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Designing A Web-Based Employee Payment Information System For The Nutritional Culture And Tourism Office

M Irsyan Antony Manday[1], Raisa Amanda Putr[2]
[1,2] Information System Study Program, North Sumatra State Islamic University, Medan

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ABSTRACT (10 PT)

Employees were previously paid directly by people and. Now. Employee payments are made instantly. The world of labor is also affected by technology advancements, which can move quite quickly.Time makes it possible for humans to do their work quickly in general. Today, a lot of businesses use technology to expedite work. Payroll information system that can help with data processing payroll for better management of payroll computations, pay stubs, and necessary reports. Based on these issues, research was done to learn the specifications needed to create an employee payroll information system for the plan. This design's outcome isemployee payroll was digitized using a web-based information system. This system was created to facilitate and minimize the company's performance in processing payroll data. processes used to calculate employee salaries. The Culture Department continues to prepare payroll reports manually, and there are still numerous challenges involved. So, in order to construct a based application, this is required. The website makes use of MySQL to make employees' job more productive. Additionally, this method enforces absenteeism for workers, and if they are ill while on leave or without notice, their pay will be withheld in accordance with the guidelines of the North Sumatra culture and tourism agency.

Corresponding Author:

M Irsyan Antony Manday
Department Information System,North Sumatra State Islamic University, Medan
Email: mandayihsan01@gmail.com

1. INTRODUCTION

The development of IT can assist in developing new tasks in companies with a global market scale or in government agencies. Information technology is the development of information systems by combining computer technology with telecommunications [1]–[4]. The payroll system applied to employees of the North Sumatra culture and tourism office is still done manually assisted by the MS.Excel program, where reports and calculations of employee salaries still use formulas in MS.Excel and the data is not stored in the database[5].

The Culture and Tourism Office of North Sumatra Province is led by a Head of Service who is under and responsible to the Governor through the Regional Secretary, as stipulated in North Sumatra Governor Regulation Number 41 of 2007 concerning Details of Main Duties and Functions of Each Position in Department of Culture and Tourism of North Sumatra Province. To facilitate the management of payroll calculations, payroll slips and reports, an employee payroll information system is needed that can assist in processing payroll data. Based on these problems, a study was conducted to obtain the requirements needed to build an employee payroll information system design. The result of this design is a computerized web-based employee payroll information system. This system was built to facilitate company performance in processing payroll data and minimize errors in processing employee salary calculations.

The Results of research conducted [6] research on "Designing a Web-Based Payroll Information System with the Waterfall Method at PT. Sinar Metrindo Perkasa (SIMETRI) and employee payroll, and manage employee salary data very accurately. Furthermore, [5] conducted research on " Optimalisasi Penerimaan Remunerasi Dosen Menggunakan Metode Rule Base Reasoning"

This research produces an application that can be used to payroll employees at the company. conducted research on "Payroll Information Systemsat PT. Nusantara Plantation IV". The results of this research application can be used to simplify the employee payroll process to make it faster and more accurate[7].

2. RESEARCH METHOD

The research method is a scientific way to obtain data with a specific purpose. The scientific way means that research activities are based on scientific characteristics, namely rational, empirical, and systematic [8], [9]. The observation method used in each research activity varies, depending on the setting, needs and research objectives[10], [11]. An interview is a meeting of two people to exchange information and ideas through question and answer, so that meaning can be constructed in a particular topic. System design at this stage produces Use Case Diagrams and Activity Diagrams[4], [12]–[14].

2.1 Use Case Diagram

Use case is a pattern or picture that shows the behavior or habits of the system. The use case diagram is a model for the behavior of the information system to be made[15]. Use case diagram serves to describe the system with users (users) called actors. Use case diagrams are used to describe the interaction relationship between the system and the user (user). In the research conducted by the author, the use case diagram can be described as follows[16].

