**CHAPTER I**

**Project and Its Background**

**Project Context**

The human resource management system utilizing technology for attendance is becoming increasingly significant in many elements of an organization in this generation. A broad variety of operations is linked to staff recruitment, development, selection, training, assessment, and renumeration; attendance; and the automation of manual tasks to make the work easier and more efficient. As an example, consider human resource management, which has a global influence, servicing billions of people. The human resource management system in a corporation is a crucial facilitator for managing an organization, as well as for employee productivity and organizational performance, while also generating a healthy work environment that fosters employee well-being and job satisfaction.  
  
 According to Mr. Khan et al. (2019) they designed a web-based HRM system with fingerprint authentication to improve employee identity. According to the findings, the solution improved the accuracy and security of employee identification, lowering the risk of fraudulent acts in the workplace. Similarly, Zaidi et al. (2020) developed a web-based HRM system with an attendance

scanner. According to the findings, the method improved attendance management while reducing administrative labor.

Furthermore, Al-Khalidi et al. (2021) created a web-based human resource management system that coupled fingerprint identification with the employee performance review. According to the findings, the technique improved the accuracy and efficiency of employee evaluation, leading to better management decision-making. Sabri et al. (2022) developed a web-based human resource management system that utilized a fingerprint scanner for recruitment and selection operations. According to the findings, the technology improved the efficiency and accuracy of application tracking and selection.

**Purpose and Description**

Metro Waste Solid Waste Management Corporation is an operational service in Jenny’s Ave., San Miguel Extension Pasig City branch. This company is a garbage collection and waste disposal (trucking) company that collects, dumps, hauls, and disposes of solid waste. And in the branch of pasig they have 1,000 employees, including driver collectors, paleros, mechanics, service drivers, evaluators, dispatchers, engineers, purchasers, and administrators. Additionally, this company has 10 branches in the Philippines.

In the year 2021, the company began operating in the area of Jenny’s Ave., San Miguel Extension, Pasig City. According to Ms. Melody Magno, an HR Head Officer, they have already used in their attendance, and it is manually writing their names, time-in/time-out, date, and for the driver collectors, they put in the attendance which route they are assigned and what time do they arrive and depart on this route. While their payroll is manually edited every 10-25 days, which is the division of their payroll cycle, and they do this in Microsoft Excel, and their entries are calculated using Microsoft Excel formulas, according to HR management, they have an automated system for their process services in the company, and this is the Odoo system, but they stopped and remove it because according to their experience, it is only used for money, and the system they are using lacks of the features provided in their company. That’s why, when it comes to salary release it takes how many days to complete the process because they do the processing manually.

Furthermore, the biggest concern with this process flow firstly is, errors because this can have a substantial influence on an employee's wages and perks. For example, if an employee's attendance is not precisely documented, they may be underpaid for the hours worked. Secondly, time-consuming because this might cause payroll delays, which can have a damaging effect on employee morale. Thirdly, lack of scalability because as the number of personnel grows, so does the complexity of the process, which can result in negative production and make management more difficult,

Fourthly, security risks because it can also offer security problems, particularly if the personnel information of employees is saved in Excel spreadsheets. Unauthorized personnel may get access to these spreadsheets if they are not adequately guarded, lastly, the limited automation because there is a larger danger of mistakes and delays since individuals who can access operations cannot be totally automated. By reducing the possibility of human mistakes in the processing of attendance and payroll data, automated systems can help manage these risks.

**Objectives of the Study**

The main objective of the study was to help Metro Waste Solid Waste Management Corp. improve the manual processes of the company's current service management workflow.

**General Objective**

This study will be focusing on creating a web-based payroll and attendance monitoring management system for Metro Waste Solid Waste Management Corporation to easily monitor the attendance of their staff and to make easier payroll using this web-based management system.

**Specific Objectives**

The following specific objectives are formulated to have a goal while conducting the proposed system:

1. To design and develop a web-based Human Resource Management System (HRMS) that can be accessed from anywhere with an internet connection.
2. To integrate a fingerprint scanner into the HRMS to provide a secure and efficient way of tracking employee attendance and ensuring accurate payroll processing.
3. To implement a user-friendly interface that allows HR staff to easily manage employee data, generate reports, and access important HR information.
4. To ensure that the HRMS is scalable and can handle a growing number of employees and data over time.
5. To test and validate the HRMS to ensure that it meets the requirements and specifications outlined by the project stakeholders.
6. To provide training and support for HR staff and employees to ensure that they can effectively use the system.
7. To ensure that the HRMS is compliant with relevant data protection and privacy regulations.

**Significance of the Study**

**Administrator.** This research aims to help MetroWaste Solid Waste Management Corporation employees track their attendance, and payroll and improve their productivity and workflow by automating their Human Resource Management System.

**Employees.** This research also aims to help the employees of MetroWaste Solid Waste Management Corp. because it will help them to make their attendance easier without having to manually write their names or their time-in and time-out. Instead, a tap of their finger on this technology automatically attaches their information to the system. It will be very helpful for employees who are short on time or who are in a hurry to enter. In addition to that, employees who will use this technology will also get the same benefits because of the new fingerprint scanner system.

**Future Researchers.** This study may be used as a reference or a guide for future researchers and developers in domains like information technology, computer science, and others. Future researchers can learn from, build upon, and compare the techniques and methods utilized in this study, which will aid them in their own research and the creation of a comparable system.

**Scope and Limitation**

This study will focus on developing an official website for MetroWaste Solid Waste Management Corp. and will also include a human resource management system. The system aims to help the company modernize its operational services processes, from attendance monitoring to payroll. The website will have Login and Forget Password buttons. Admin can login and will go to the homepage. The administration will be the main account holder and will have full access to the following tabs: dashboard, employees, attendance, payroll, leave, holiday announcements and notice.