UNIVERSITY OF SANTO TOMAS

COLLEGE OF INFORMATION AND COMPUTING SCIENCES
DEPARTMENT OF COMPUTER SCIENCE

Software Engineering II

Software Requirements Specification

BeeHive: Timekeeping, Evaluation, and Payroll System for Employees of Jollibee Quinta Market

CLIENT:

Uno Grupo Cinco Food Corporation

CLIENT ADDRESS:

Ground Floor Quinta Market & Fish Port, C Palanca St., Quiapo Manila City, Metro Manila

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1. Introduction

1.1 Project Purpose

This document delineates the requirements necessary to meet the system's expectations. It comprehensively conceptualizes the system's features and associated behaviors, aligned with the client's needs and demands, and acts as a functional framework. This document will guide the development process to ensure the system meets the client's specified requirements.

This project is intended to address the challenges faced by the Jollibee Quinta Market branch with its current software solution spreadsheets and for hardware Bundy Clock. The client seeks to replace their existing system with a robust and reliable solution that aligns with their organizational goals and objectives. The proposed system will encompass comprehensive functionalities, including data retrieval, organization, tracking, storage, and manipulation. Specifically, it will address the client's payroll processing requirements by incorporating employee work hours, dividends, end-of-contract payments, and pensions. To ensure the project's success, the proponents have continuously collaborated with the key personnel to gather critical information, enhancing the system's design and development to meet the specific needs of the branch while optimizing operations.

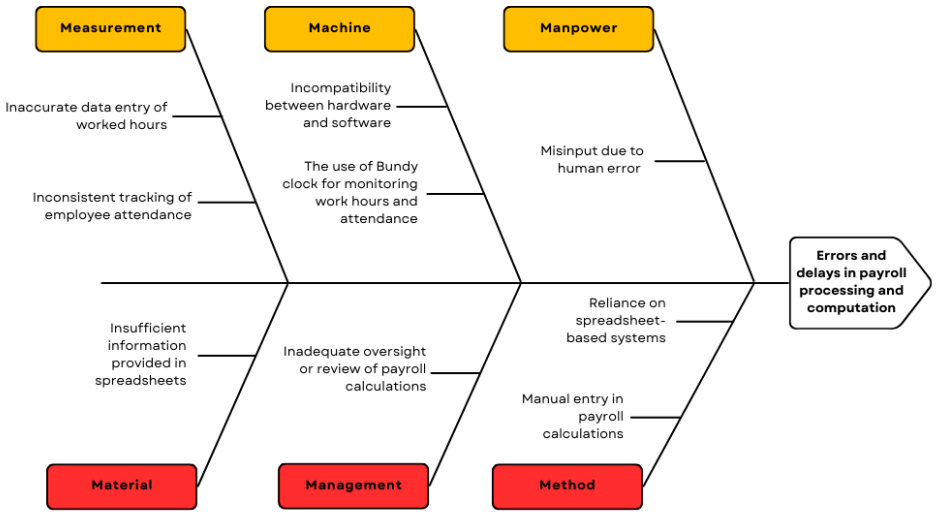

Figure 1.1 Fishbone Diagram showing Errors and delays in payroll processing and computation

The Fishbone diagram is utilized to assess the root causes of issues encountered with the current system. By identifying these factors, the development process is directed towards addressing these challenges, thereby enhancing the overall user experience of the newly developed system.

1.2 Project Scope

The goal of this project is to implement a robust payroll and human resource system that ensures accurate and reliable payslips to employees for the Jollibee Quinta Market branch.

- To provide detailed pay information, including performance-based pay, monthly salaries, pensions, end-of-contract settlements, and bonuses. It will offer employees clear visibility into their earnings, ensuring they receive accurate compensation.

- To facilitate easy and precise computation of payslips, incorporating calculations and hourly work rates. This will ensure that payroll reports are generated accurately and efficiently, fostering trust between the employees and management regarding salary payments.

- To automate payroll records, enhancing financial management for directors and board members. By transitioning from Excel and paper-based methods to dedicated payslip software, the organization will achieve greater efficiency and accuracy in payroll processing.

- Incorporating RFID technology to record clock-in clock outs accurately in real time. Automatically capture hours worked based on NFC timestamps, reducing the need for manual attendance logging ensure precise data for payroll computation, especially for work hours.

In alignment with the project's goals and objectives, the following Validation Board has been created, highlighting the key challenges identified through input from internal stakeholders.

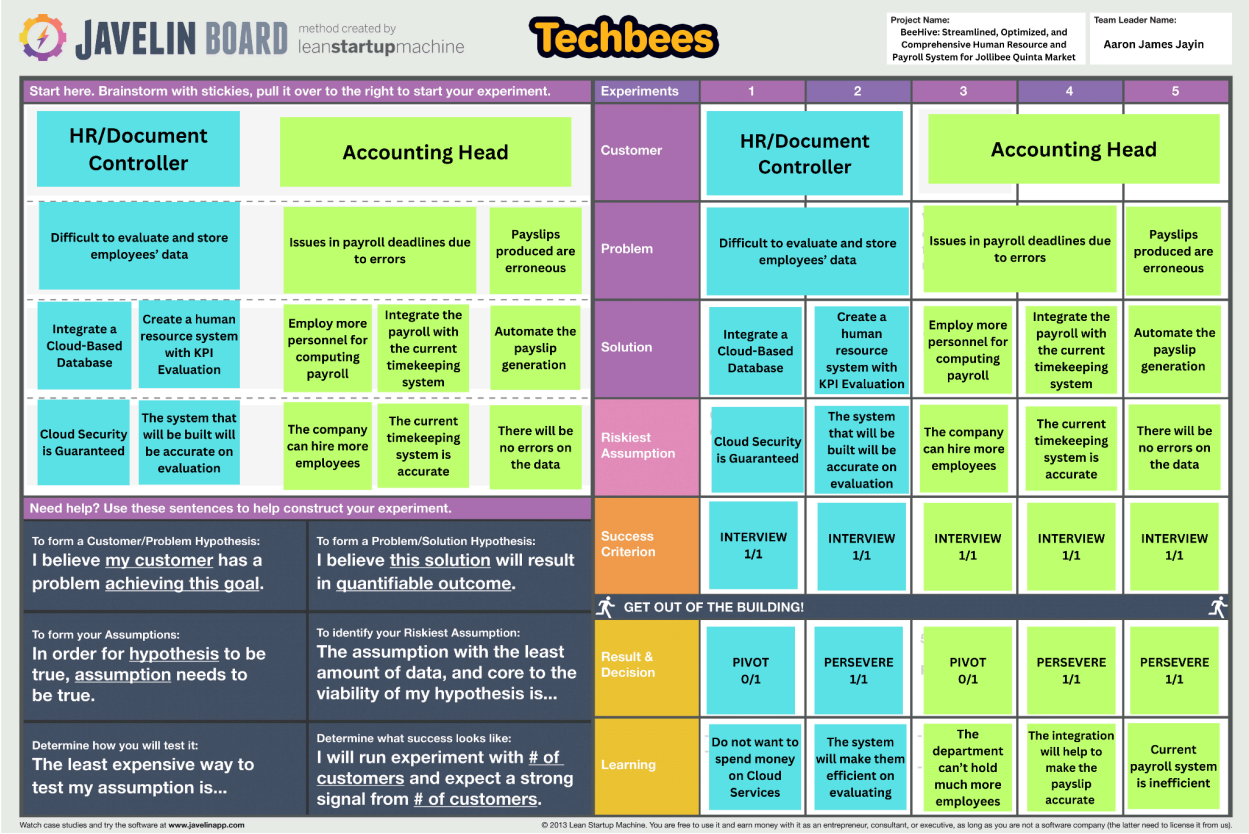

Figure 1.2.1 Validation Board

2. Overall Description

2.1 Project Perspective

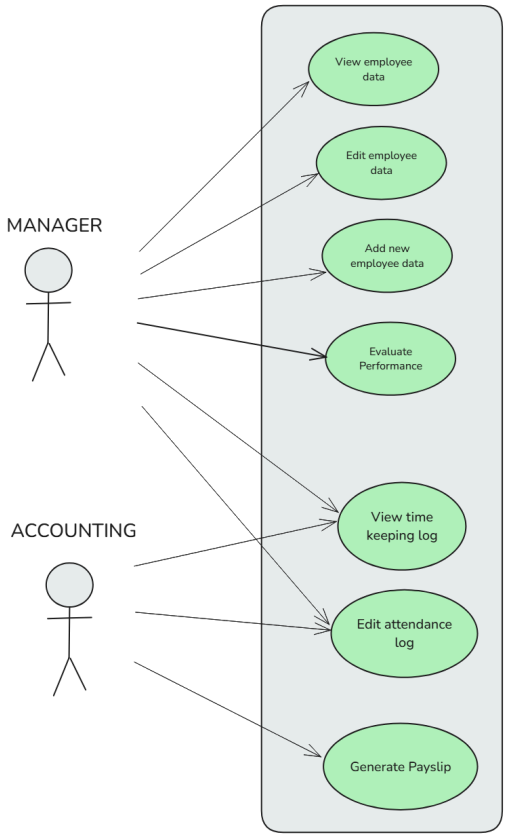

Figure 2.1.1 Use Case Diagram

Use Case	View employee data
Actors	Manager
Pre-Condition	The actor is authorized to view employees data
Post-Condition	The actor can view the employee data sheet
Description	After accessing the employees data sheet, the manager can navigate through the employee data sheet where the manager can view detailed information about the employee such as employee's name, job title, contact information, employment status, TIN, government mandated benefits, and bank account number

Use Case	Edit employee data
Actors	Manager
Pre-Condition	The actor is authorized to edit the specific employee's details
Post-Condition	The actor can edit the information of the employees data
Description	The manager navigates through the system and navigates to the employee data, where the manager can edit each employee data after reviewing the employees information, the manager modifies relevant information

Use Case	Add employee data
Actors	Manager
Pre-Condition	The actor is permission in adding records of the employee data
Post-Condition	The newly added employee can be viewed, edited, and accessible
Description	The manager logs into the system, the manager can add an employee inputting the required information of the employee at the system. After entering the details the manager stores the newly added employee with its information and can now be viewed, edited, and accessible

Use Case	Evaluate Performance
Actors	Manager
Pre-Condition	The actor is authorized to evaluate employees performance
Post-Condition	The actor can evaluate the employees performance
Description	The manager logs into the system and navigates to the performance evaluation where the manager selects each employee whose performance will be evaluated and assesses the employee based on performance metrics.