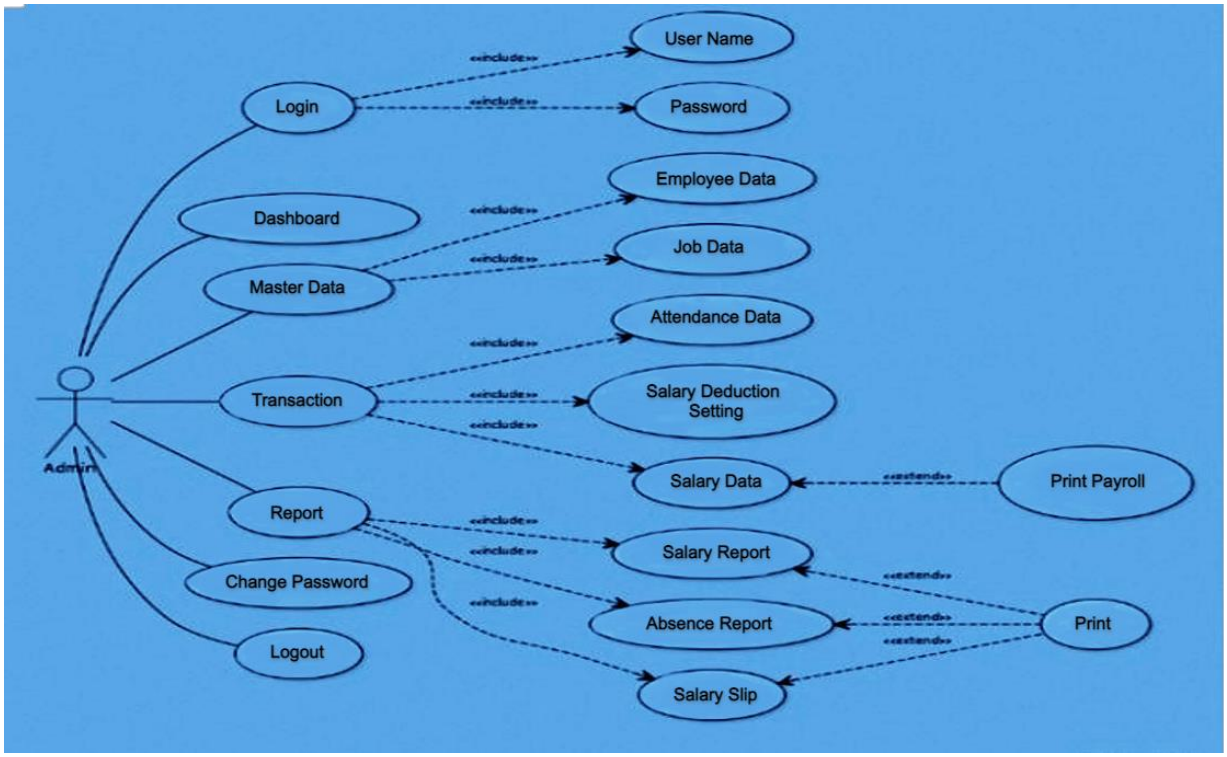

Figure 1 Use Case Diagram of Fertilizer Incoming and Expenditure System

Based on the Use Case Diagram created by the author, it can be concluded that the Use Case Diagram has two actors, namely admin and employees. employees log in by filling in the username and password owned by the admin, then after carrying out the login process the admin checks salaries and recitation reports and attendance and salary deductions. After printing the payslip, the payslip will be used to determine the salary to be taken and transferred to the employee's account. In the Use Case Diagram above, employees can also see reports on payslips and employee attendance and salary deductions for absence

2.2 Activity Diagram

Activity diagrams describe the workflow or activity of a system or business process [17]. Activity diagrams also describe several action processes at the same time. The activity diagrams contained in this study are as follows:

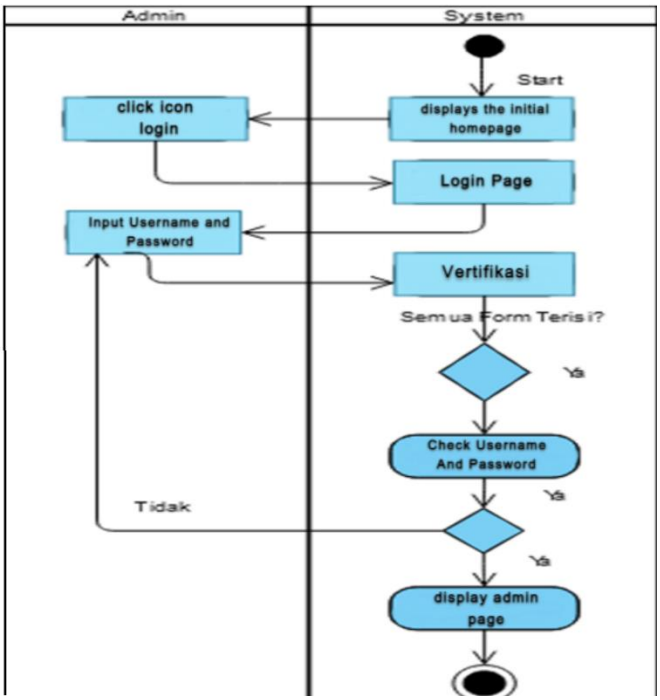

Figure 2 Activity Diagram of login admin

This diagram Figure 2 explains the login process carried out for the admin of the North Sumatra tourism and culture department, starting from entering the username and password and verification

