestock family-owned corporation specializes in breeding cattle on their farms, encompassing an extensive area of approximately 400 hectares, which includes a fenced area where they hoard the cattle during inventory. The breeding, feeding, and raising of livestock are also done in various places, dispersed across an enormous land area. There are pastures and grazing areas where the cows can roam and graze. There are no known branches, and the corporation operates locally. With its impressive size and well-designed layout, Pomeleigh May Livestock has successfully established itself as one of the leading cattle farms in the area.

The ICT infrastructure used by Pomeleigh May Livestock was manual, with no existing MIS department. They used

logbooks to manually record their inventory, which poses several problems, such as data manipulation, difficulty in data recovery, and absence of backup records. The farm does not have an automated backup system in case of emergencies, which can lead to significant data loss. The business needed to be fully networked and utilize client-server technologies. They did not employ computerized systems to track their inventory or sales; they recorded their data in paper logbooks.

Critical Success Factors

Pomeleigh May Livestock have several attributes that have contributed to its success in the cattle breeding industry. Firstly, it is a family-owned corporation with a long-term vision and commitment to the business. Secondly, they specialize in breeding cattle, allowing them to focus their resources and expertise on this area, giving them a competitive advantage. Thirdly, the corporation recognizes the need for efficiency and improvement and is willing to invest in technology.

The Current System

Pomeleigh May Livestock used a manual inventory system for tracking their cattle records to improve their system's efficiency, accuracy, and backup. The primary operation that makes use of information systems is their inventory system.

Description of Operations

When the cattle arrive, a cowboy herds them to one side of the fence and then lets them enter a few at a time in a single file line. The cowboy inspects each one, shouting the number of the cattle and the owner's initials, while someone records them in a logbook.

Sometimes, the cowboy notes the age group (anak, torete, dinalaga, toro, inahin) and whether the cattle are "out," meaning they may be dead, sold to others, or sold to the slaughterhouse. Any cows that are "out" are transferred to a truck.

They brand the calves the following day. They mark the calf with the owner's initials and its assigned number. Due to the free-range style, they may need to include some cattle during inventory checks, but usually, the cattle return after a few inventory checks.

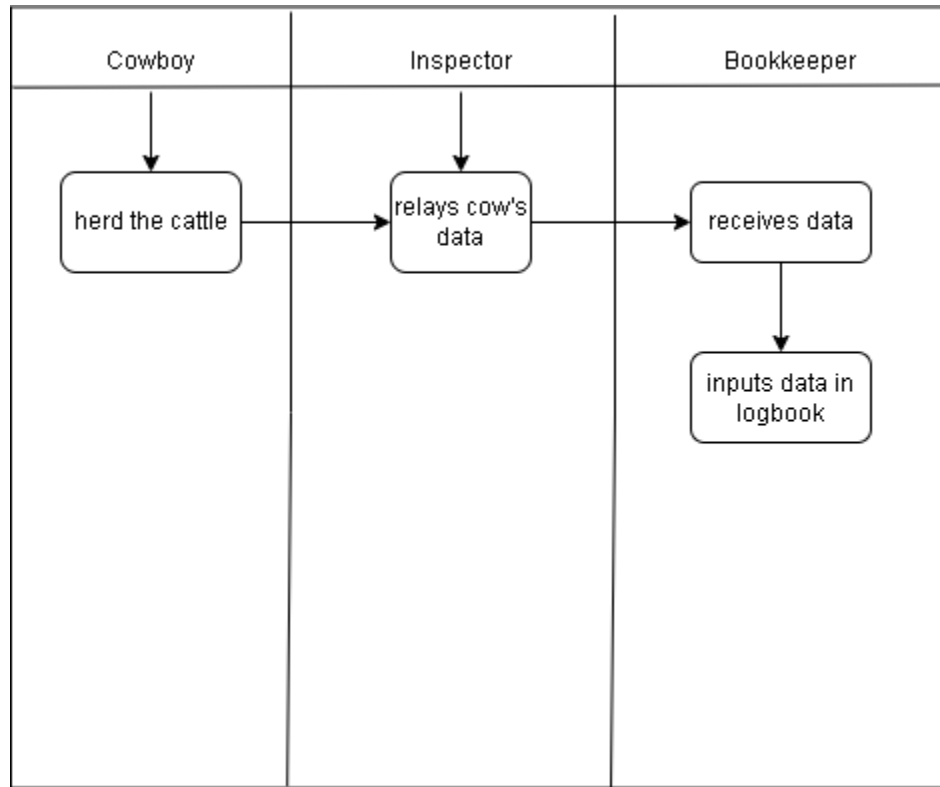


Figure 1.3

Activity Diagram of the Current System

Figure 1.3 above shows the activity diagram of the current system being used by the business. As shown in the diagram, the cowboy herds the cattle inside the fence. Then, they are moved to a narrow area a few at a time to be inspected. Then, the inspector inspects the cow's details, which are then relayed to the bookkeeper. Then, the bookkeeper writes the received information in the logbook.



Figure 1.4

Context Level Data Flow Diagram of the Current System

Figure 1.4 shows the context level data flow diagram of the current system of the business. It is centered around the inspector since they receive the cow after being herded and relay the information to the bookkeeper.

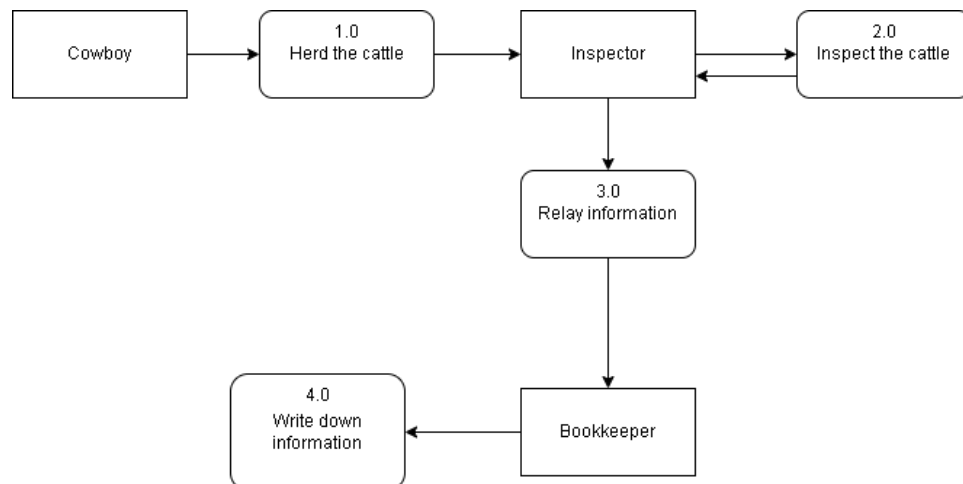


Figure 1.5

Level 0 Data Flow Diagram of the Current System

Figure 1.5 illustrates the data flow diagram of the current system of the business. It shows how the data is relayed throughout the entire process. First, the cowboys

herd the cattle which are then moved to a narrow area for inspection. Then, the inspector inspects each cow, which they relay the information to the bookkeeper. After receiving the information, the bookkeeper writes it down in the logbook.

Problem/Opportunity Definition

Table 1.1

Detailed Budget Computations for the Current System

(Attachment A)

Expenses	Quantity	Price	Total
Total Wages	Monthly	P20,000	P20,000
Repairs and Maintenance	Monthly	P5,000	P5,000
Rent*	Monthly	P31,250	P31,250
Total			P56,250

*Rent is sharing of offspring. Assuming 50 females gave birth to calves this year, 30% goes to the landowner, which is 15. Assuming P25,000 per head, the rent per year is P375,000 or P31,250 per month.

Table 1.2

Problem-Opportunity Definition Matrix

	Problem	Opportunity	Cause(s)	Effect(s)
Performance	Lack of proper personnel in recording data	Production of a system, each employee will be given distinct roles when they log in	No proper policy and decision making	<ul style="list-style-type: none"> • Data manipulation and difficulty in monitoring and analyzing data • might have duplicates in the logbook
Information	Manual recording of transactions is time-consuming and inefficient	Implementation of an automated monitoring system.	<ul style="list-style-type: none"> • Lack of automated system for recording/viewing transactions. • no current ICT 	<ul style="list-style-type: none"> • difficulty in monitoring and analyzing data • over-time, logbook might wear off which would need to rewrite to a new logbook
Economics	Others would compete with their livestock	Increase in profit by accommodating more livestock from others.	Competition from other ranchers who may offer better	Decrease in market share and profits due to competition and

			conditions.	inefficient and time-consuming manual processes.
Control	Monitoring of the inventory process without proper policies when decision making	Implementation of a clear and formal agreement with clear policies and guidelines.	Lack of clear policies for decision making.	Insufficient and inaccurate decisions
Efficiency	Retrieval of records when browsing data through manual records	A monitoring management system that has a browsing option which would make the managing/browsing of data efficient	No organized way of viewing the logbook (Such as table of contents) therefore affecting the efficiency of browsing through the logbook	<ul style="list-style-type: none"> • Looking through data would take time • Logbooks might get weary faster • Tedious in retrieving of records
Service	Lack of digital system to track inventory and sales	By using a digital system to monitor, it can make the monitoring	Need for digital monitoring system to track	Difficulty in monitoring

		process easier to manage and eliminate the need for a one- time, complete headcount.		
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Above, Table 1.2 presents the problem-opportunity definition matrix. (1) The problem of manual data recording in the information area could be more efficient, leading to data monitoring and analysis difficulties. However, implementing an automated system to sort cattle records quickly can solve this problem. (2) Insufficient and inaccurate decision-making occurs when monitoring the inventory process without proper policies. Implementing explicit and formal agreements on policies and guidelines can solve this problem. (3) Lastly, browsing data through manual records for record retrieval is less efficient and can become burdensome as logbooks accumulate over time. This issue can be addressed by implementing a monitoring system with a browsing option to make data management and browsing more efficient.

Functional Requirements

This proposal aimed to create a functional system that automates the cattle farm's monitoring process. The system had a central interface that the admin could use to monitor, add, edit, and delete cows and employees using the system. Additionally, the system included ranch policies and guidelines to ensure that all employees follow the same standards and procedures.

The monitoring system recorded vital details of the cows, such as gender, age, caretaker, owner, and tag/id. This information was critical in managing and improving the cattle farm's breeding operations. The automated system provided a more efficient and reliable means of recording and managing cattle inventory(database), eliminating the current manual and paper-based system.