Use Case	View time keeping log

Actors	Manager, Accounting
Pre-Condition	The actors are authorized to view the time keeping log
Post-Condition	The system logs the manager's access to the time keeping data for tracking the employees attendance for performance evaluation
Description	The manager and accounting navigates through the time keeping log to access employees attendance and work hour records, The manager selects specific employees. The system retrieves detailed attendance that includes clock in and clock out times total hours work and days of absence.

Use Case	Edit attendance log
Actors	Manager, Accounting
Pre-Condition	The actor are authorized to edit the attendance log
Post-Condition	The actor can edit the attendance status of each employees
Description	The manager and accounting navigates through the attendance log the manager selects employees whose attendance needs to be edited, then updates the attendance record that will be reflected at the system.

Use Case	Generate Payslip
Actors	Accounting
Pre-Condition	The actor is authorized to generate the payslip
Post-Condition	A payslip is generated for employee containing relevant details
Description	The accounting personnel navigates through the system and can select employees to generate the payslip, ensuring the hours worked, salary, bonuses, and deductions. The system computes and creates the payslip generating the accumulated earnings of the employee including the deductions.

2.2 User Accounts and Characteristics

Account Type	Account Description and Characteristics
Jollibee Quinta Market Manager	**Role:** Manage employees, time keeping, and performance evaluation of the employees **Responsibilities:** ● **Employee Management** ○ Modifying employees details such as basic information and relevant data ○ Adding employees records into the system including basic information and job information ● **Time Keeping Monitoring** ○ Viewing the attendance and work hours of the employees ○ Editing attendance records of the employee ● **Evaluate Performance** ○ Asses the employee performance based on performance metrics
Jollibee Quinta Market Accounting	**Role:** The accounting personnel manages the financial records of the employees, including payslips and employee attendance **Responsibilities:** ● **Generate Payslips** ○ Create and distribute payslips ○ Calculating employee earnings, bonuses, and deductions ● **Time Keeping Monitoring** ○ Viewing the attendance and work hours of the employees ○ Editing attendance records of the employee
Jollibee Quinta Market Supervisor	**Role:** The supervisor is responsible for overseeing the operations of managers and user account management within the system. **Responsibilities:** ● **User Management** ○ Create, update, and delete accounts

	○ Assign roles and permissions to organizational needs ● **Viewing Manager** ○ Monitoring and viewing the manager details ● **Viewing Employee** ○ Monitoring and viewing the employees status ● **Generate Payslips** ○ Create and distribute payslips ○ Calculating employee earnings, bonuses, and deductions ● **Time Keeping Monitoring** ○ Viewing the attendance and work hours of the employees ○ Editing attendance records of the employee ● **Data Oversight and Recovery** ○ Oversees the system view logs performed by managers and accountants ○ Perform regular data backups ○ Recover system data in case of errors or discrepancies

2.3 Project Functions

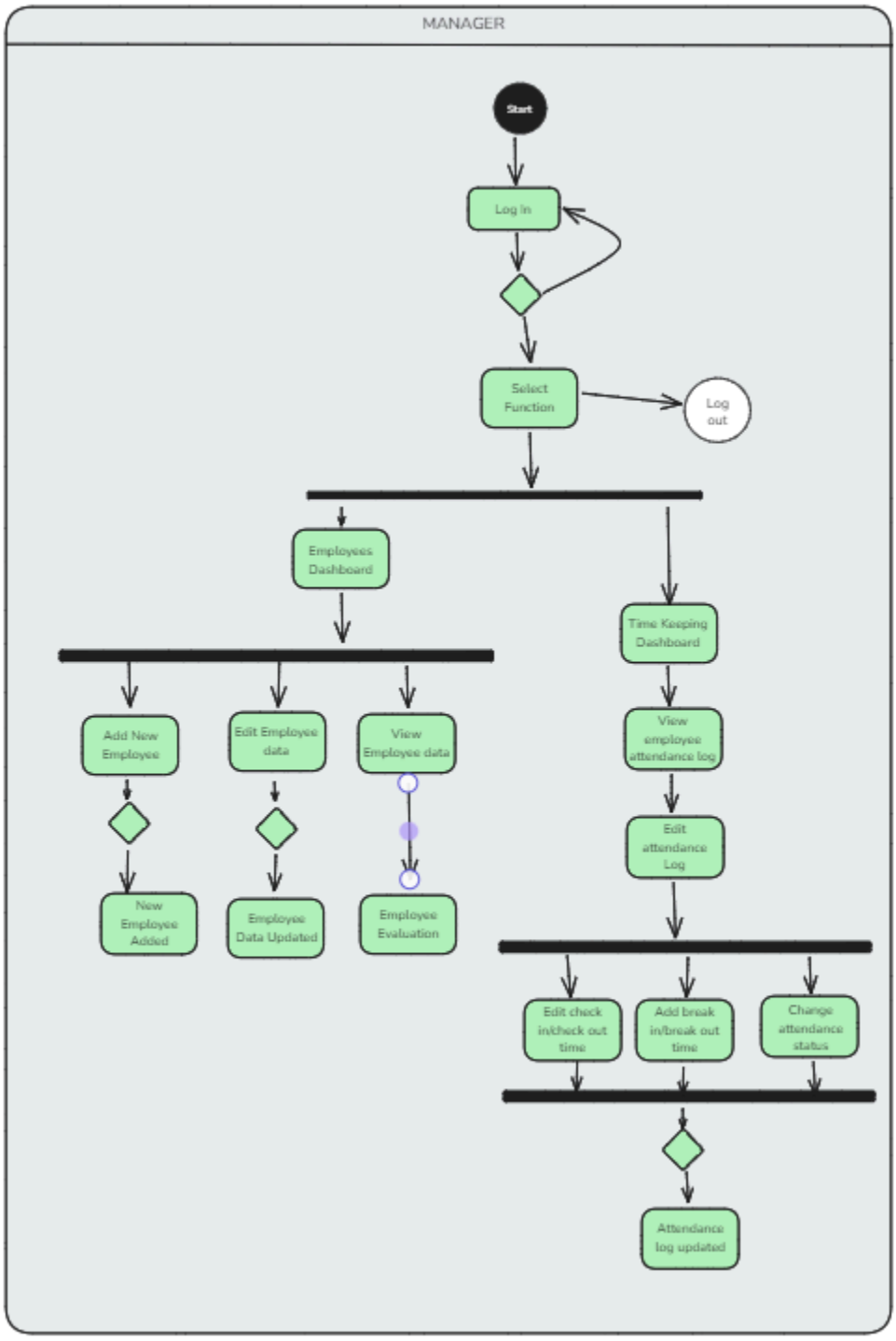

Figure 2.3.1 Activity Diagram for Manager Account

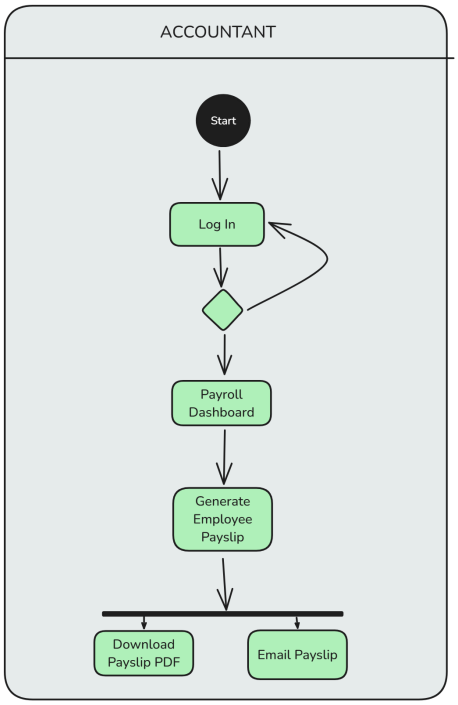

Figure 2.3.2 Activity Diagram for Accounting Account

The activity diagram shows the flow of the system from start to end. The system starts with the login which identifies the user role that matches with its credentials. After logging into the system, the user grants access to key functions such as payroll generation, Managing user accounts. This visual representation highlights the seamless of accountant, manager, and supervisor functions, emphasizing the system's efficiency in managing employee operations.

2.4 Operating Environment

The system will be developed in a web-based application. It is deployed at the Jollibee Quinta Branch to give access to its users, particularly the database and NFC as external factors. The system requires the following environment, composed of the following in its implementation.