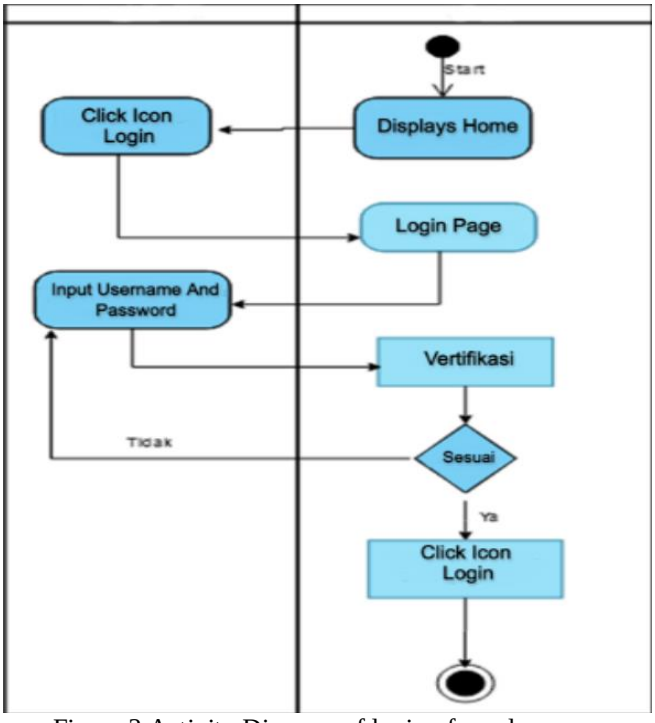

Figure 3 Activity Diagram of login of employee

This diagram Figure 3 explains the login process carried out for the Employee of the North Sumatra tourism and culture department, starting from entering the username and password and verification.

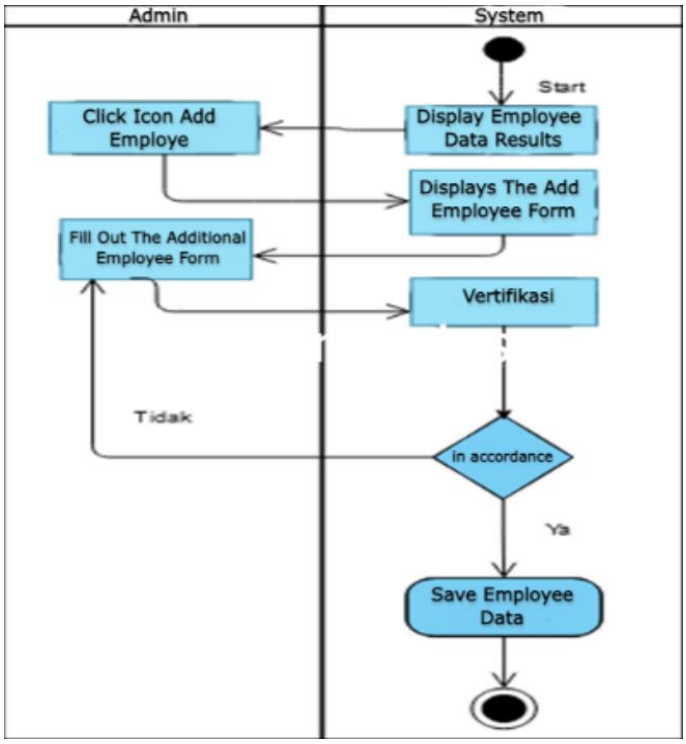

Figure 4 Activity Diagram of employee data or ad employee data

This diagram explains how to add employee data, where the admin adds employee data into the system, which includes name, position, attendance and verification.