By automating the monitoring process, the cattle farm could maintain an up-to-date and accurate cattle record, which was essential for proper farm management. The system also enabled the ranch to keep track of cattle ownership, and overall health, allowing for better decision-making and improving the farm's breeding operations. Implementing this automated system enhanced the overall efficiency of the

cattle farm, leading to improved productivity and profitability.

Monitoring Management:

I. Cow Management System:

a. Add Cows: The system should allow the admin to add new cows to the database. The admin will input the gender, age, owner, tag/ID, and other necessary details of the cows.

b. Edit Cows: The system should allow the admin to update the details of the cows if any changes occur, like transfer of ownership, etc.

c. Delete Cows: The system should allow the admin to delete a cow's record from the database if it has died, been sold, or is no longer in its possession.

d. Monitor Cows: The admin should be able to view and monitor the cows' status, including their location, and other necessary details.

II. Employee Management:

a. Add Employees: The system should allow the admin to add new employees. The admin will input their details, contact information, position, and other necessary details.

b. Edit Employees: The system should allow the admin to update the employee details if any changes occur, like promotion, transfer, or resignation.

c. Delete Employees: The system should allow the admin to delete an employee's record from the system if they have resigned or terminated.

d. Monitor Employees: The admin should be able to view and monitor the employee's attendance, performance, and other necessary details.

III. Owner Management:

a. Add Owner: The system should allow the admin to add new owners. The admin will input their name, contact information, and other necessary information

b. **Edit Owner:** The system should allow the admin to update the owner's details if any changes occur.

c. **Delete Owner:** The system should allow the admin to delete an owner's record from the system if they have resigned or terminated.

d. **Monitor Owner:** The admin should be able to view and monitor the owner's necessary details.

IV. Ranch Policies and Guidelines:

a. **Display Policies:** The system should display the branch policies and guidelines for the employees to read and understand.

b. **Update Policies:** The admin should be able to update the policies if any changes occur, like changes in regulations or laws.

c. **Policies and Guidelines:** The system should enable the admin user to record and manage all ranch policies and guidelines, including animal welfare, safety procedures, and health regulations.

d. **Document Management:** The system should enable the admin user to store and manage all relevant documents related to the ranch policies and guidelines, including standard operating procedures, training manuals, and compliance documents.

Sales Management:

I. Reporting Features:

a. **Generate Reports:** The system should allow the admin to generate reports on the cow monitoring and sales. The information should show the number of cows in the stock, the number of cows sold, and the revenue generated from the sales.

b. **Filter Reports:** The system should allow the admin to filter the reports based on specific criteria such as date range, gender, age, owner, etc.

The features listed above are based on the activity and data flow diagrams and the interviews conducted with the system owner and users.

Use Cases

Table 1.3

Use Case Glossary

Use-Case Name	Use-Case Description	Participating Actors and Roles
a. Relaying information	This use case describes the event of relaying the cow information during inspection	Inspector
b. Recording of information	This use case describes the event of recording the information from the inspector	Bookkeeper

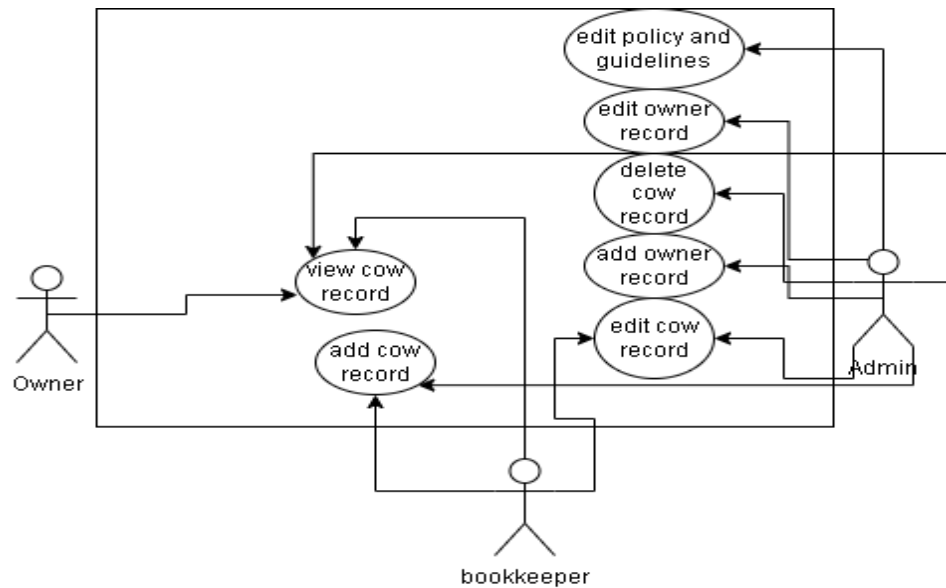


Figure 1.6

Use Case Diagram

Figure 1.6 above shows how the users can use the system. Owner (view cow record), Bookkeeper (view, add, edit, cow record), and Admin (view, add, edit, and delete the cow record as well as the owner and policy and guidelines

Feasible Alternatives

Effective cattle monitoring was essential for businesses to ensure smooth operations and maximize profits. Several feasible alternatives were considered for this purpose. One option was to leverage widely used spreadsheet software like Microsoft Excel or Google Sheets, which provide convenient and accessible ways to record cattle data and financial records and automate calculations. Another alternative was to improve the existing manual system by creating separate logbooks for different data types and adding index tabs for more straightforward data retrieval. Lastly, modifying an open-source monitoring system from online repositories such as GitHub can offer a cost-effective and customizable solution by adding custom data fields, integrating with other systems, or incorporating additional functionalities. Each of these options has its own advantages and may be customized to

meet the business's unique needs, thus improving their cattle monitoring procedures.

Alternative Solutions

1. Candidate 1 (Spreadsheet software)

The business would use Microsoft Excel or Google Sheets to record the cattle's records during inventory. They could also record their financial records, such as their expenses and profits. They could optionally add formulas to automate their spreadsheet. Since this is free, they do not need to pay for the software. Moreover, users can access these software applications anywhere with an internet connection, which makes data monitoring accessible.

2. Candidate 2 (Improved manual system)

The business would improve its manual system for easier retrieval of data and lessen disorganization when monitoring and analyzing the data in the logbook. Separate logbooks for the cattle data, markings for calves and unmarked cattle, and financial records would be beneficial so that the bookkeeper and owners would not have to search through all the pages in one logbook. A separate logbook for each year would also be better for more straightforward data retrieval and

monitoring. In addition, they would add index tabs for each date they did inventory checks.

Table 1.4
Detailed Budget Computations for Candidate 2
(Attachment B)

Item	Quantity	Price	Total
Logbook	12	P53	P636
Ballpen	20	P12	P240
Index tabs	1 set of 200	P40	P40
			P916

3. Candidate 3 (Modify an open-source inventory system)

The business can find suitable systems online repositories such as GitHub and hire a developer to modify the software to meet their specific requirements. The modifications may include adding custom data fields, integrating with other systems, or adding additional functionality. However, businesses should comply with the licensing terms and test modifications thoroughly to ensure there are no bugs or security vulnerabilities. Modifying an open-source inventory management system can provide businesses with a cost-effective and customizable solution to streamline their inventory management processes.

Table 1.5

Detailed Budget Computations for the Candidate 3

(Attachment B)

Item	Quantity	Price	Total
Developer	Depends on the contract	Depends on the contract	Depends on the contract

Feasibility Analysis

Operational Feasibility

This section compared the different alternative solutions on the aspect of their applicability, given the current operational resources that the business has.

Candidate 1

The operational feasibility of implementing Microsoft Excel or Google Sheets as a cattle inventory management solution was evident due to their wide usage, user-friendly interface, and cloud-based nature, enabling easy access and data retrieval. However, we must consider compatibility with existing systems and ensure data privacy and security measures.

Candidate 2

Enhancing the existing manual system for cattle monitoring was operationally feasible as it requires minimal training and change management efforts. However, additional costs for creating and maintaining separate logbooks and regular monitoring of data recording and retrieval procedures were necessary.

Candidate 3

Modifying an open-source inventory system from online repositories could be operationally feasible as it allows customization. However, it requires technical expertise, thorough testing, and compliance with licensing terms and regulations. However, it can provide a cost-effective and customizable solution with proper planning and implementation.

Technological Feasibility

This section compared the different alternative solutions on the aspect of their applicability, given the current technological resources that the business has.

Candidate 1

Microsoft Excel or Google Sheets for inventory and financial record-keeping were technologically feasible as they are widely used and readily available. The establishment assessed hardware/software requirements and staff skills for practical use.

Candidate 2

Improving the manual system for data retrieval and organization did not require significant technological changes, as it relied on existing logbooks and index tabs. Feasibility depended on sufficient supplies and compatibility with current practices.

Candidate 3

Modifying an open-source inventory system required technical expertise and compliance with licensing terms. Feasibility depended on the establishment's capability for technical modifications and compatibility with existing technology infrastructure.

Economic Feasibility

This section compared the different alternative solutions in the aspect of their applicability, given the

current economic or financial resources that the business has.

Candidate 1

Using Microsoft Excel or Google Sheets was economically feasible since both software are free and the business already had the necessary equipment such as a laptop or smartphone. Hence, there was little to no additional cost required.

Candidate 2

This alternative was economically feasible since the costs for items such as logbooks, pens, and index tabs are cheap.

Candidate 3

Hiring a developer/programmer was not economically feasible for the business since they had to pay an additional salary for customization and future maintenance of the software.

Schedule Feasibility

Candidate 1

This alternative was feasible since downloading did not take that long and encoding the data was doable within the given period.

Candidate 2

This alternative was feasible because rewriting the data to separate logbooks was doable within the given period.