1. **Local Network:** the whole system will be operated by a local network connected to the server and access the data. The devices shall be connected to a single

internet address, this makes the ip address of the server accessible only to users connected to the network.

2. **PC as a server:** This referred to as the main pc, will act as the server in which all of the process will be deployed including the application. This device also contains the database where the users will be able to connect in order to access the data of the employee. The main pc can act as an additional device for managing employees and users.

3. **RFID system**: Will be integrated into the employee attendance tracking process, providing a seamless and efficient method for monitoring employee clock-in and clock-out. This device consists of NFC tags and a reader which will be connected to a laptop to connect it to the main server to store the employees attendance at the database.

In this section, we will discuss the various functionalities offered by the system, accompanied by detailed descriptions, to ensure transparency and clarity regarding the capabilities and benefits it provides.

Table 2.4.1: Functional Requirements

Function	Description
Login System	Users can enter their credentials, and upon successful verification, the system will automatically log them in according to their designated roles. This streamlined authentication process ensures that each user is granted appropriate access to the system functionalities and data, enhancing both security and efficiency
Update and View employee data	Allows authorized users to both update and view employee records within the systems. Authorized users can modify personal information, employment status, and salary details. Additionally, they can access comprehensive employee

	records, including performance evaluations and payroll data.
View and Edit attendance log	Authorized users can view and edit the attendance log of the employee efficiently. Authorized users can review detailed attendance of employees, and make necessary corrections to clock-in/out times and absences.
Generate payslip report	Authorized users can generate detailed payslip reports for employees, access payroll data, compile individual payslips, and securely distribute them. This ensures timely and accurate documentation of employee compensation, promoting transparency and compliance with payroll regulations.
View and Edit Managers	Allows authorized users to both edit and view manager records within the system, such as personal, manager, employee, performance details, salary details.
Employee Evaluation	Authorized users can evaluate employees according to how well they are performing during shifts, taking into consideration factors such as work quality, efficiency, and company based qualifications.
Backup and Recovery	Allow supervisor to perform data backups and recover critical information related to employee records, evaluations, payroll, and logs. This ensures data integrity and prevents loss due to errors or system failures.

Table 2.4.2: Non-functional Requirement

Non-Functional Requirements	Description
Data Integrity	Ensures that all information stored within the system is accurate, consistent, and reliable over its lifecycle. Mechanisms must be in place to prevent unauthorized modifications and to verify that data

	remains uncorrupted during storage and processing
Reliability	Its ability to consistently perform its intended functions without failure over time. The system must be designed to minimize downtime and recover swiftly from any disruptions to ensure continuous availability for users
Accuracy	Denotes the system's capability to process and present data correctly, reflecting true values and information. All calculations, reporting, and data retrieval processes must adhere to strict standards to ensure that outputs are precise and trustworthy
Security	Encompasses measures to protect sensitive data from unauthorized access, breaches, and attacks. The system must implement robust authentication, encryption, and access to safeguard employee information and maintain confidentiality
Performance	System's ability to execute tasks efficiently and effectively under varying load conditions. This includes response times for user interactions, processing speeds for payroll calculations, and the capacity to handle multiple concurrent users without degradation in service quality

2.5 Design and Implementation Constraints

2.5.1 Risk assessment

Table 2.5.1: Risk Assessment Table

Risk	**Likelihood**	**Impact**	**Mitigation Plan**
Programming language limitations	Low	High	Develop a fallback strategy in case of limitations that

			prevent certain operations from being executed efficiently. This could involve implementing hybrid systems that can switch to a different architecture when needed
Confusing User Experience	Moderate	Very High	Implement a consistent and well-structured design system across all interfaces. This includes the use of familiar UI patterns, straightforward navigation, and visual cues that guide users effortlessly through the system.
Data Loss	Moderate	Very High	Implement an automated and regular backup schedule to ensure that critical data is securely stored offsite or in cloud-based systems. This minimizes the risk of permanent data loss by allowing quick restoration of lost or corrupted data
Hardware Compatibility	High	Very High	Implement software compatibility layers to ensure older hardware components or software can function on newer systems.
Server Crash	High	Very High	Implement an automated, frequent backup process to capture critical data and configurations.

			Ensure backups are stored both on-premises and in the cloud to prevent data loss in case of a crash
Network Issues	Moderate	Very High	Enforce strict network access control policies to limit unauthorized devices and users from accessing the network. Rogue devices or compromised systems can cause unexpected network issues.
Data Breach	Moderate	Very High	Restrict access to sensitive data using role-based access control, ensuring that the users can only access information necessary for their role. Regularly review and update access permissions
Lack of Accessibility and affordance	High	High	Incorporate accessibility and affordance considerations from the design phase by following a user-centered design approach.

2.5.2 Assumptions and Dependencies

The successful deployment of the system at the Jollibee Quinta Market will be influenced by several factors. First, It is crucial that all necessary software, hardware, and tools are available throughout the project to ensure smooth development and implementation. Additionally, the development team must possess the required skills to navigate programming language limitations, design a seamless user experience, and

ensure the system's effective functionality. However, the system's overall effectiveness will also rely on the end users being properly trained and capable of adopting the new system and technology. Once implemented, the system will significantly improve payroll management by providing an accurate and reliable system and real time tracking of employee time checks. This will allow for the easy identification of key performance indicators, efficient backtracking of employee payrolls each month, and the establishment of credible payroll processes.

2.6 User Documentations

To ensure the success and smooth operation of the newly developed system at Jollibee Quinta Market, a comprehensive system support and training strategy. This strategy covers essential components such as user manuals, training sessions, troubleshooting mechanisms, ensuring that both users and clients can efficiently navigate and utilize the system. Below is a summarized approach for each component.

2.6.1. User Manuals

User Manuals will serve as a primary resource for users to understand the system's functionality. These manuals will be provided both in digital and physical formats to accommodate diverse user preferences:

2.6.1.a Digital Format

The digital manual will be accessible via email. It will be regularly updated to reflect the latest system features and include:

- **System Functions and features**: Detailed descriptions of step by step guides on essential tasks such as data entry, payslip generation, and user management.
- **System Workflow:** A visual and descriptive breakdown of system interactions and data flow to enhance user understanding.
- **Error Troubleshooting**: Solutions for common system issues, such as connection errors or failed record saving, with step-by-step instructions.

2.6.1.b Physical Format

Hard copies of the manual distributed to users who prefer printed materials. These manuals will replicate the content of the digital version and will be systematically organized into clearly defined sections, facilitating ease of use.

2.6.2 Training Sessions

To complement the user manuals, training sessions will be conducted onsite to cater to varied user needs and ensure comprehensive system adoption.

2.6.2.Onsite Training Sessions

Onsite sessions will be held at the Jollibee Quinta Market branch, led by the developers team. These sessions will cover:

- **Introduction to the System**: A guided walkthrough of the system interface, navigation, and key configuration settings to tailor the system to the branch's operational needs.
- **Feature Walkthrough**: In-depth demonstrations of key features, including modifying the records, data entry, monitoring the employees, and payroll generation.
- **Interactive Hands-on Training:** Users will practice tasks in real time with developers supervision
- **Q&A Sessions:** the users and clients will have the opportunity to clarify and discuss challenges during the onsite training sessions.

2.6.3 Post-Training and Ongoing Support

Continued support will be offered to ensure users remain proficient in system use.

2.6.3.a Ongoing System Updates and Training

- As new features and updates are introduced, additional training sessions will be organized to inform users and maintain system efficiency.

Our system has been designed with user-friendliness in mind, aiming to minimize the need for extensive training. We anticipate that this approach enables the client to quickly adapt to the system with minimal challenges, fostering a smooth transition and optimal operational efficiency.