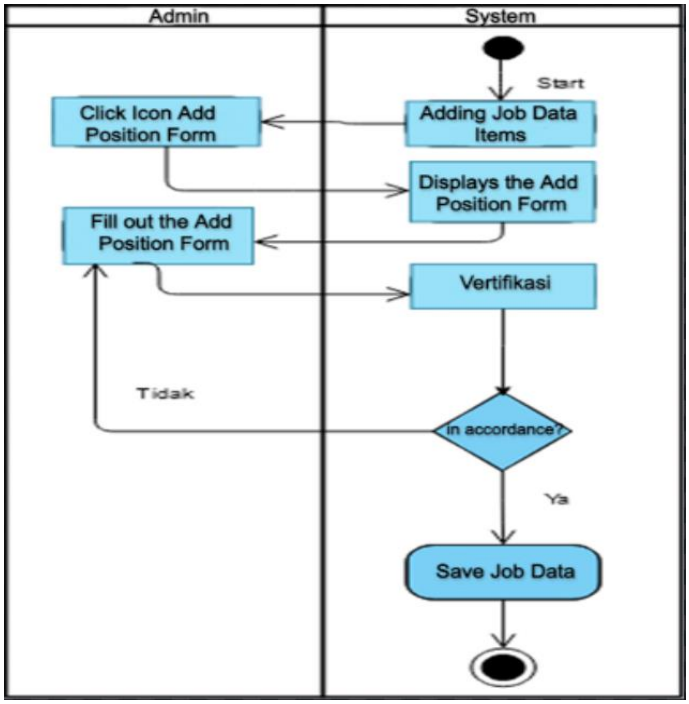

Figure 5 Activity Diagram of job data or add position detail

This diagram figure 5 explains the admin adding employee position data, position data in fields and verifying employees, this is to determine salaries in each field and position..

In the Activity Diagram above, it is explained how the payroll flows, first the admin logs in by filling in the username and password then, prints the payslip, after printing the salary and expenditure reports, the data will be entered in the MySQL database.

2.3 Sequence Diagram

Sequence Diagram is a diagram created to determine the interaction between objects. The contents of the Sequence Diagram must be the same as the use case and class diagrams. One single use case will be described in a sequence diagram[15]

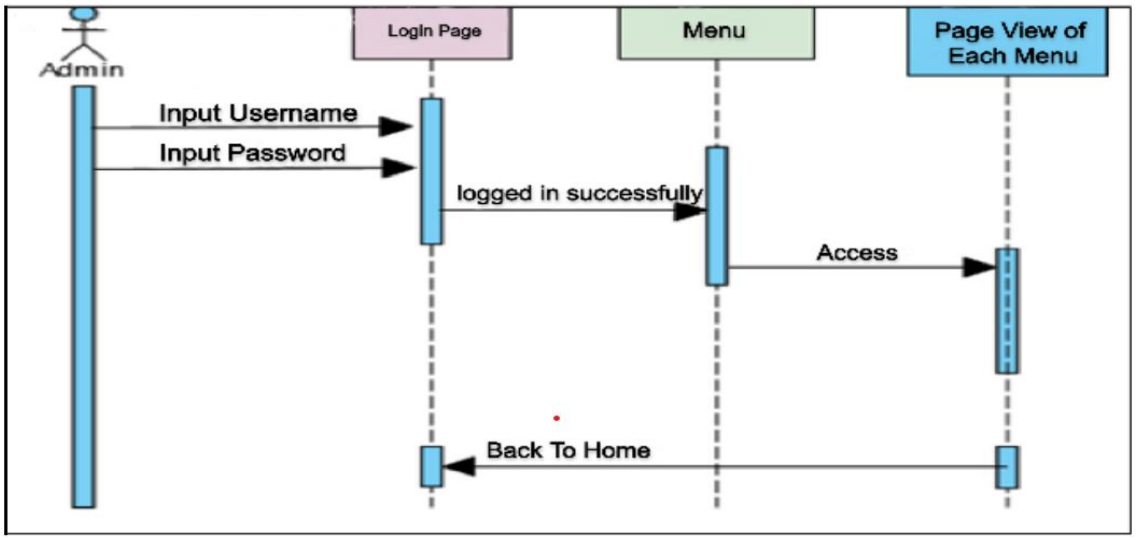

Figure 6 Disbudpar Sequence Diagram

This diagram figure 6 explains the sequence diagram where the login process carried out by the admin on the web is from entering the username and password until being able to enter the web and being able to access the web.