Candidate 3

This alternative was not feasible because the business still needed to search for an open-source software and hire a developer/programmer for modifying an open-source software

Feasibility Analysis Matrix

Table 1.6

Weighted Scoring Model for the Different Candidates

Feasibility Criteria	Wt.	Candidate 1	Candidate 2	Candidate 3
Operational Feasibility	30%			
Functionality . A description		This would provide a digital and	This would improve data retrieval,	Would only support the cow

<p>of to what degree the candidate would benefit the organization and how well the system would work.</p> <p>Political. A description of well-received this solution would be from both user management, user, and organization perspective.</p>		<p>automatic backup for their records.</p> <p>This could be well-received as it could serve as a digital backup, and it is casual to use.</p> <p>Score: 90</p>	<p>monitoring, and analyzing.</p> <p>The business could go with this alternative if they prefer to continue keeping their manual system.</p> <p>Score: 85</p>	<p>business as the developer modifies an inventory system just for them.</p> <p>The business would have to hire a developer for this alternative and their acceptance of this could depend on the cost-effectiveness of this alternative .</p> <p>Score: 75</p>
<p>Technical Feasibility</p> <p>Technology. An assessment of the maturity, availability (or ability to acquire), and desirability of the computer technology needed to support this candidate.</p>	30%	<p>A laptop or smartphone is enough for this alternative .</p>	<p>For this alternative, the business only needs to acquire more logbooks, pens, and index tabs.</p>	<p>Since they will be modifying an open-source software, it could either be a smartphone or a personal computer.</p>

<p>Expertise. An assessment of the technical expertise needed to develop, operate, and maintain the candidate.</p>		<p>Basic knowledge of spreadsheets is enough since they will only be encoding data and using formulas is only optional.</p> <p>Score: 90</p>	<p>Teaching the bookkeeper how to write down the records using this alternative.</p> <p>Score: 90</p>	<p>For developing and maintaining, this would be the developer's job. For operating, the business provided training for the bookkeeper in how to operate the new system.</p> <p>Score: 70</p>
<p>Economic Feasibility</p> <p>Cost to develop:</p> <p>Payback period:</p> <p>Net present value:</p> <p>Detailed calculations:</p>	30%	<p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>Score: 95</p>	<p>Php 916</p> <p>~4 months</p> <p>None</p> <p>Refer to table 1.4</p> <p>Score: 90</p>	<p>Refer to table 1.5</p> <p>6 months - 1 year</p> <p>None</p> <p>Refer to table 1.5</p> <p>Score: 70</p>
<p>Schedule Feasibility</p> <p>An assessment of how long the solution will take to design and implement</p>	10%	<p>1 month</p>	<p>1 month</p>	<p>6 months-1 year</p>

		Score: 95	Score: 95	Score: 80
RANKING	100%	Average: 92	Average: 89	Average: - 72.5

Scope and Limitations

The proposed system focused on automating the monitoring process for cows and their associated details, such as gender, age, owner, and tag/id, at the specific cattle farm. It included a central interface for the admin to monitor, add, edit, and delete cows and employees and access ranch policies and guidelines. We developed the system to be user-friendly, reliable, and capable of handling substantial amounts of data while also incorporating reporting features to generate valuable reports. We prioritized data privacy and security to protect the information. However, the system did not automate tracking missing cows during the monitoring process, as cowboys may only sometimes have control over cows' whereabouts. Technical limitations, budget, time, and resource constraints also impacted system implementation. Additionally, the proposed system was tailored to the specific requirements and processes of the cattle farm and was not directly applicable to other farms. During implementation, we also encountered changes to existing

workflows and potential resistance from employees or stakeholders.

Scope

1. The proposed system focused on automating the monitoring process for cows and their associated details, such as gender, age, owner, and tag/id.
2. The system included a central interface for the admin to monitor, add, edit, and delete cows and employees and access ranch policies and guidelines.
3. The system was developed to be user-friendly, reliable, and capable of handling substantial amounts of data.
4. Reporting features allowed the operations manager to generate useful reports about the cows and employees on the ranch.
5. The system prioritized data privacy and security, ensuring the information is protected.

Limitations

1. The proposed system did not automate tracking missing cows during the monitoring process, as cowboys may need control over every cow's whereabouts.
2. The system faced technical limitations or constraints, such as hardware or software limitations, that may affect its performance or functionality.

3. The proposed system was developed based on the requirements and constraints of the specific cattle farm. It did not directly apply to other farms with different processes or requirements.
4. Implementing the proposed system required changes to existing processes and workflows, which needed to be improved by employees or stakeholders.
5. The proposed system was subjected to budget, time, and resource constraints during development and implementation.

The Proposed System

This proposal aimed to create a functional system that automates the cattle farm's monitoring process. The system had a central interface that the admin could use to monitor, add, edit, and delete cows and employees using the system. Additionally, the system included ranch policies and guidelines to ensure that all employees follow the same standards and procedures.

General Objective

This project aims to implement a monitoring system to improve data retrieval, monitoring, and analysis, eliminate data manipulation, and make the overall system efficient.

Specific Objectives

- Develop reporting features that allow for easy monitoring.
- Implement a central interface for the admin to monitor, add, edit, and delete cows and employees using the system and access ranch policies and guidelines.
- Make the search option accessible in a way that the admin can easily sort the inventory database (sort by: Cow Id, Owner Initials, Owner Id, Owner Last name, Employee ID, Employee Last Name).

Scope of Automation

The system's automation scope was the monitoring process for cows and their associated details, including gender, age, owner, and tag/id. Currently, this information was(is) manually recorded in a logbook. With our system, we automated the monitoring of cow and employee data and the ability to add, edit, and delete cows and employees as needed. We were not automating the tracking of missing cows during the monitoring process. Since we may not always have control over the whereabouts of every cow, we cannot guarantee to account for all cows during each monitoring check.

Activity Diagram

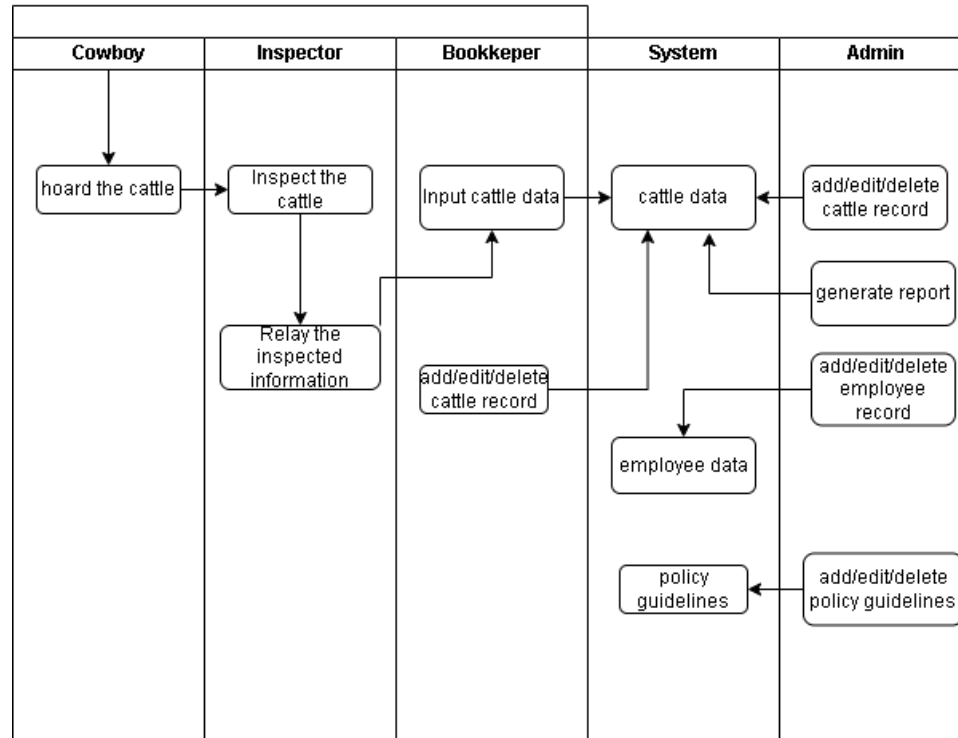


Figure 1.7

Activity Diagram of the Proposed System

Figure 1.7 above illustrates the activity diagram of the proposed system. It is like the activity diagram of the current system, but the proposed system adds a system and admin column. Instead of inputting the cattle data in a logbook, the bookkeeper will input it into the system, and it will store all the cattle records there. Inside the system, employee records will also be kept inside, along with the

policy guidelines. In this system, the bookkeeper and admin have the authority to add, edit, and delete cow records in the system. However, for the employee data and policy and guidelines, only the admin is authorized to add, edit, and delete records. Lastly, only the admin can generate reports about the cattle data.

DFD

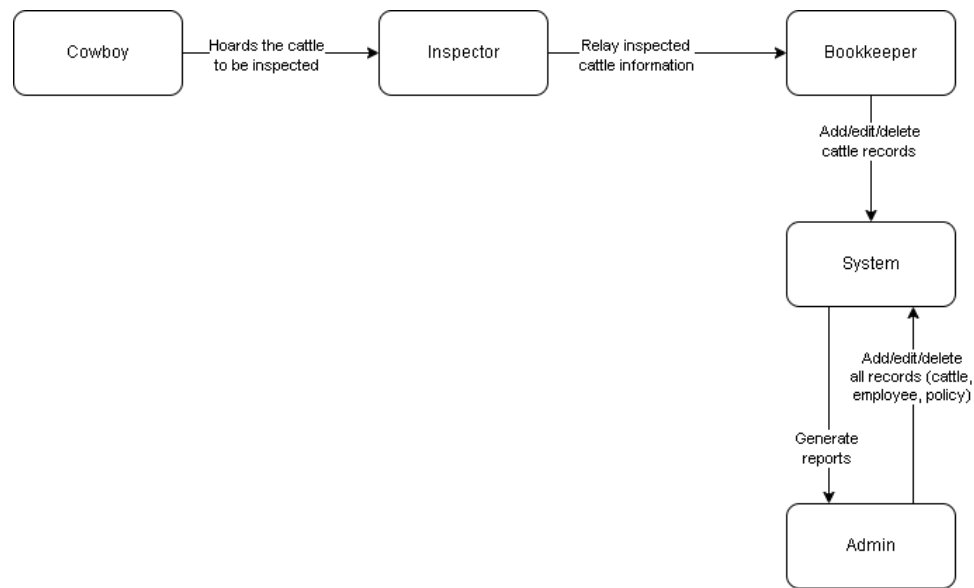


Figure 1.8

Context Level Data Flow Diagram of the Proposed System

Figure 1.8 above illustrates the proposed system's context-level data flow diagram. This context-level data flow diagram is like the current system's, but this adds a system and admin entity. In this proposed system, the bookkeeper logs the data in the system. In addition, they can also edit

and delete cattle records in the system. The admin can also add, edit, and delete cattle and employees' records and the policy guidelines. Furthermore, the admin has the authority to be given a report generated by the system.