3. External Interface Requirements

3.1 User Interfaces

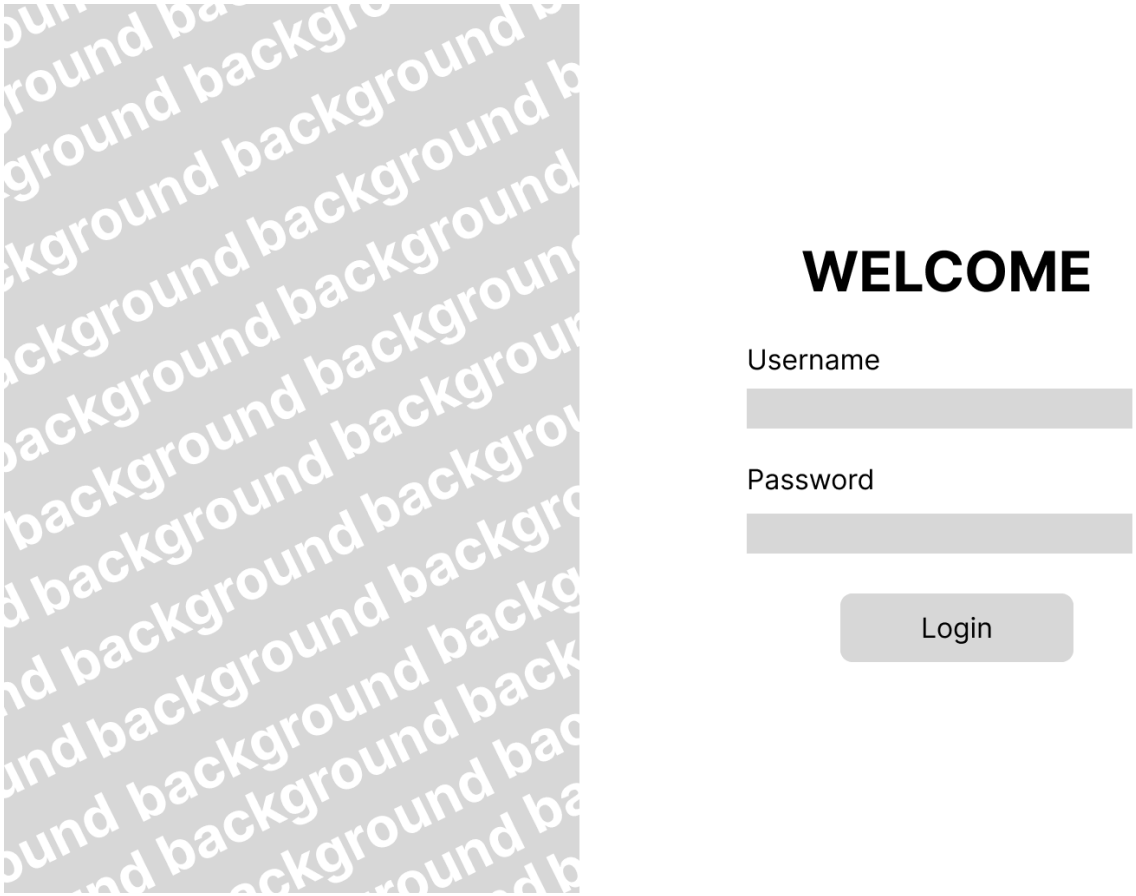

Figure 3.1.1 Login Page User Interface

Access to the system is restricted to authorized users only such as the manager, accountant head and supervisor. Upon launching the system, users must authenticate by entering their credentials, username and password. In case of failed login attempts, users will be prompted with an error message, allowing them to re-enter their credentials.

Depending on the role associated with the username, different access levels and functionalities will be available. The primary roles include:

- **Manager –** Manages employee data such as adding, editing, or deleting employees and editing the timekeeping information.
- **Accounting –** Responsible for generating and managing pay slip reports.

- **Supervisor –** Manages the manager and oversees employee status, manager's logs, and system activities for recovery and backup.

After a successful login, users are directed to the appropriate dashboard based on their role, allowing them to perform their specific tasks efficiently. The interface features clear navigation to key functions, including:

- **Employee Management –** View, add, edit, or delete employee data.
- **Payroll Management –** Generate, view, download and email payslips.
- **Performance Evaluation –** Evaluate employees' performance.
- **Time Keeping -** Automates time in, time out, and calculations for target and actual hours. Allows editing of time in, time out, breaks, and attendance status.
- **Manager Management** - Create and edit manager accounts.