2.4 Database MySQL

In this study the author uses a MySQL database, MySQL is a software that functions for database management. MySQL Cluster is a replication solution for distributed databases and MySQL cluster is a database that uses a shared-nothing architecture[18]–[23]. The following is a list of database columns that were successfully created by the author.

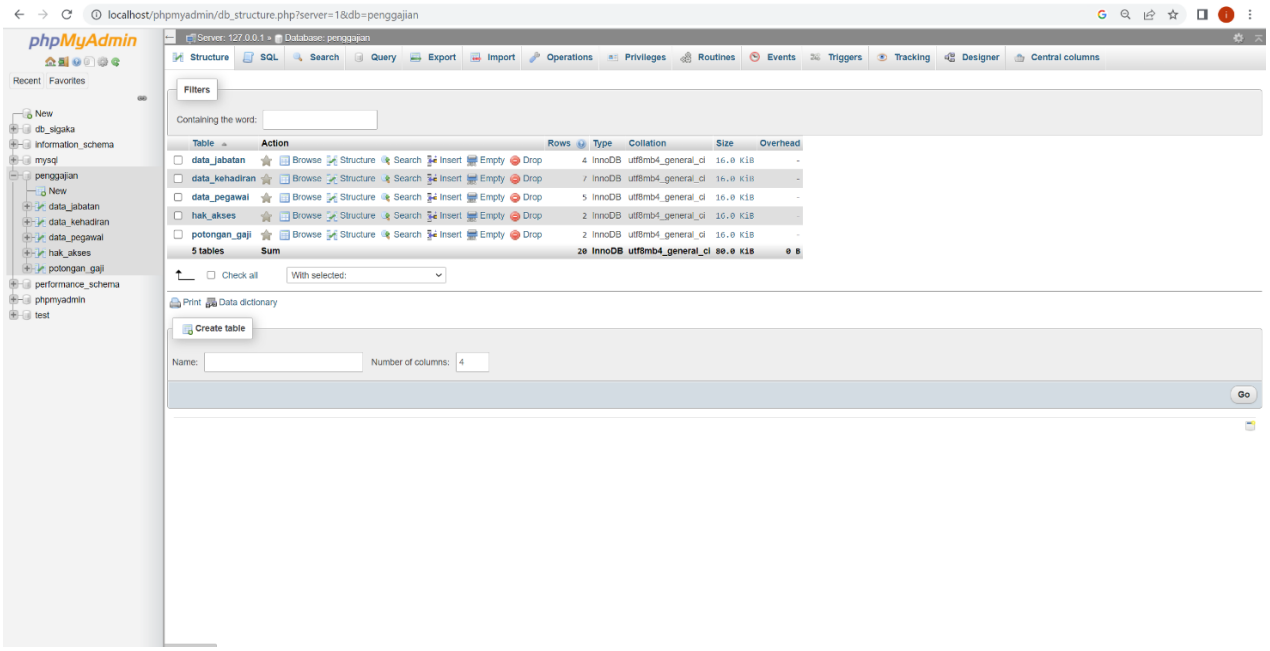

Figure 7 Website Project Database

This diagram figure 7 explains the database that is implemented in the system and what data is used in the system

3. RESULTS AND DISCUSSION

3.1 Login Page

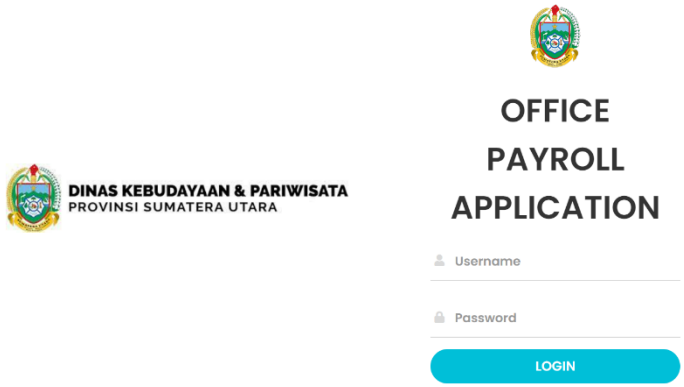

Figure 8 Login Page Display

Diagram 8 explains logging into the system where employees or admins must enter their username and password to be able to access it.