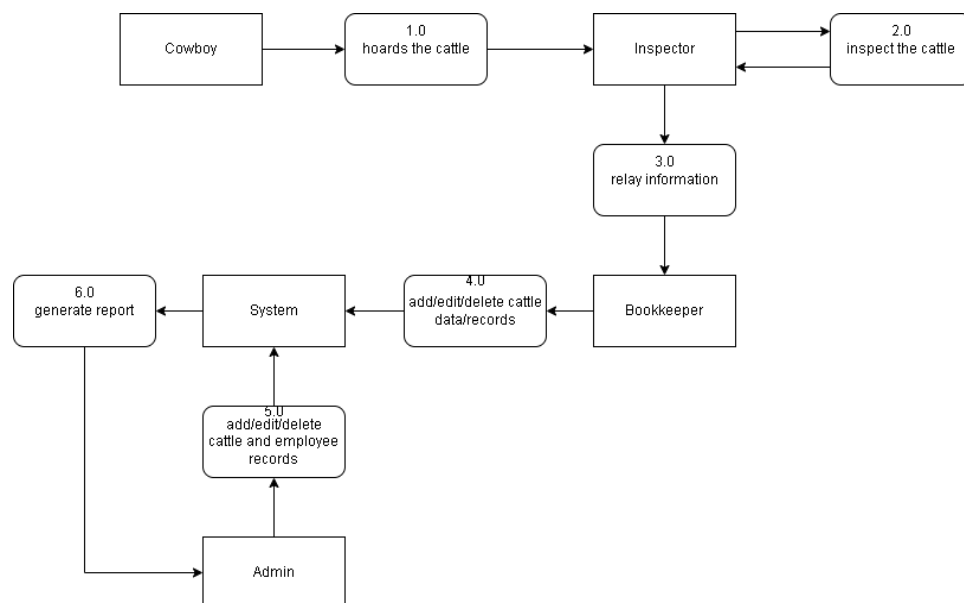


Figure 1.9

Level 0 Data Flow Diagram of the Proposed System

Figure 1.9 above illustrates the level 0 data flow diagram of the proposed system. The first part of the flow is the same as the current system's but with the addition of the system and an admin. The bookkeeper enters the relayed information into the system, which they can also edit and delete cattle records. The system then stores those records,

which can be accessed by the admin as well. The admin can add, edit, and delete cow records, employee records, and the policy and guidelines. The admin can also receive a report generated by the system.

Entity Relationship Diagrams

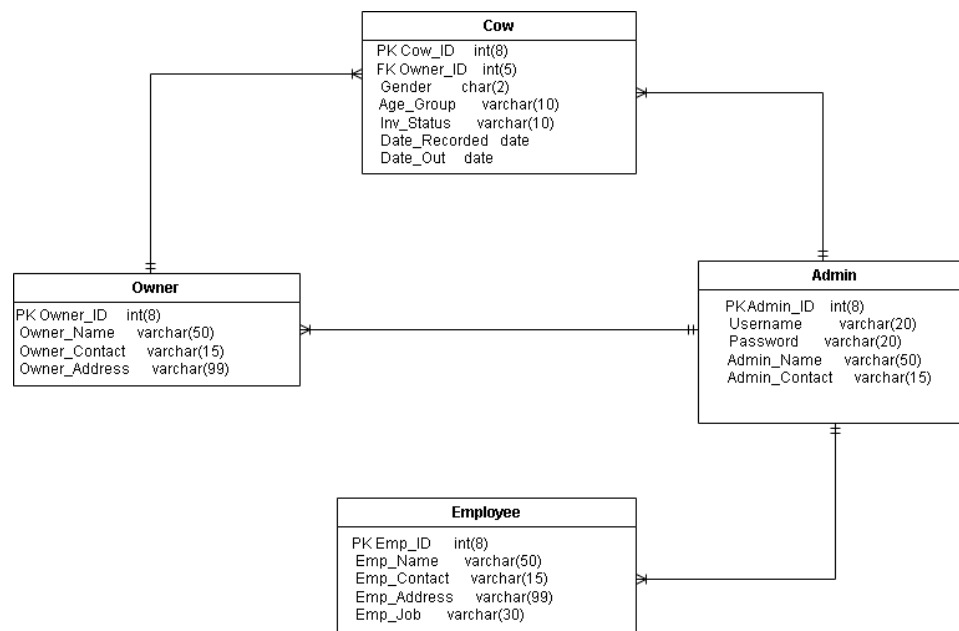


Figure 1.10

Entity Relationship Diagram of the Proposed System

Figure 1.10 above illustrates the entity relationship diagram of the proposed system. It shows the entities involved in the process and what attributes those entities contain.

Data Dictionary

I. Data Dictionary for the Data Flow Diagram

PROCESSES

1. Add Cow Record

Description:

A process by which a cow's record is added into the system.

Process #: 1

Location:

General Processes

Admin Processes

Input Flows:

Enter cow data

Output Flows:

View records

Generate Report

2. Edit Cow Record

Description:

A process by which a cow's record is edited.

Process #: 2

Location:

General Processes

Admin Processes

Input Flows:

Edit cow data

Output Flows:

View records

3. Delete Cow Record

Description:

A process by which a cow's record is deleted from the system.

Process #: 3

Location:

General Processes

Admin Processes

Input Flows:

Delete cow data

Output Flows:

4. Add Employee Record

Description:

A process by which an employee's record is added into the system.

Process #: 4

Location:

Admin Processes

Input Flows:

Output Flows:

5. Edit Employee Record

Description:

A process by which an employee's record is edited.

Process #: 5

Location:

Admin Processes

Input Flows:

Output Flows:

6. Delete Employee Record

Description:

A process by which an employee's record is
deleted from the system.

Process #: 6

Location:

Admin Processes

Input Flows:

Output Flows:

FILES

1. Cattle Records

Description:

A file containing the cattle's records.

Location:

General Processes

Admin Processes

Input Flows:

Enter cow data

2. Employees Records

Description:

A file containing the employees' records.

Location:

Admin Processes

Input Flows:

Enter employee data

SOURCE/SINKS/ENTITIES

1. Cow

Description:

The animal that is being bred on the ranch.

Alias:

COW

Location:

General Processes

Admin Processes

Input Flows:

add/edit/delete cow data

Output Flows:

generate report

2. Owner

Description:

A person who owns a cow.

Alias:

OWNER

Location:

General Processes

Admin Processes

Input Flows:

Output Flows:

3. Employee

Description:

A person who works for the business.

Alias:

EMP

Location:

Admin Processes

Input Flows:

add/edit/delete employee data

Output Flows:

4. Admin

Description:

A person who has complete access and authority to the system

Alias:

ADMIN

Location:

Admin Processes

Input Flows:

Output Flows:

Table 1.7

Data Dictionary for the Entity Relationship Diagram

Entity	Business Definition
Cow	The animal being bred in the ranch
Owner	A person who owns a cow
Employee	A person who works for the business
Admin	A person who has full access to the system

Part II

PROJECT DESCRIPTION

Project Title

The researchers chose the title "A Livestock Monitoring System for Pomeleigh May Livestock." The title is simple and direct to what its purpose and target are. This project's main goal was to implement a monitoring system to improve data retrieval, monitoring, and analysis, eliminate data manipulation, and make the overall system efficient.

Project Organization

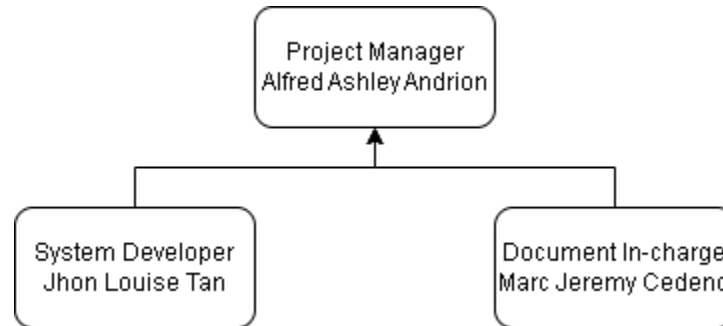


Figure 2.1 Project Roles and Hierarchy Diagram

Figure 2.1 illustrates the project members' roles and their hierarchy. The document in-charge role oversees the document's contents and format and makes sure that the changes are made according to the suggestions and recommendations given. The system developer is someone who developed the database and user interface and functionalities of the project system. The project manager is someone who oversees the whole project and its progress, including the document and the system development.

Project Methodology

This project utilized the waterfall model as its project methodology. The waterfall model is a software development methodology that follows a sequential approach to software development. It typically comprises five main phases that progressively build on one another, each starting only after the previous one's completion.

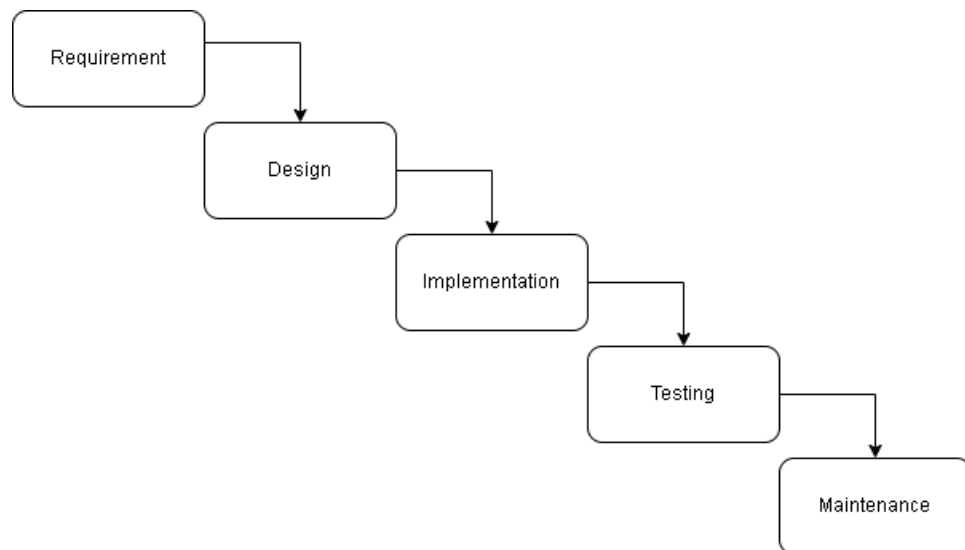


Figure 2.2 Waterfall Model Diagram

Figure 2.2 illustrates the project's utilization of the waterfall model. During the requirements gathering and analysis phase, the project team collaborates with the chosen organization to actively define and document the requirements for the software system to be developed. The design phase

involves actively creating a detailed plan for the software system, including determining its structure, selecting technologies, and defining the interaction between different components. In the implementation phase, the system development begins coding the software system based on the design specifications created in the previous phase. We thoroughly test the software during the testing phase to ensure it meets the intended requirements and functions. In the final phase, maintenance involves ongoing maintenance and support for the software system, including bug fixes, updates, and improvements.