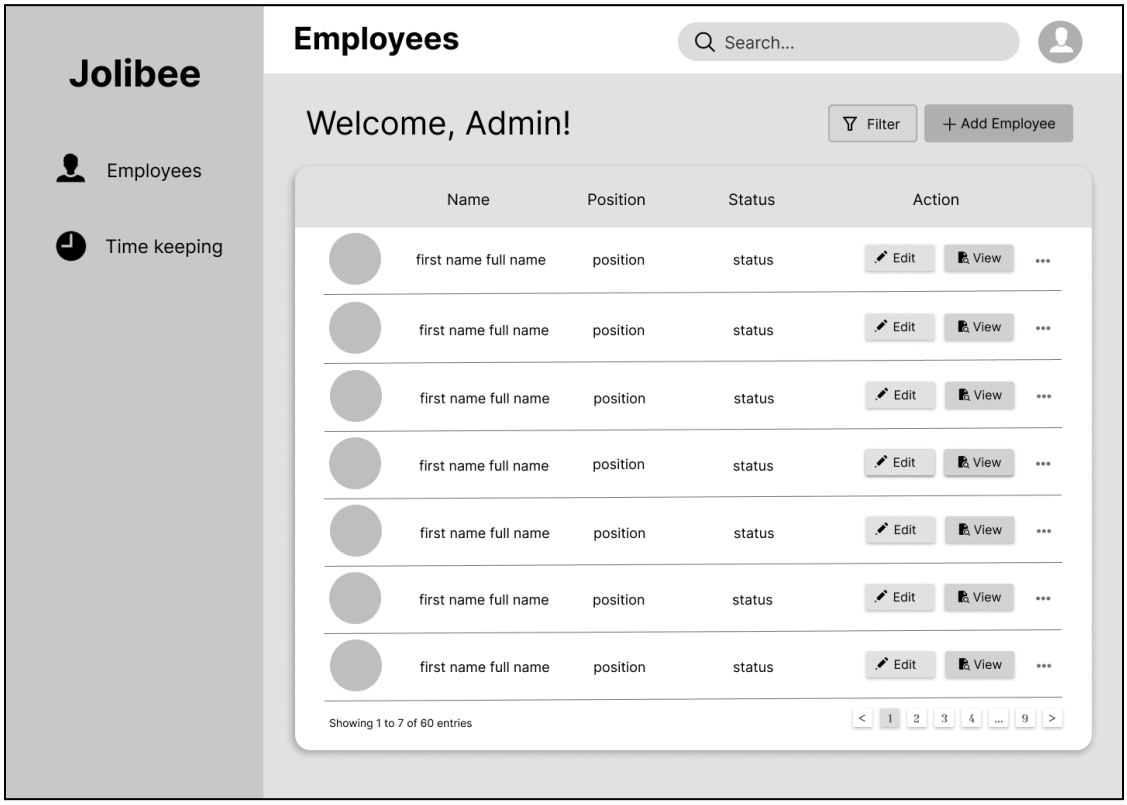

Figure 3.1.2 HR Employee Dashboard Homepage

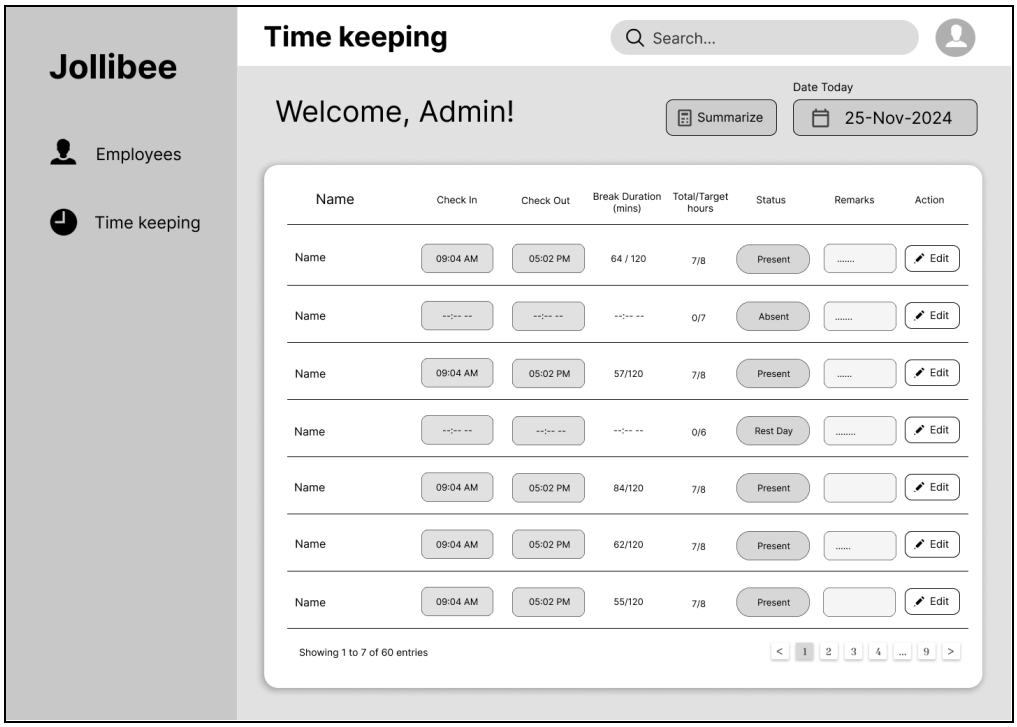

Figure 3.1.3 Timekeeping Dashboard

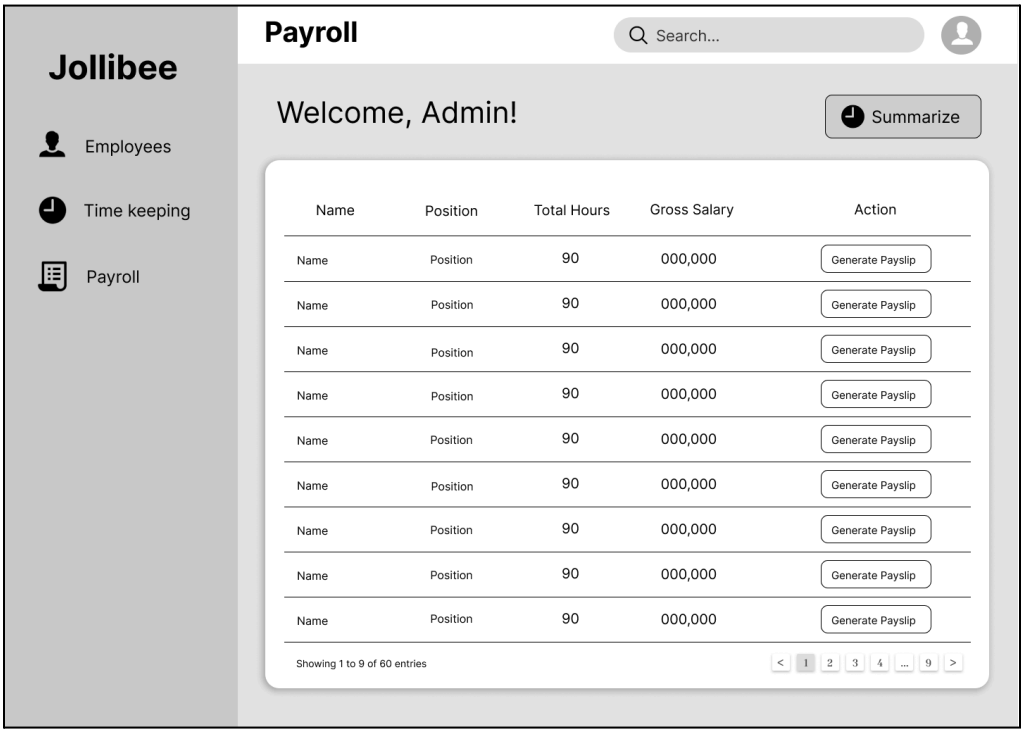

Figure 3.1.4 Payroll Dashboard

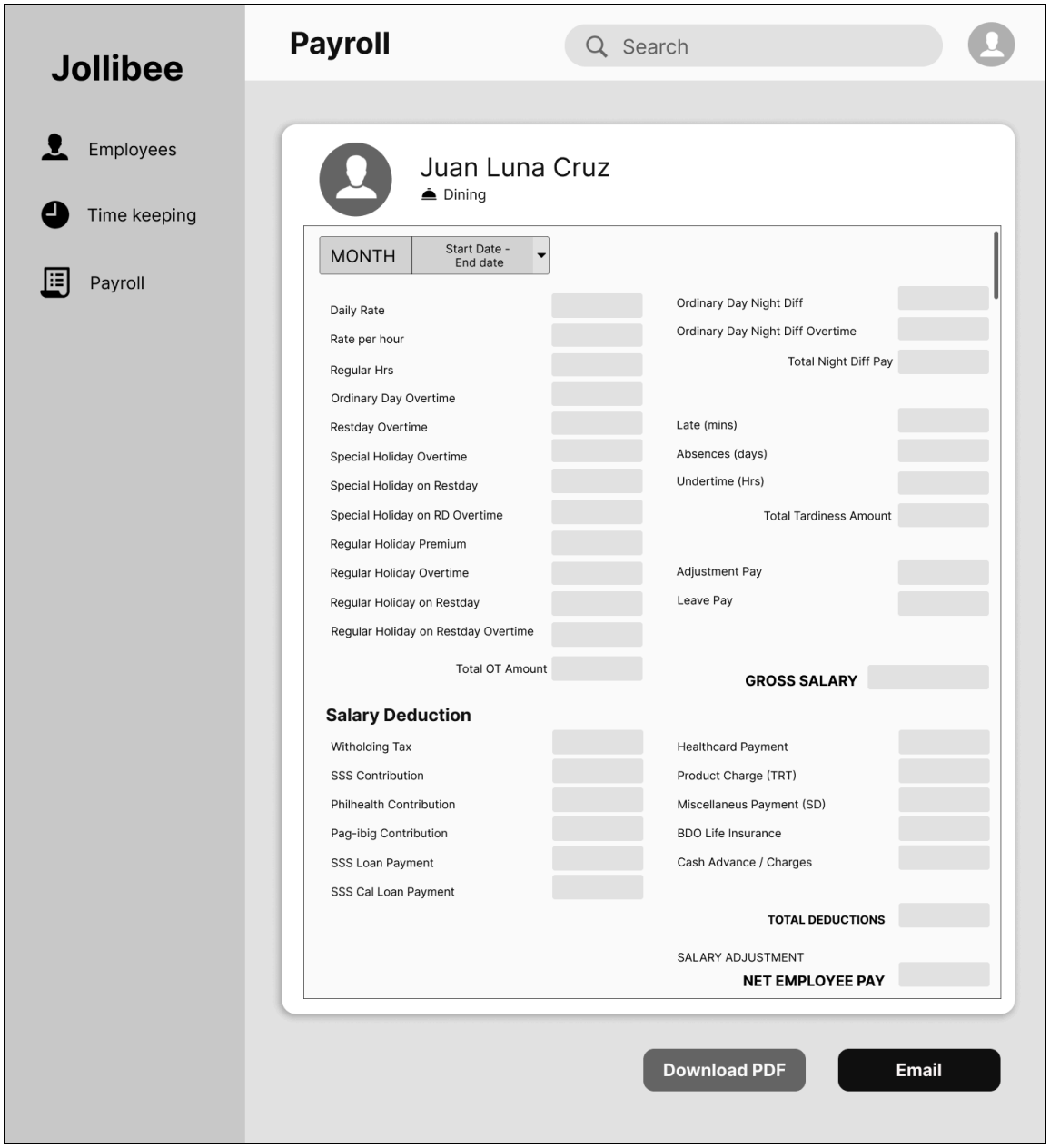

Figure 3.1.5 Generated Payslip Report Page

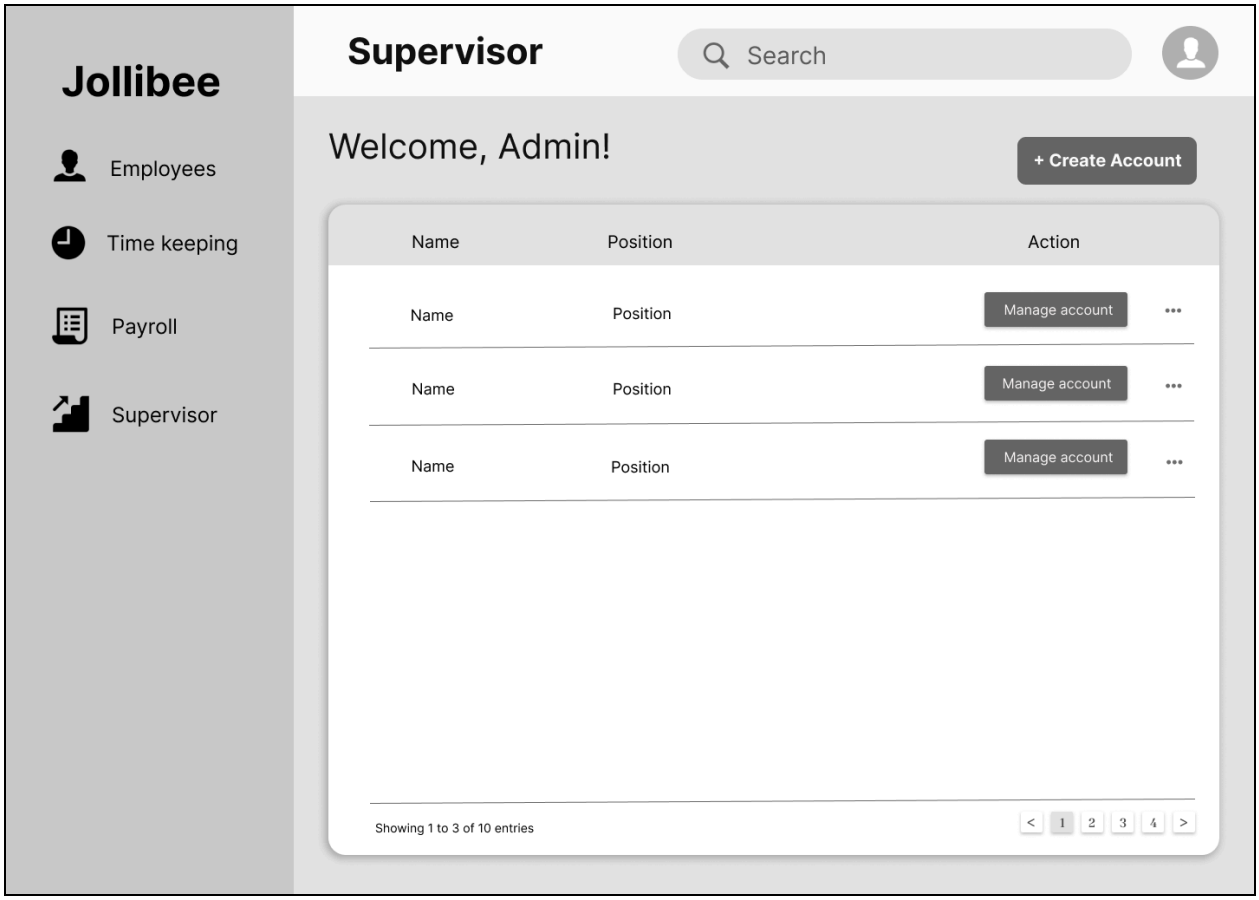

Figure 3.1.6 Supervisor Dashboard

To automate attendance management for employees, the system utilizes NFC technology. By tapping an NFC card on the NFC reader, the system then shows a time confirmation portal designed to verify their attendance accurately. This portal features an interface that enables seamless confirmation of attendance, including time in, break in, break out, and time out.