3.2 Page Dashboard / Page Admin

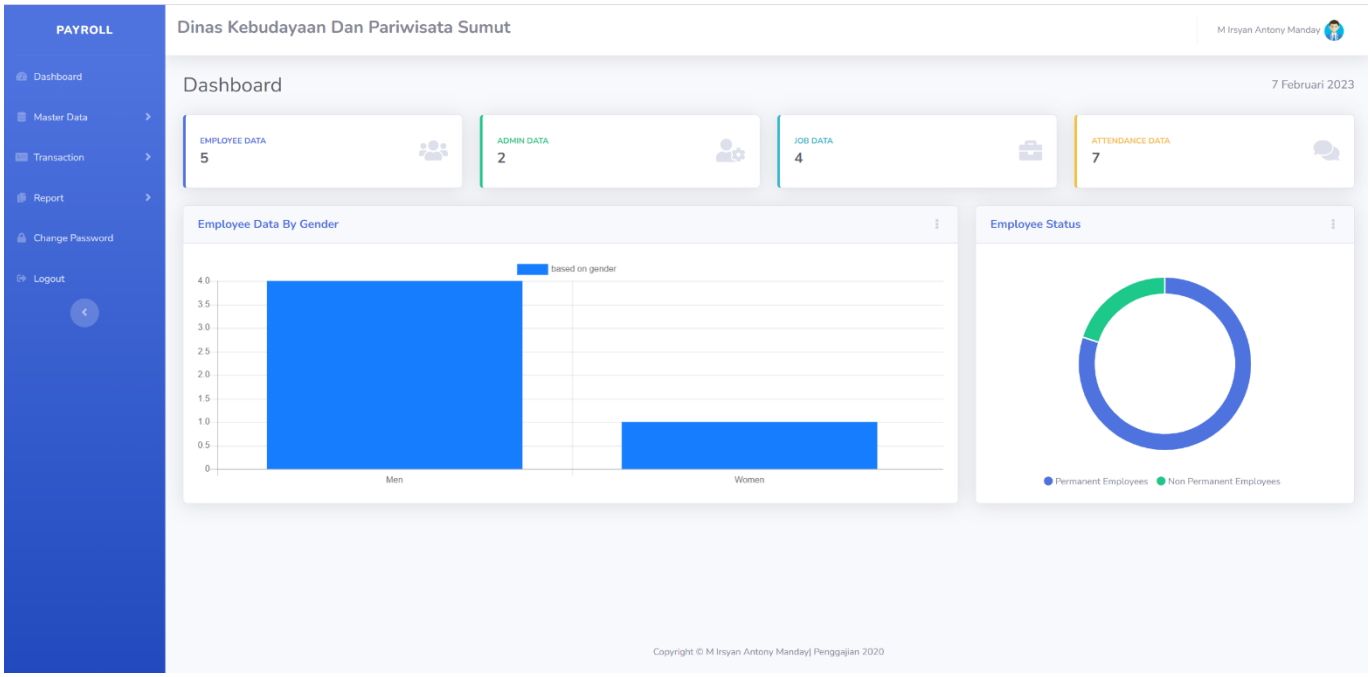

Figure 9 Page Dashboard / Page Admin

This view displays the Dashboard/Home page where there are various menus from the Payroll Information System which can be clicked by the Admin to view detailed data on each menu.