Project Schedule

The project schedule is a crucial element of any project management plan, as it provides a roadmap for the project team to follow and ensures that the project stays on track. By having a clear project schedule in place, the project team can ensure that all tasks are completed on time and within budget, and that the project meets its objectives.

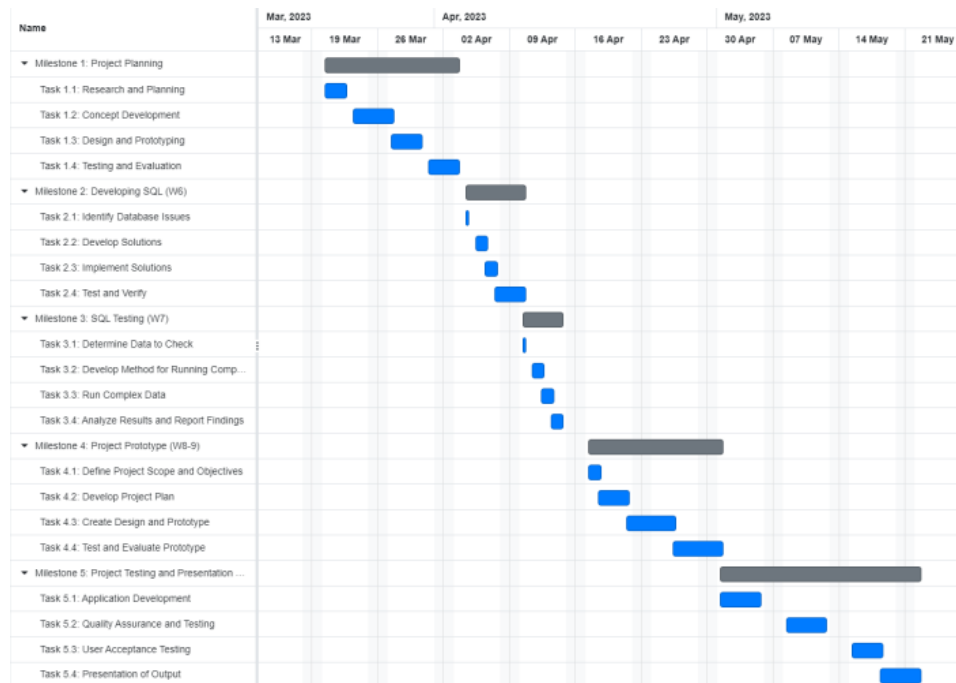


Figure 2.3 Project Gantt Chart

Figure 2.3 illustrates the project's timeline and schedule in a Gantt Chart format. This includes the project's milestones and tasks that need to be done for the milestone to be hit. This also includes a three-month detailed timeline of each milestone and task for the project.

Technology

When designing and developing this project, we carefully selected a range of technologies to ensure its successful implementation. For the programming language, we opted for Visual Studio Basic, a versatile and user-friendly

environment that facilitated the creation of the system and its intuitive user interfaces.

We employed MySQL, a robust and reliable database technology, to store and manage data. We utilized MySQL to design and configure the necessary database structure and tables to effectively support the system's functionality.

In terms of equipment, the system is designed to be accessed and operated through a computer. Users will interact with the system using their computer's graphical user interface, which provides a seamless and intuitive experience. By leveraging the power and capabilities of modern computers, the system aims to enhance efficiency and productivity.

Furthermore, to establish a seamless connection between the system and the database, we implemented Xampp. Xampp enables easy access to the MySQL database, ensuring smooth and efficient data retrieval and manipulation.

By integrating these technologies, we aim to develop a robust and user-friendly system that streamlines processes and enhances overall efficiency when used on a computer.

Part III

USER ACCEPTANCE AND TRAINING

User Acceptance Testing

We administered user acceptance training and testing to the organization's users to verify the successful implementation of the system. The testing consisted of two types: Preliminary Testing and Parallel Testing. John Louise Tan conducted the preliminary testing while the organization's users performed parallel testing. The testing took place in General Santos City.

Preliminary Testing Results

Functional Requirement

Test Cases

1. Cow Management

a. Add

b. Edit

c. Delete

d. Monitor

2. Employee Management

a. Add

- b. Edit
- c. Delete
- d. Monitor

3. Owner Management

- a. Add
- b. Edit
- c. Delete
- d. Monitor

Table 3.1

User Acceptance Testing: Preliminary Testing Results

Test Case	Tested by	Test Date	Expected Outcome	Actual Outcome	Remarks
1a	Jhon Louise Tan	May 8, 2023	Add cow records to the database	Was able to add records	Successful
1b	Jhon Louise Tan	May 8, 2023	Edit existing cow records	Was able to edit the records	Successful
1c	Jhon Louise Tan	May 8, 2023	Delete cow records	Was able to delete records	Successful
1d	Jhon Louise Tan	May 8, 2023	Monitor cow records	Was able to view and search cow records	Successful

2a	Jhon Louise Tan	May 8, 2023	Add employee records in the database	Was able to add records	Successful
2b	Jhon Louise Tan	May 8, 2023	Edit existing employee records	Was able to edit records	Successful
2c	Jhon Louise Tan	May 8, 2023	Delete employee records	Was able to delete records	Successful
2d	Jhon Louise Tan	May 8, 2023	Monitor employee records	Was able to view and search employee records	Successful
3a	Jhon Louise Tan	May 8, 2023	Add owner records in the database	Was able to edit records	Successful
3b	Jhon Louise Tan	May 8, 2023	Edit owner records	Was able to edit records	Successful
3c	Jhon Louise Tan	May 8, 2023	Delete owner records	Was able to delete records	Successful
3d	Jhon Louise Tan	May 8, 2023	Monitor owner records	Was able to monitor and search records	Successful

Table 3.1 shows the preliminary testing results conducted by Jhon Louise Tan. All test cases were successfully tested as seen in the table above.

Training Results

The training was conducted to the users after the UAT.

1. Cow Management
2. Employee Management
3. Owner Management

Table 3.2

Training Results

Date	Module	User	Results
May 9, 2023	Cow Management	Jan Stephon Andre Tan	The training was administered successfully
May 9, 2023	Employee Management	Jan Stephon Andre Tan	The training was administered successfully
May 9, 2023	Owner Management	Jan Stephon Andre Tan	The training was administered successfully

Table 3.2 shows the information from the training results. The training was conducted on May 9, 2023, at General Santos City. The user, Jan Stephon Andre Tan, was able to successfully perform all modules listed above.

Parallel Testing

Table 3.3

User Acceptance Testing: Parallel Testing Results

Test Case	Tested by	Test Date	Expected Outcome	Actual Outcome	Remarks
1a	Jan Stephon Andre Tan	May 9, 2023	Add cow records to the database	Was able to add cow records	Successful
1b	Jan Stephon Andre Tan	May 9, 2023	Edit existing cow records	Was able to edit the cow records	Successful
1c	Jan Stephon Andre Tan	May 9, 2023	Delete cow records	Was able to delete cow records	Successful
1d	Jan Stephon Andre Tan	May 9, 2023	Monitor cow records	Was able to view and search cow records	Successful

2a	Jan Stephon Andre Tan	May 9, 2023	Add employee records in the database	Was able to add employee records	Successf ul
2b	Jan Stephon Andre Tan	May 9, 2023	Edit existing employee records	Was able to edit employee records	Successf ul
2c	Jan Stephon Andre Tan	May 9, 2023	Delete employee records	Was able to delete employee records	Successf ul
2d	Jan Stephon Andre Tan	May 9, 2023	Monitor employee records	Was able to view and search employee records	Successf ul
3a	Jan Stephon Andre Tan	May 9, 2023	Add owner records in the database	Was able to edit records	Successf ul

3b	Jan Stephon Andre Tan	May 9, 2023	Edit owner records	Was able to edit owner records	Successf ul
3c	Jan Stephon Andre Tan	May 9, 2023	Delete owner records	Was able to delete owner records	Successf ul
3d	Jan Stephon Andre Tan	May 9, 2023	Monitor owner records	Was able to view and search owner records	Successf ul

Table 3.3 shows the results of the parallel testing conducted by Jan Stephon Andre Tan. Like the preliminary testing results, all test cases were tested successfully.

Part IV

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, implementing an automated monitoring system has effectively addressed the problems identified in the manual recording of transactions, inefficient inventory monitoring processes of Pomeleigh May Livestock, and the cumbersome retrieval of records. We have successfully achieved the objectives by recognizing the opportunity to improve efficiency and productivity.

To address the problems, we developed a comprehensive monitoring management system that incorporates various reporting features, enabling easy monitoring of transactions. Implementing a central interface for administrators has facilitated efficient management of cows and employees, allowing for tasks such as addition, editing, and deletion of records. Access to ranch policies and guidelines through the system has also provided an explicit and formal agreement for decision-making processes.

Furthermore, the search option implemented in the system has dramatically enhanced the browsing and sorting of the

inventory database. The admin can now sort records based on various criteria such as Cow ID, Owner Initials, Owner Id, Owner Last Name, Employee ID, and Employee Last Name. This functionality has significantly improved the efficiency of data management and retrieval processes.

In summary, implementing an automated monitoring system, along with clear policies and guidelines, has effectively addressed the identified problems and capitalized on the opportunity for improvement. The objectives of developing reporting features, implementing a central interface, and enhancing the search option have all been accomplished, resulting in a more streamlined and efficient monitoring and data management process for the organization.

Recommendations

It is essential to evaluate each recommendation's feasibility, cost, and potential impact in the context of the project's scope, limitations, and available resources. Prioritizing these recommendations based on their potential benefits and alignment with the cattle farm's goals will facilitate the continuous improvement of the monitoring system.

1. Enhance the monitoring process further by implementing a missing cow tracking feature. This feature will help track and record where cows escape accounting during monitoring checks. By integrating tracking mechanisms such as GPS tags or RFID technology, the system can provide valuable insights into cow locations and facilitate their retrieval, improving overall efficiency and reducing potential losses.