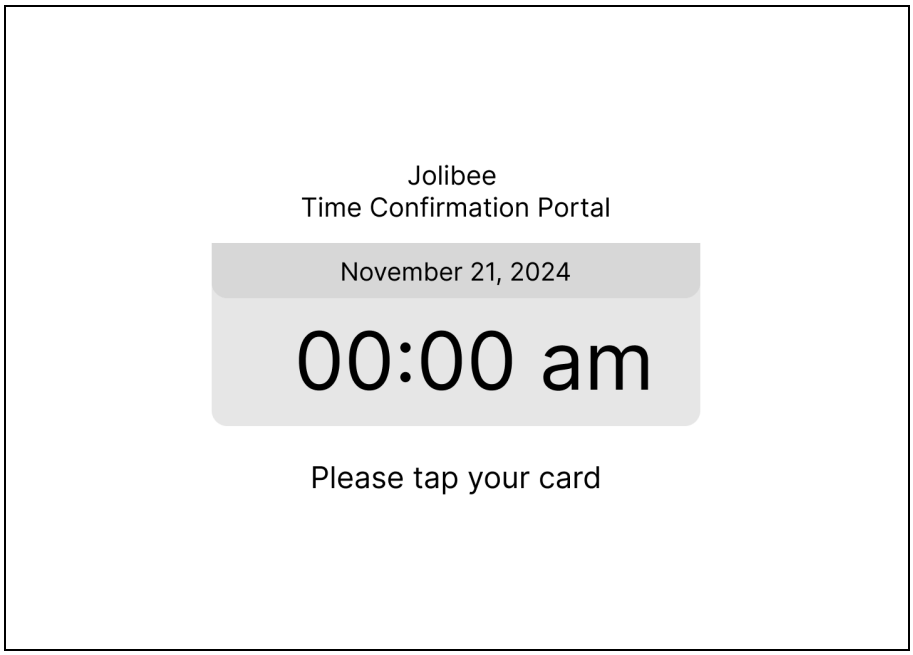

Figure 3.1.7 Default Employee Time Confirmation

After employee's tapping their NFC card, the system will display any of this feature, depending on the current situation:

- **Time In –** Employees confirm their time-in at the start of their shift. Break In: Offers an option for the employee to take a break.
- **Break Out –** Marks the end of their Break.
- **Time Out –** After all break options are utilized, only the Time Out button remains to conclude the shift.