3.3 Employee Data Page

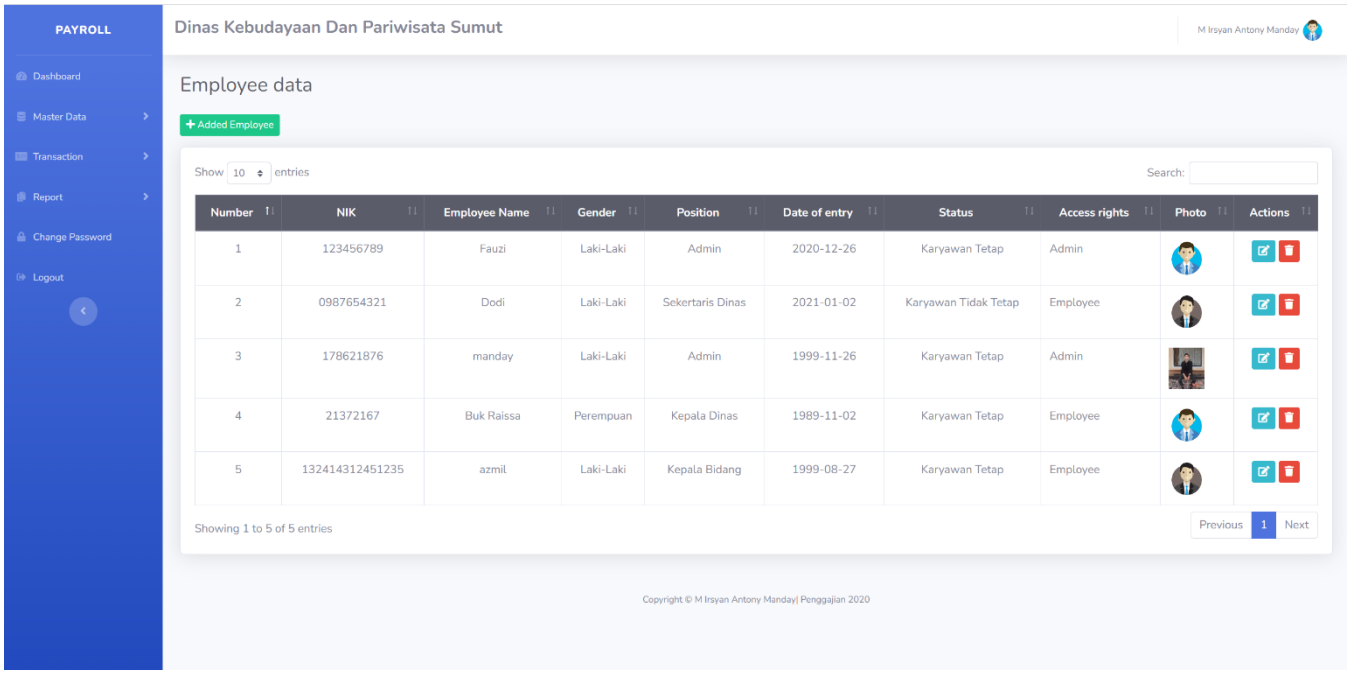

Figure 10 Employee data page

This diagram figure 10 explains the data that has been entered into the admin system with information and data forms that have been filled in.