2. Enhancing data analysis and insights can expand the reporting features to provide more comprehensive data analysis and insights. By incorporating data visualization tools and advanced analytics, the system can generate meaningful reports that offer deeper insights into herd performance, employee productivity, and other vital metrics. These insights can assist in making informed decisions, identifying trends, and optimizing operations on the cattle farm.

3. Consider developing a mobile application that integrates with the monitoring system. This app can provide on-the-go access to critical information, allowing employees to input real-time data, update records, and receive notifications. Mobile app compatibility will enhance the system's usability, especially for field staff who may only sometimes have immediate access to a computer.

4. Explore the possibility of integrating the monitoring system with other third-party software or systems commonly used in the industry. For example, integrating with veterinary management systems, financial software, or supply chain management tools can streamline data exchange, reduce duplicate data entry, and enhance overall operational efficiency across different departments.

5. Allocate resources for ongoing system maintenance and regular updates to ensure stability, security, and compatibility with evolving technologies. Proactive monitoring, bug fixes, UI-Changes, and feature enhancements will contribute to the long-term success and usability of the system.

USER' S MANUAL



The image shows a screenshot of a login window. The window's title bar reads "Pomeleigh May Livestock" and includes standard minimize, maximize, and close buttons. The main area has a tan background. It contains two labels, "Username" and "Password", each followed by a white text input field. Below these fields are two buttons: "Login" and "Exit".

Username	<input type="text"/>
Password	<input type="password"/>
<input type="button" value="Login"/>	<input type="button" value="Exit"/>

Figure 5.1 Login UI

Pomeleigh May Livestock (Bookkeeper)

Cow ID

Owner

Gender

Select Gender

Age Group

Select Age Group

Status

Select Inventory S

Date of Inventory

2023-05-15

Recorded

2023-05-15

Out

2023-04-19

Cow ID or Owner Initials

Search

Add

Update

Delete

	Cow ID	Owner	Gender	Age Group	Inventory Status	Date of Inventory	Date Recorded	Date Out
▶	1	ROS	Male	Inahin	IN	20/04/2023	20/04/2023	20/04/2023
	2	RRS	Male	Toro	IN			
	3	ROS	F	Inahin	IN			
	4	ROS	Male	Torete	IN	15/05/2023	15/05/2023	
	6	ASD	Male	Torete	OUT	15/05/2023	15/05/2023	28/04/2023

Logout

Figure 5.2 Cow Management UI

Figure 5.1 and figure 5.2 above show the login UI of the system and the cow management UI. In figure 5.2, the left side is where the user will input the cow's details such as its ID, owner, gender, etc. After adding, the entered record will be displayed in the table. To edit and delete specific records, simply click on the cell you want to edit or delete, and the system will automatically fill in the textboxes with the correct information. The user could also search the table by typing the cow's ID or filter by owner initials.

APPENDICES

APPENDIX A

Letter in Conducting Study



Hermie P. Arzagon
President, Pomelegh May Livestock
Barangay Tamber
General Santos City, South Cotabato

Dear Sir / Madam:

Greetings!

We, the undersigned, are second year Bachelor of Science in Information Systems students of Malayan Colleges Mindanao, A Mapua School and are currently enrolled in CS103P – Systems Analysis and Design.

You have been chosen to be the client company who will be the recipient of the solution software we are going to produce in our study. In connection with this, we would like to humbly ask permission from your good office to allow us to conduct a thorough data gathering and investigation of the company's business operations regarding the inventory. We also would like to ask for your commitment to assist us in this endeavor. This will help the group in creating a high-quality software solution that will help improve the way you do things in your company.

Your favorable response is highly appreciated.

Respectfully Yours,

Alfred Ashley Andrion

Marc Jeremy Cedeño

Jhon Louise Tan

Noted by:

CHERRY B. LISONDRA, MIT
CS103P Adviser

Conforme: _____
Date: ____ May 15, 2023 _____



Figure 5.3 Letter in Conducting Study

APPENDIX B

Letter for Conducting an Interview



Hermie P. Arzagon
President, Pomeleigh May Livestock
Barangay Tumbler
General Santos City, South Cotabato

Dear Sir/Madam:

Greetings!

As a requirement of our course CS103P, we, the second-year students of Bachelor of Science in Information Systems of Malayan Colleges Mindanao, A Mapua School are required to carry out a study that would produce a computer-based information system that would help a company improve productivity in their daily operations. We are to choose three (3) companies / clients and carry out a preliminary data gathering to come up with a single company profile that will be used as our official company, which will be the recipient of the aforementioned software solution.

In lieu with this, our group would like to humbly ask permission from your good company to allow us to conduct an interview with one of your personnel and/or staff regarding your business process concerns.

Respectfully Yours,

Alfred Ashley Andrion

Marc Jeremy Cedeño

Jhon Louise Tan

Noted by:

CHERRY B. LISONDRA, MIT
CS103P Adviser

Conformer: _____
Date: __May 15, 2023__

Figure 5.4 Letter for Conducting an Interview

APPENDIX C

Problem Statement and Factors

A. Problem Statement and Factors

Statement of the Problem

The manual recording of transactions, inefficient inventory monitoring processes, and cumbersome retrieval of records at Pomeleigh May Livestock have led to significant challenges in efficiency and productivity. An automated monitoring system was implemented to overcome these issues, incorporating various reporting features, a central interface for administrators, and an enhanced search option.

General Problem

Specific Problem 1: Manual recording of transactions is time-consuming and inefficient.

Factor 1: Error-prone data entry - The manual recording of transactions increases the likelihood of errors during data entry. Human errors, such as typos, missing entries, or incorrect information, can lead to inaccuracies in the recorded transactions. This factor contributes to the

inefficiency of the manual recording process and the subsequent need for additional time and effort to identify and rectify errors.

Factor 2: Limited scalability - As the volume of transactions increases, the manual recording process becomes more time-consuming and challenging to manage. The need to record each transaction individually, manually inputting relevant information, makes it difficult to scale the recording process efficiently. This limitation can result in delays and potential backlogs in transaction recording, further impeding the organization's ability to monitor and analyze data effectively.

Factor 3: Lack of real-time visibility - Manual recording of transactions typically involves physical logbooks or paper-based forms, which require manual retrieval and updating. This lack of real-time visibility hinders the organization's ability to access up-to-date information for analysis and decision-making readily. It also introduces delays and potential data inconsistencies, as information may not be promptly recorded or accessible when needed. This factor exacerbates the inefficiency of the manual recording process, hindering the timely monitoring and analysis of transaction data.

Specific Problem 2: Monitoring of the inventory process without proper policies when decision making.

Factor 1: Inconsistent data recording - There is a higher likelihood of consistent data recording with appropriate policies and guidelines for inventory monitoring. Different individuals or teams may have varying methods or criteria for recording inventory information, leading to discrepancies and inconsistencies in the recorded data. This lack of standardization hampers accurate decision-making based on the inventory data, as relying on complete or reliable information becomes challenging.

Factor 2: Lack of data categorization and prioritization - Inventory data may need more precise categorization and prioritization with suitable policies. This can result in difficulties in identifying and addressing critical inventory issues promptly. For example, with established policies, it may be clear which inventory items require immediate attention or which can be managed with less urgency. The absence of clear guidelines for decision-making concerning inventory monitoring can lead to inefficiencies, delays, and potentially costly errors.

Factor 3: Limited performance analysis and forecasting - In the absence of proper policies, the monitoring of the inventory process may need more structured performance analysis and forecasting capabilities. With defined metrics, benchmarks, or guidelines, it becomes easier to assess the performance of the inventory process accurately. This limitation hinders the organization's ability to identify trends, anticipate demand fluctuations, optimize inventory levels, and make informed decisions regarding inventory management. The lack of proper policies impedes the organization's ability to align inventory monitoring with strategic goals and optimize overall operational efficiency.

Specific Problem 3: Retrieval of records when browsing data through manual records.

Factor 1: Time-consuming search process - Browsing data through manual records can be time-consuming and labor-intensive. The need to manually flip through pages, search for specific information, and navigate through multiple forms can result in significant time and effort expended in retrieving the desired records. This factor leads to inefficiencies and delays in accessing the required

information promptly, hindering effective decision-making and data analysis.

Factor 2: Limited search capabilities - Manual records often need more advanced search functionalities, making it challenging to perform targeted searches based on specific criteria. With the ability to search by key parameters such as date, category, or relevant keywords, locating particular records within a large volume of manual records becomes easier. This limitation restricts the organization's ability to efficiently retrieve and extract relevant information from the documents, potentially impacting the accuracy and timeliness of decision-making processes.

Factor 3: Risk of misplaced or lost records - Manual records are susceptible to human errors, such as misplacement or loss of physical documents. Over time, as logbooks accumulate, the risk of misplacing or misfiling forms increases. This factor introduces the possibility of valuable information being lost or needing to be more secure, leading to gaps in the organization's historical records and impeding the ability to retrieve specific records when required. The risk of misplaced or lost documents further exacerbates the inefficiencies of browsing data through manual records, making the process even more burdensome.

APPENDIX D

PROBLEM STATEMENT APPROVAL

The problem statement addresses the challenges identified in the manual recording of transactions, inefficient inventory monitoring processes, and burdensome retrieval of records at Pomeleigh May Livestock. The factors identified, such as error-prone data entry, limited scalability, lack of real-time visibility, inconsistent data recording, lack of data categorization and prioritization, and limited performance analysis and forecasting, highlight the significant issues that hinder efficient decision-making and data management. By clearly outlining these problems, the problem statement provides a comprehensive understanding of the obstacles faced by the organization. This approved problem statement is a solid foundation for further research and development to optimize the monitoring and data management processes, ensuring streamlined operations and improved productivity for Pomeleigh May Livestock.

Below, we present the POM matrix as evidence of reviewing and approving the system.

Table 1.2 Problem Opportunity Matrix

	PROBLEM	OPPORTUNITY	CAUSE (S)	EFFECT (S)
INFORMATION	Manual recording of transactions is time-consuming and inefficient	Implementation of an automated monitoring system.	<ul style="list-style-type: none"> • Lack of automated system for recording/viewing transactions. • no current ICT 	<ul style="list-style-type: none"> • difficulty in monitoring and analyzing data • over-time, logbook might wear off which would need to rewrite to a new logbook
CONTROL	Monitoring of the inventory process without	Implementation of a clear and formal agreement with clear policies	Lack of clear policies for decision making.	Insufficient and inaccurate decisions

	proper policies when decision making	and guidelines.		
EFFICIENCY	Retrieval of records when browsing data through manual records	A monitoring management system that has a browsing option which would make the managing/brows ing of data efficient	No organized way of viewing the logbook (Such as table of contents) therefore affecting the efficiency of browsing through the logbook	<ul style="list-style-type: none"> • Looking through data would take time • Logbooks might get weary faster • Tedious in retrieving of records

APPENDIX E

Letter in Conducting System Testing



Jan Stephon Andre Tan
Valma Subdivision, Barangay San Isidro
General Santos City, South Cotabato

Dear Sir / Madam:

Greetings!