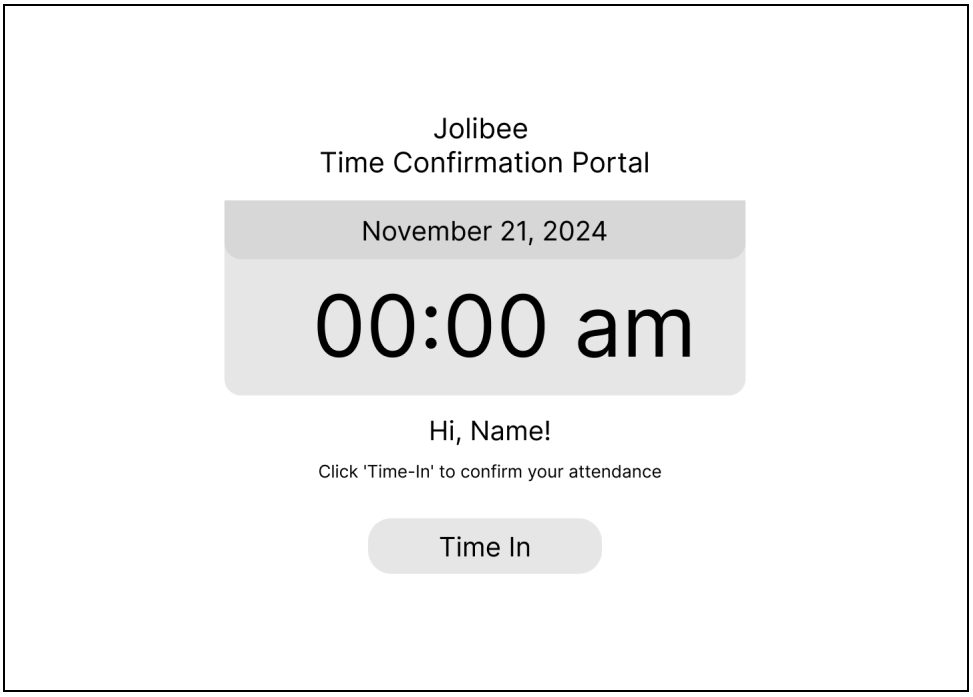

Figure 3.1.8 Employee Time-in

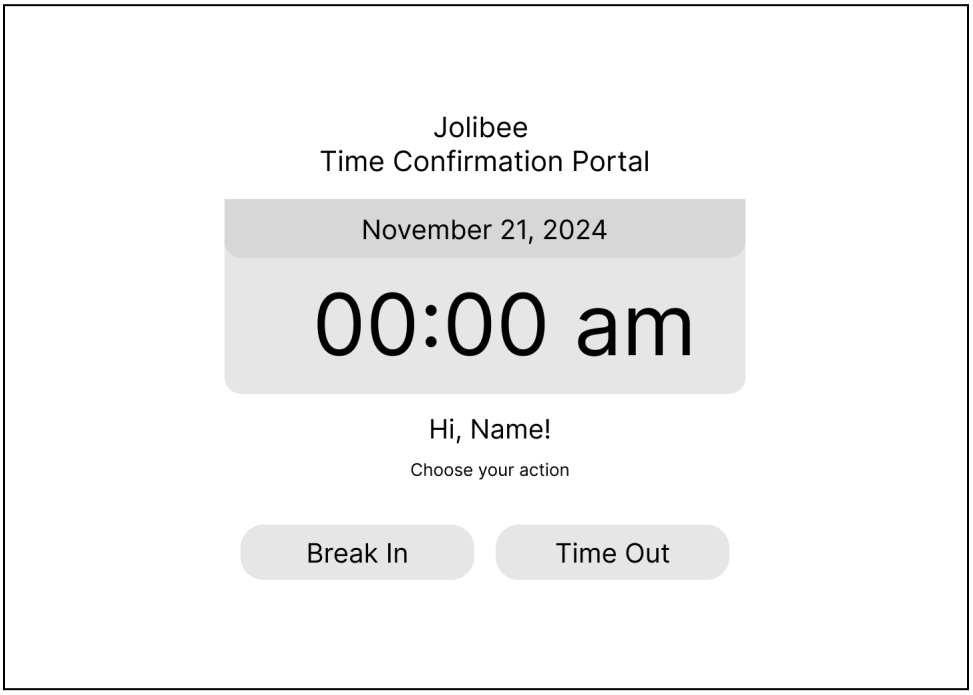

Figure 3.1.9 Employee Break in or Time out

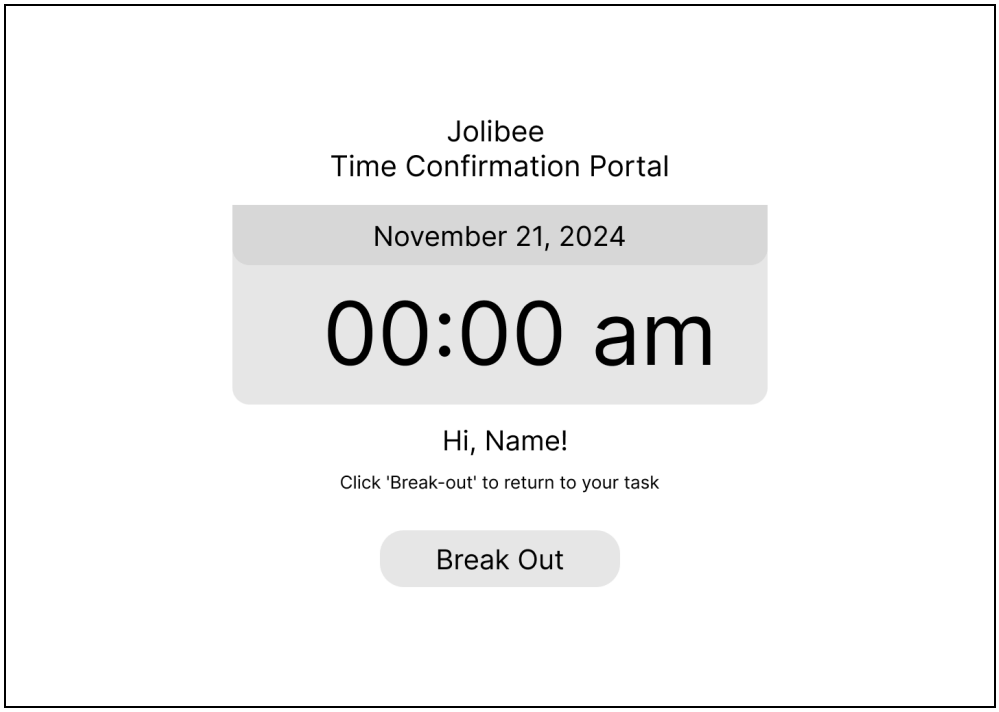

Figure 3.1.10 Employee Break out

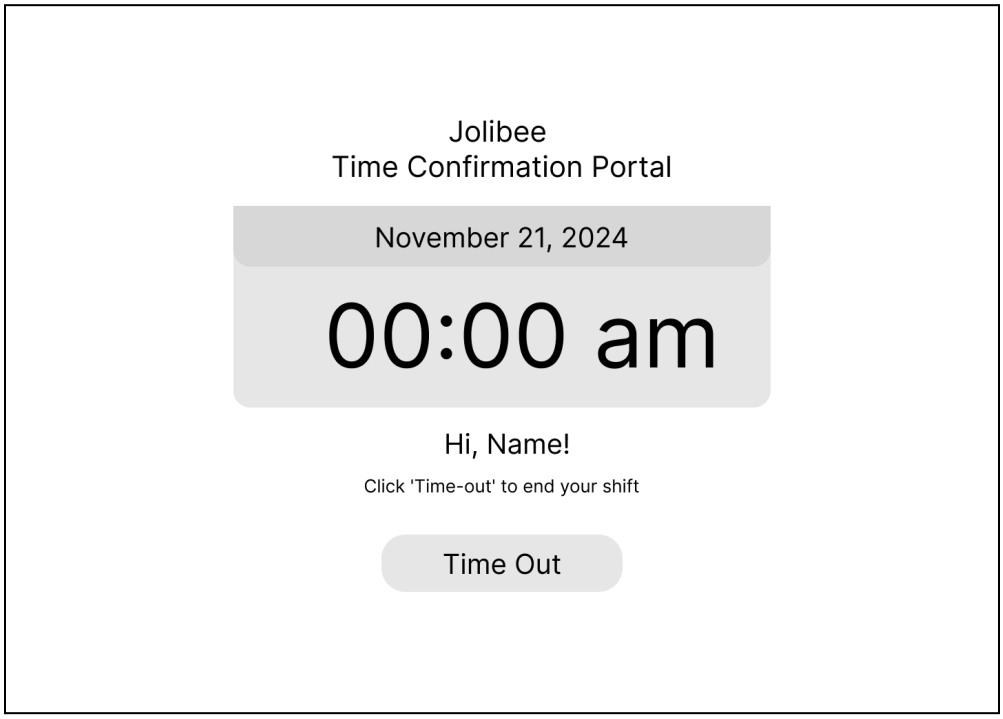

Figure 3.1.11 Employee Time-out

3.2 Hardware Interfaces

The system will operate within a local network consisting of a main PC and a server. Access to the system will be restricted to designated computers on this network, ensuring controlled access. To enhance security and streamline user authentication, RFID based identification verification devices will be integrated for employees. This will enable automated clock in and clock out processes and real time attendance tracking, with this integration it ensures secure access, accurate tracking of user activity, and efficient attendance monitoring.

3.3 Software Interfaces

The client currently does not have a formal system in place and relies on a blue notebook alongside manual data entry in Excel for record-keeping. To address this, we will develop a system that automates these processes. The development will require the following technologies:

- **HTML/CSS** – for the front-end design
- **JavaScript** – for the client-side logic
- **PHP/SQL** – for server-side scripting and database management

The software tools required for development and deployment include:

- **Web Browser** – for system deployment and testing
- **VSCode** – for code development
- **MySQL** – for database management and record tracking
- **XAMPP** – for setting up a local server environment to facilitate PHP and MySQL development
- **AWS/GoogleDrive** – for cloud storage

3.4 Communication Interfaces

The system is designed to operate in a fully offline environment, functioning exclusively on local machines without external network dependencies. It will be implemented across three dedicated PCs which will handle all organizational

requirements, including employee management, and attendance tracking. Employees' attendance will be recorded using RFID technology. Each employee will have a unique NFC card linked to their profile. When scanned, the RFID system, connected to a designated laptop, updates the central database with accurate clock-in and clock-out timestamps. This ensures precise tracking of attendance and work hours, enhancing data integrity and reducing the risk of manipulation. The access to the system is strictly restricted to authorized personnel, with role based permissions determined by the assigned usernames and IDs. Supervisors have the authority to view manager details, assign roles, and add new personnel to the system. Managers are responsible for modifying and viewing employee data, evaluating employee performance, and tracking and updating attendance records. Accounting personnel manages attendance data and handles payroll processes by generating payslips. This structured access ensures each has necessary roles to perform their specific tasks while maintaining data integrity and security.

4. System Features

4.1 Performance evaluation on the Manager dashboard

4.1.1 Description and Priority

This feature integrates performance evaluation metrics on a manager dashboard, allowing the manager and supervisor to assess employee performance directly within the system. This allows for viewing and evaluating reports on employee performance evaluation criteria, aiding in performance reviews, promotions, and feedback. As it plays a key role in managing employee performance and organizational growth, this feature is designated as a high priority with a rating of 10.

4.1.2 Stimulus/Response Sequence

Stimulus: Manager and supervisor evaluate employees based on performance.

Response: A detailed performance evaluation and manager dashboard outlining individual performance metrics.

4.1.3 Functional Requirements

REQ-1: Provide a user-friendly interface on the manager dashboard

REQ-2: Ease of evaluation for employee performance.

REQ-3: Allow editing or adjusting performance metrics from the dashboard.

4.2 Generate Payslip

4.2.1 Description and Priority

This functionality enables the automated generation of comprehensive payslips at the conclusion of each payroll period. The system will compute employee salaries, including base salary, deductions, and overtime bonuses. The payslip will provide a transparent breakdown of earnings and deductions, ensuring accuracy and compliance with legal and organizational standards. This is a high-priority feature, with a scale of 10, for ensuring timely and accurate payroll processing, essential for maintaining employee satisfaction and compliance.

4.2.2 Stimulus/Response Sequence

Stimulus: Accounting personnel and Supervisor initiates the payroll generation process after salary computation, including overtime bonus and deductions.

Response: The system processes all relevant data to generate a detailed payslip for each employee, reflecting salary, deductions, and bonuses.

Stimulus: The system pulls payroll data, including salary, deductions, and overtime information, to generate payslips.

Response: Payslips are prepared in a standardized format, reviewed for accuracy, and distributed securely via email.

4.2.3 Functional Requirements

REQ-1: Distribute payslips securely via encrypted email, ensuring confidentiality and compliance with data protection regulations.

REQ-2: Ensure that all payslips are professionally formatted for clarity, legal compliance, and ease of understanding by employees, providing a transparent breakdown of earnings, deductions, and taxes

REQ-3: Implement a “Generate Preview” function to allow accounting management system to review and verify the finalized payslip for each employee prior to official generation and distribution

REQ-4: Provide a “Generate Payslip” button that automatically creates and downloads the payslip, ready for secure distribution via email.

REQ-5: Maintain a comprehensive and auditable history of all generated payslips, allowing for future reference by employees and authorized personnel, ensuring compliance with audit and record-keeping requirements.

4.3 Updating Employee Data

4.3.1 Description and Priority

This feature allows authorized personnel such as supervisor and manager to update employee data within the managers management functions. Changes may include modifying personal information, employment details, role assignments, or salary structures. Ensuring that employee data is current is critical for accurate payroll processing, performance evaluations, and regulatory compliance. This is a high-priority feature on a scale of 9, as it ensures that employee information is up-to-date, essential for maintaining accurate payroll, benefits administration, and reporting. Regular updates are vital for avoiding and ensuring smooth managing employee operations.

4.3.2 Stimulus/Response Sequence

Stimulus: the authorized personnel accesses the employee management interface to update an employee’s data

Response: The system validates the entered data and updates the employee’s profile in the managers interface.

4.3.3 Functional Requirements

REQ-1: Enable the manager and supervisor to modify employee data, including personal details, job roles, salary information, and contact information.

REQ-2: Provide version control and rollback functionality, allowing administrators to revert changes if errors are identified

REQ-3: Ensure that all changes made to employee data are validated and logged in the database.

REQ-4: Ensure data integrity and compliance with data protection regulations by enforcing role-based access controls and maintaining an audit trail of all modifications

4.4 Viewing Employee Data

4.4.1 Description and Priority

This feature enables authorized users, such as managers and supervisor, to view comprehensive employee data within the employee management system. The data may include personal information, employment history, performance evaluations, salary details, and benefits enrollment. Providing easy access to this information is crucial for effective employee management, performance assessments, and compliance with organizational policies. This feature is a high priority on a scale of 8, as it supports informed decision-making and enhances operational efficiency by allowing relevant personnel to access critical employee information promptly and accurately.

4.4.2 Stimulus/Response Sequence

Stimulus: An authorized user logs into the employee management system and navigates to the employee data section

Response: The system retrieves and displays the requested employee data in a user-friendly format, ensuring that all relevant details are readily accessible

Stimulus: The user selects an employee’s profile to view detailed information

Response: Any changes to the employee’s profile or data are reflected in real-time, maintaining data accuracy.

4.4.3 Functional Requirements

REQ-1: Allow authorized users to access and view comprehensive employee data, including personal information, job details, performance records, and compensation history

REQ-2: Ensure that the displayed data is organized and formatted for clarity, facilitating easy navigation and understanding by users.

REQ-3: Implement search and filter functionalities to enable users to quickly locate specific employee profiles based on various criteria.

REQ-4: Ensure compliance with data protection regulations by restricting access to sensitive employee information based on user roles and permissions.

4.5 Manage Managers Data

4.5.1 Description and Priority

This feature allows authorized personnel to manage manager related data efficiently. The functionality includes creating, updating, viewing, and deleting managers data and users data, as well as assigning roles, and handling sensitive data information securely. This is a high-priority feature, rated 9, as it is integral to maintaining organizational structure, ensuring smooth operations, and providing accurate managerial oversight.

4.5.2 Stimulus/Response Sequence

Stimulus: The authorized personnel accesses the manager management interface to perform the required features such as modifying manager data, and users data.

Response: The system validates the entered data and updates the manager’s profile or records as requested, ensuring all changes are logged for auditing purposes

4.6.3 Functional Requirements

REQ-1: Allow authorized users such as supervisor to add, view, modify manager data and user data such as name, assigned role, and contact information.

REQ-2:Implement role based access to restrict sensitive data handling to authorized personnel only.

REQ-3: Log all modifications made to manager data including user details

REQ-4: Provide functionality to validate manager data inputs to prevent inconsistencies and ensure data accuracy

4.6 Timekeeping and Attendance Management

4.6.1 Description and Priority

This feature enables accurate tracking and management of employee work hours and attendance. It includes functionalities for recording clock-in/clock-out times, and break times. The system ensures compliance to organizational policies while streamlining payroll processing. This is a high-priority feature, rated 10, as it directly impacts payroll accuracy, employee satisfaction, and regulatory compliance.

4.6.2 Stimulus/Response Sequence

Stimulus: An employee clocks in or out using RFID technology that connects to a laptop

Response: The system records the timestamp, validates the entry, and updates the attendance log for the employee.

Stimulus: An authorized user such as supervisor and manager to validate the attendance of the employee and status of the employees attendance.

Response: The system verifies the attendance with discretion of the manager or the supervisor to approve the attendance status of the employee and updates the attendance record upon personnels decision.

4.6.3 Functional Requirement

REQ-1: Enable employees to clock-in/clock-out through RFID technology

REQ-2: Record and store timestamps securely, ensuring data accuracy and integrity

REQ-3: Provide functionalities for attendance status of the employee

REQ-4: Automatically calculate the total work hours and deductions based on recorded data.

REQ-5: Ensuring compliance with organizational policies by enforcing rules for break times

4.7 Login

4.7.1 Description and Priority

This login feature provides a secure authentication mechanism that allows users to access the system based on their assigned roles within the organizational hierarchy. By requiring valid credentials, the system ensures users can only access functionalities and data relevant to their specific roles, such as supervisor, manager, accounting personnel. Ensuring data integrity and maintaining compliance with regulatory standards. This feature is a critical priority on a scale of 10, as it is the primary entry point to the system. A secure and efficient login process is paramount for protecting sensitive data and upholding the overall security framework of the organization.

4.7.2 Stimulus/Response Sequence

Stimulus: The user navigates to the login interface

Response: The system validates the provided credentials against the user database

Stimulus: The user inputs their credentials, consisting of a username and password, and submits the login request

Response: in the event of invalid credentials, the system displays an error message prompting the user to re-enter their information.

Stimulus: The user correctly inputs the credentials

Response: Upon successful validation, the user gains access to the system with the interface customized to reflect their role within the hierarchy

4.7.3 Functional Requirements

REQ-1: Implement a secure login interface that mandates users to input valid usernames and passwords to gain access to the system

REQ-2: Enforce role-based access control to ensure that users can only access features and data pertinent to their designated roles within the organizational hierarchy.

5. Business Rules

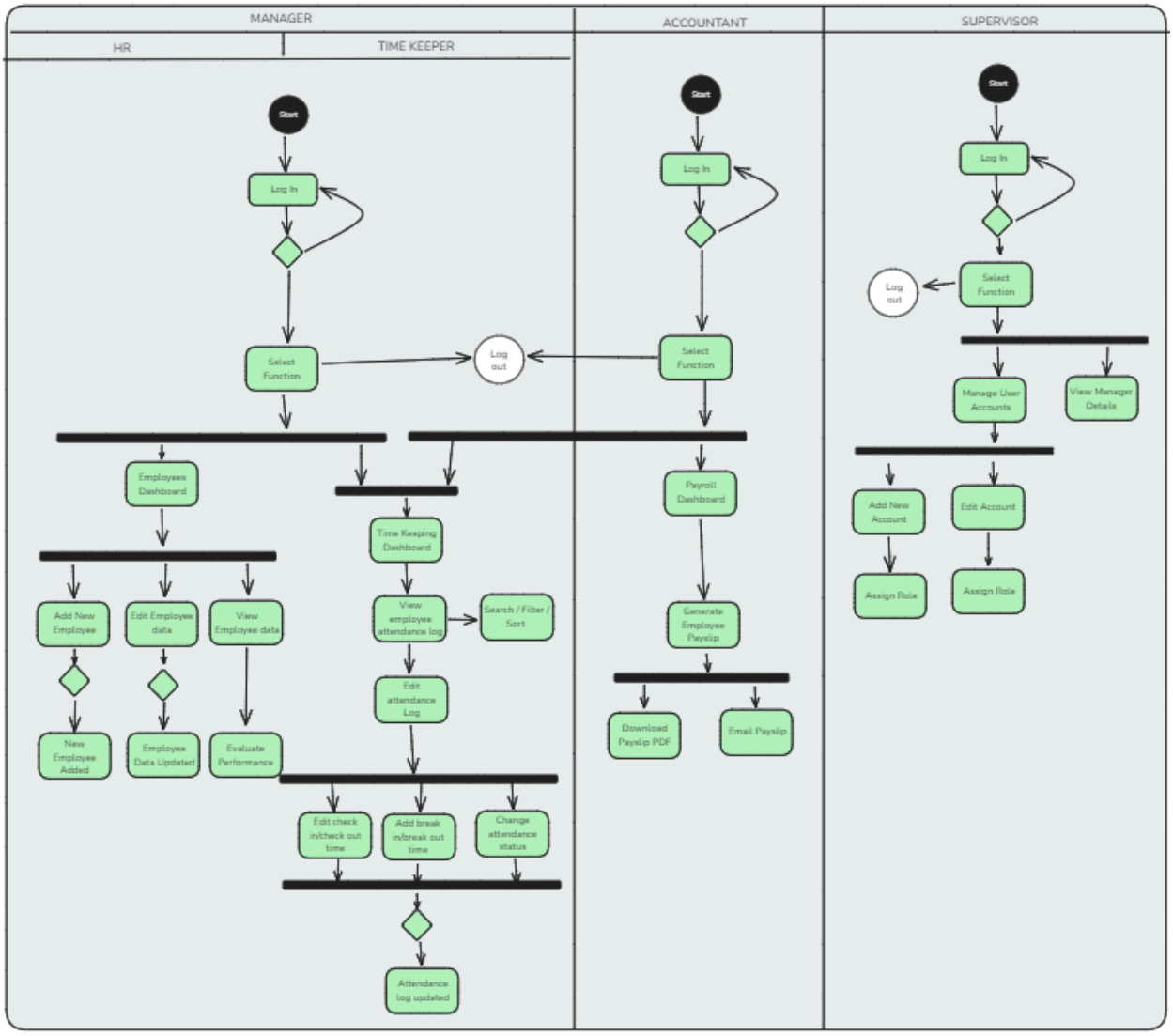

Table 5.1.1 Swimlane Diagram Jollibee Quinta Market

6. Other Requirements

6.1 Minutes of the Meeting

TechBees: Minutes of the Meeting
Quinta Market, Quiapo Manila
August 19, 2024
3:00 pm - 5:00 pm

Attendance	
Present	Aaron James Jayin Andrei Christian Tonido Mark Josh Alvear Eric Julian De Guzman
Absent	None

Call to Order
Ms. Catherine Sevilla called the meeting to order at 3:00 PM

Agenda	
1	Know what the company needs for automation and what they already have.
2	What are the specific needs Discussion: The HR discussed the data for the HR system, such as for the HR system and payroll slip report.
3	What is the hardware available for them for the possible proposed system.
4	Web-based or standalone.

Agenda	**Discussion**	**Decision**	**Action**
1. Know what the company needs for automation	The company already has an inventory system but needs an HR system and payroll slip report (currently using Excel).	Implement an HR system and payroll slip report generator.	The project manager interviewed HR and accountancy.

2. Specific needs for the HR system and payroll slip report	HR discussed data needs such as attendance, automated payroll computations, and data storage for employee performance, endo, attendance, etc.	Automate the process for tracking employee data and payroll slip generation.	HR and accountancy provided necessary data. for employee performance to be provided by the director.
3. Hardware availability	Business analysts and HR checked if existing computers could handle the proposed system.	Use computers with high processing capabilities as centralized servers for storing company data.	Checked computer specifications.
4. Web-based or standalone system	Director discussed whether to invest in cloud services or standalone solutions to minimize investment.	Agreed to proceed with a standalone system for cost efficiency.	Project manager explained the differences between standalone and web-based systems.

Other Business	**Discussion**	**Decision**	**Action**
Follow-up question of the director	The director inquired about post-service operations after the one-year service period.	The team will provide troubleshooting support to the HR and accountant teams.	The team will teach how to troubleshoot and handle system issues.
Web service or Standalone	The director questioned how to minimize investment in the system.	The project manager explained two options: web service or standalone.	The director chose the most cost-effective option (standalone).

Follow-up questions for payroll slip	The accountant raised concerns about payroll slips including date, pensions, and deductions.	The project manager confirmed these elements would be included.	Ensure the payroll system includes all required details.
Concerns for hierarchical management	The director raised concerns about managing access to data hierarchically.	Data access will be restricted based on management levels.	Implement data access controls to manage permissions.
Service or contract the team will provide	The director inquired about the service duration and contract flexibility.	The project manager offered flexible contract terms lasting one year.	Define clear service timelines and flexibility in the contract.
Possible cloud service functionalities	The project manager asked if employee performance could be tracked through the system.	The director negated the idea due to confidentiality concerns.	Confidential employee performance data will not be included in the system.

Adjournment
The meeting was adjourned at 5:00 PM EST

Client Representative:

Catherine Sevilla
Accounting Head
Jollibee Quinta Market

Signature/Date:

07/19/2024