We, the undersigned, are second year Bachelor of Science in Information Systems students of Malayan Colleges Mindanao, A Mapua School and are currently enrolled in CS103P – Systems Analysis and Design.

We kindly request your participation in the conducting of a system testing for our prototype developed in compliance with the Systems Analysis and Design course. We require an honest and committed approach to our developed software to see flaws and weaknesses in perspectives that are not our own. Participation in user testing consists of interacting with our program to which the proponents will assist you with tasks and objectives as to test the user-friendliness and efficiency of faculties of the system

We are hoping for your favorable response in this matter.

Respectfully Yours,

Alfred Ashley Andrion

Marc Jeremy Cedeño

Jhon Louise Tan

Noted by:

CHERRY B. LISONDRA, MIT
CS103P Adviser

Conforme: _____
Date: ____ May 8, 2023 _____

Figure 5.5 Letter in Conducting System Testing

APPENDIX F

User Acceptance Training Results

Table 3.1

User Acceptance Testing: Preliminary Testing Results

Test Case	Tested by	Test Date	Expected Outcome	Actual Outcome	Remarks
1a	Jhon Louise Tan	May 8, 2023	Add cow records to the database	Was able to add records	Successful
1b	Jhon Louise Tan	May 8, 2023	Edit existing cow records	Was able to edit the records	Successful
1c	Jhon Louise Tan	May 8, 2023	Delete cow records	Was able to delete records	Successful
1d	Jhon Louise Tan	May 8, 2023	Monitor cow records	Was able to view and search cow records	Successful
2a	Jhon Louise Tan	May 8, 2023	Add employee records in the database	Was able to add records	Successful
2b	Jhon Louise Tan	May 8, 2023	Edit existing employee records	Was able to edit records	Successful
2c	Jhon Louise Tan	May 8, 2023	Delete employee records	Was able to delete records	Successful

2d	Jhon Louise Tan	May 8, 2023	Monitor employee records	Was able to view and search employee records	Successful
3a	Jhon Louise Tan	May 8, 2023	Add owner records in the database	Was able to edit records	Successful
3b	Jhon Louise Tan	May 8, 2023	Edit owner records	Was able to edit records	Successful
3c	Jhon Louise Tan	May 8, 2023	Delete owner records	Was able to delete records	Successful
3d	Jhon Louise Tan	May 8, 2023	Monitor owner records	Was able to monitor and search records	Successful

Table 3.3

User Acceptance Testing: Parallel Testing Results

Test Case	Tested by	Test Date	Expected Outcome	Actual Outcome	Remarks
1a	Jan Stephon Andre Tan	May 9, 2023	Add cow records to the database	Was able to add cow records	Successful
1b	Jan Stephon Andre Tan	May 9, 2023	Edit existing cow records	Was able to edit the cow records	Successful
1c	Jan Stephon Andre Tan	May 9, 2023	Delete cow records	Was able to delete cow records	Successful

1d	Jan Stephon Andre Tan	May 9, 2023	Monitor cow records	Was able to view and search cow records	Successf ul
2a	Jan Stephon Andre Tan	May 9, 2023	Add employee records in the database	Was able to add employee records	Successf ul
2b	Jan Stephon Andre Tan	May 9, 2023	Edit existing employee records	Was able to edit employee records	Successf ul
2c	Jan Stephon Andre Tan	May 9, 2023	Delete employee records	Was able to delete employee records	Successf ul
2d	Jan Stephon Andre Tan	May 9, 2023	Monitor employee records	Was able to view and search employee records	Successf ul
3a	Jan Stephon Andre Tan	May 9, 2023	Add owner records in the database	Was able to edit records	Successf ul
3b	Jan Stephon Andre Tan	May 9, 2023	Edit owner records	Was able to edit owner records	Successf ul
3c	Jan Stephon Andre Tan	May 9, 2023	Delete owner records	Was able to delete owner records	Successf ul
3d	Jan Stephon Andre Tan	May 9, 2023	Monitor owner records	Was able to view and search owner records	Successf ul

APPENDIX G

Minutes of the Trainings

- Introduce the system to the user
- Show the different possible users when logging in
- Show how the search function works in the view-only UIs
- Show how to add, edit, delete, and search cow records in the cow management UI
- Show how to add, edit, delete, and search owner and employee records in their respective UIs.

Appendix H

Letter of Project Acceptance



Hermie P. Arzagon
President, Pomeleigh May Livestock
Barangay Tumbler
General Santos City, South Cotabato



Dear Sir / Madam:

Greetings!

We, the undersigned, are second year Bachelor of Science in Information Systems students of Malayan Colleges Mindanao, A Mapua School and are currently enrolled in CS103P – Systems Analysis and Design.

We write to you with utmost pleasure to have worked and studied the processes and inner workings of your company. With your permission, we have investigated the inefficiencies you have vocalized regarding your organization, and we are happy to tell you that our studies have borne fruition and led to excellent results. It is with great excitement that we propose the implementation of a livestock monitoring system to your organization. Through rigorous evaluation and the supportive cooperation of your employees, we are confident that our software will have positive results to the operations of your company.

Please consider this letter as permission and acceptance of our software, and your favorable response is highly appreciated.

Respectfully Yours,

Alfred Ashley Andrion

Marc Jeremy Cedeño

Jhon Louise Tan

Noted by:

CHERRY B. LISONDRA, MIT
CS103P Adviser

Conforme: _____

Date: _____ May 15, 2023 _____

Figure 5.6 Letter of Project Acceptance

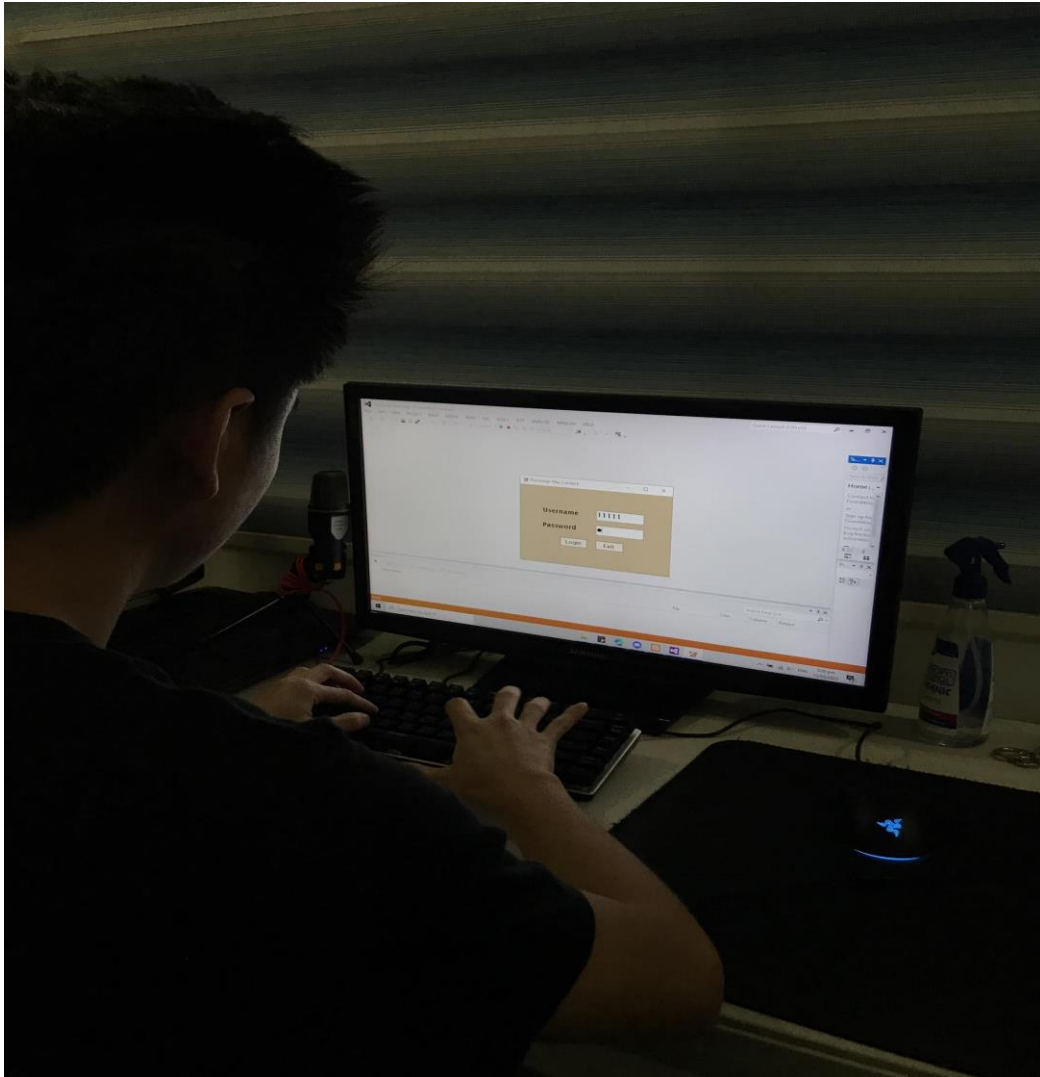
APPENDIX I

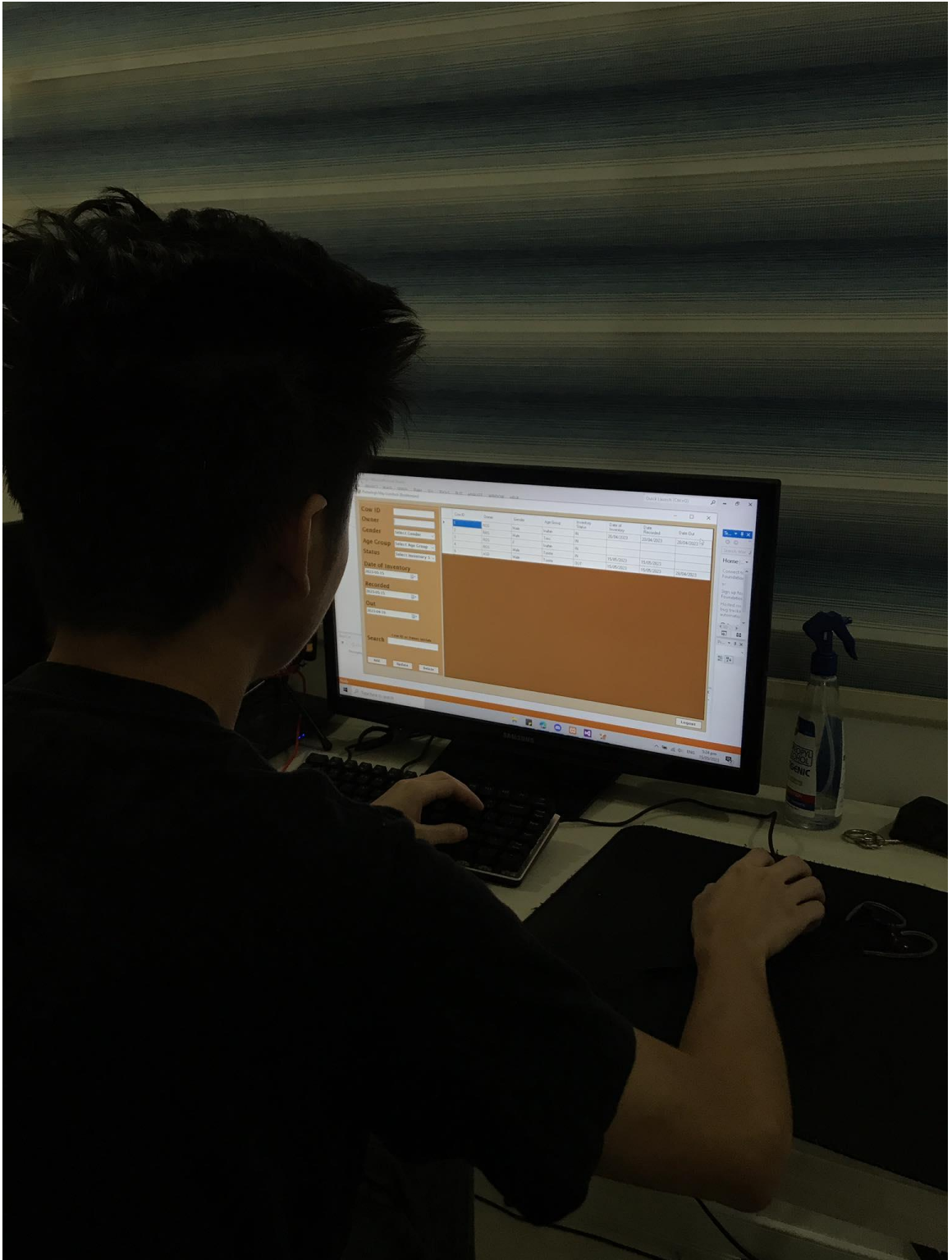
CERTIFICATES

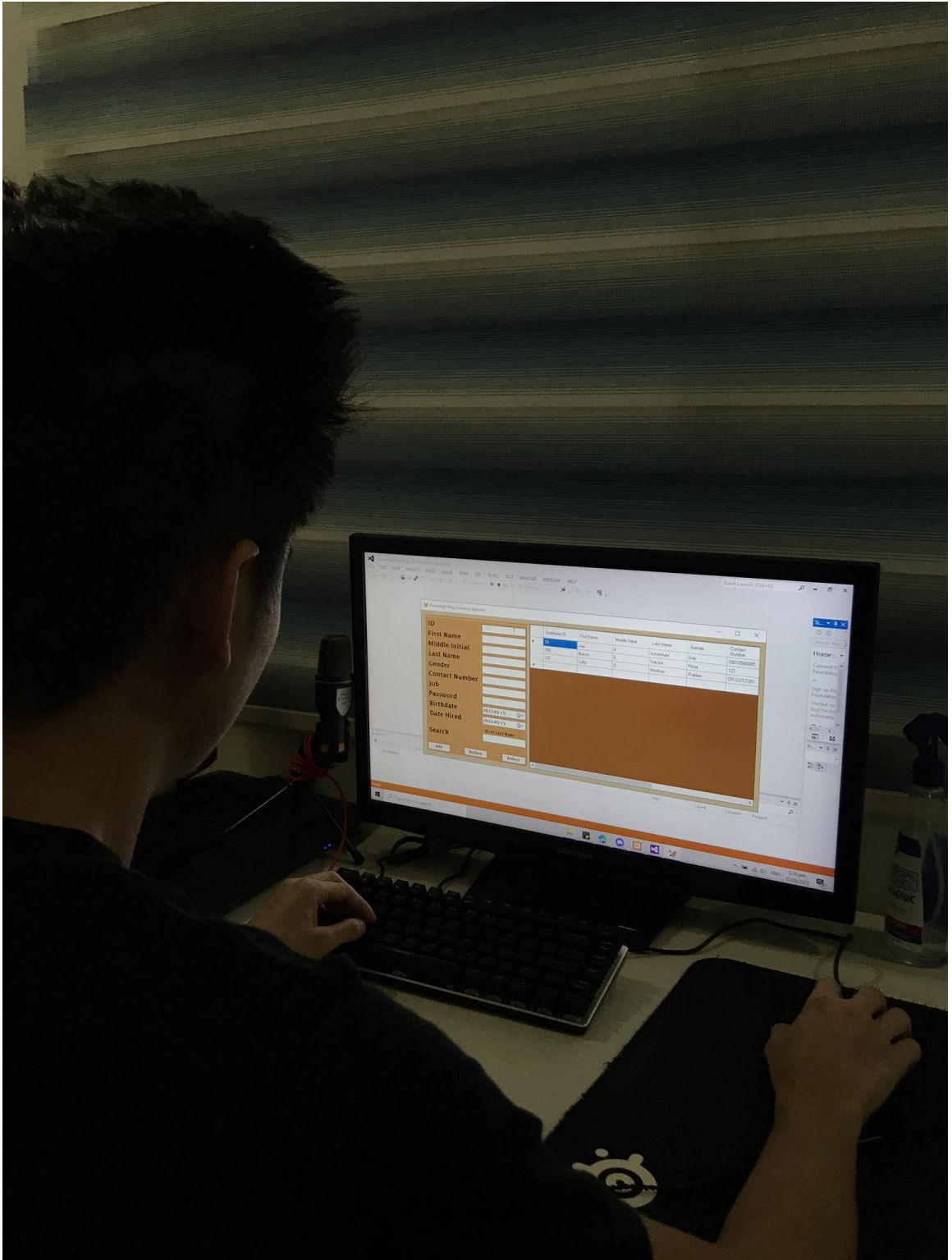


APPENDIX J


Photos










CURRICULUM VITAE



CONTACT

 09770595880

 mjCedeno@mcm.edu.ph

 Block to Lot 30, Cedar Street, Prescilla Estate 2, Cabantain, Davao City, Philippines

SKILLS

Beginner Learning Java

Beginner at Programming

LANGUAGES

ENGLISH

TAGALOG

HOBBIES

Reading

Dancing

Martial Arts

Gym

Gaming

Marc Jeremy U.Cedeño

[Hi! I'm Marc. I love reading books about my interest such as mangas and books, I am an active person based on my hobbies. I also like playing video games occasionally. I have an Introverted personality and I like trying new things that Interest me.

As a beginner, I am currently trying to catch up in learning Java as I have no background or experience in programming before enrolling in Information Systems.

EDUCATION

B.S Information Systems 2nd year present
Malayan Colleges Mindanao
Clubs & Societies: Malayan Dance Company

Senior High School 2020
Malayan Colleges Mindanao
Clubs & Societies: Malayan Dance Company

EXPERIENCE

Student
Malayan Colleges Mindanao
No experience yet

present

88



Jhon Louise S. Tan

CONTACT



0916-4756972



jlTan@mcm.edu.ph



Valma Subdivision, Purok
Malakas, Barangay San
Isidro, General Santos
City, Philippines

SKILLS

Java Programming

Python Programming

LANGUAGES

ENGLISH

Tagalog

HOBBIES

Video Games

Reading Manga

[Hi! I'm Jolo. I love playing competitive video games, GeoGuessr, and online chess. I also love consuming Japanese media like music, anime, and manga. I am a curious person and I learning more about what piques my curiosity and interest.

Before enrolling in IS, I had no experience or background in programming. Then as time passed, I learned to love programming. Currently, I only know how to write programs using Java and Python.

EDUCATION

B.S Information Systems 3rd year present

Malayan Colleges Mindanao

Clubs & Societies: CCIS Department

Senior High School 2019

The Quantum Academy inc.

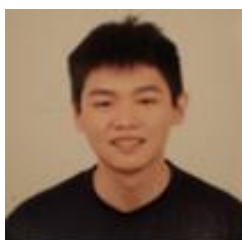
EXPERIENCE

Student

Malayan Colleges Mindanao

No experience yet

present



Alfred Ashley Andrion

✉ aaAndrion@mcm.edu.ph 📞 09995148574 📍 Matina, Davao City, 8000 Davao

Education

Grade School Ateneo de Davao University, Davao City	2006 - 2012
Junior High School Ateneo de Davao University, Davao City	2012 - 2016
Senior High School Ateneo de Davao University, Davao City	2016 - 2018
College Ateneo de Davao University, Davao City	2018 - 2019
College Mapua Malayan Colleges Mindanao, Davao City Present	2019 - 2022

Certificates

Java Object-Oriented Programming Certificate of Completion	Oct 2022
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Profile

I am a hardworking and motivated CCIS student who has acquired knowledge through the field of Information Systems study. I have strengthened my skills over time under the guidance of my peers' teachers, which immensely contributed to most of my success. I am approachable and eager to learn to help the organization and my peers. I am also not scared to be mentored or corrected.

References

References available upon request.

I consent to the processing of my personal data for the purpose of recruitment to which I am applying.

Personal details

Date of birth
July 9th, 1999

Nationality
Filipino

Civil status
Single

Skills

Good Communicator

Creative

Media Literate

Self Motivated

Languages

Tagalog

Visaya

English

Hobbies

- Video Games
- Watching movies or TV series
- playing with dogs