3.4 Page Added Employee Data

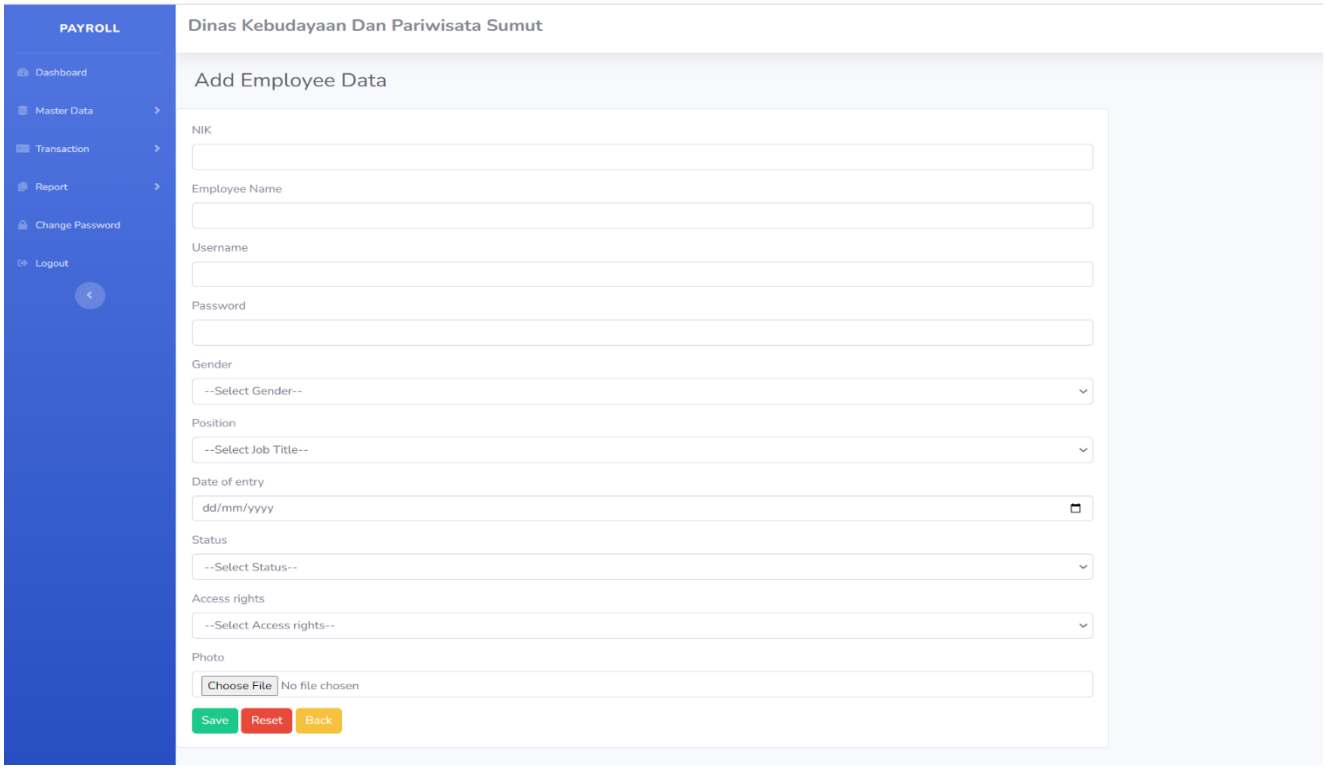

Figure 11 Page added employee data

This diagram figure 11 explains adding employee personal data, where the admin will add employee personal data

3.5 Employee Absences

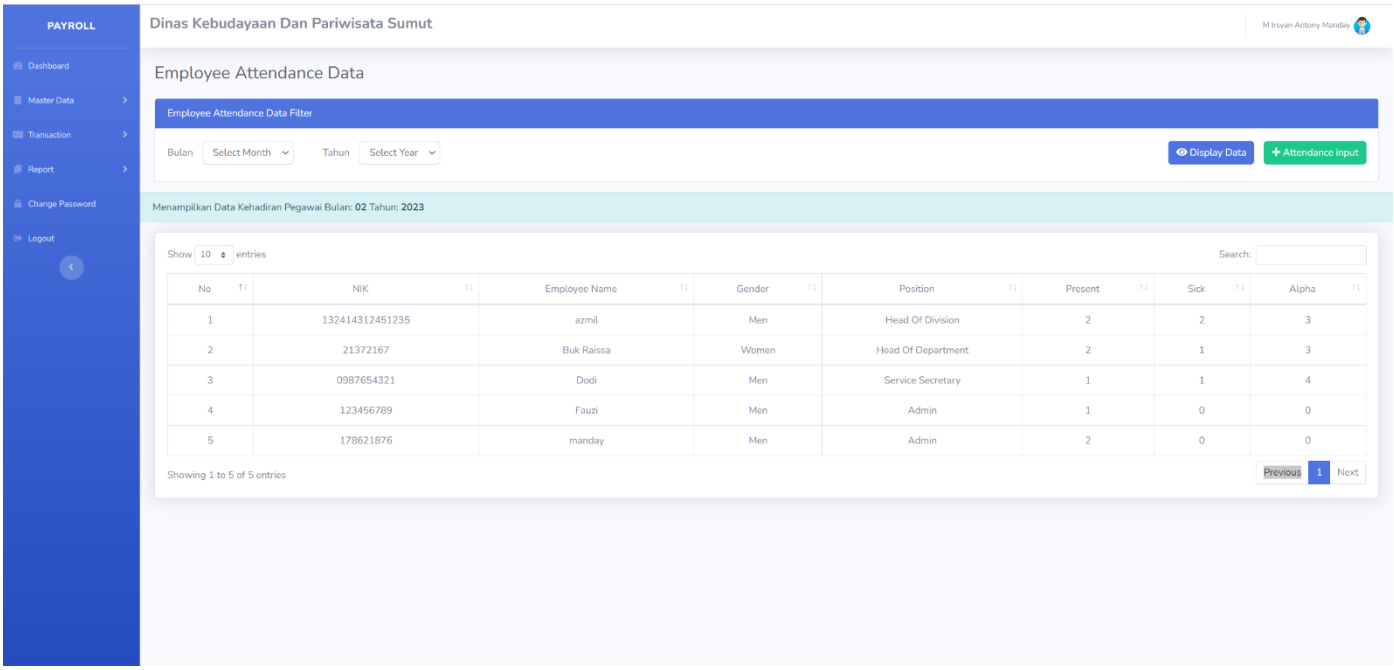

Figure 12 Employee absences

This page displays an absence form for employee attendance and an employee attendance form with alpha and present sick categories.

3.6 Salary Deduction Page

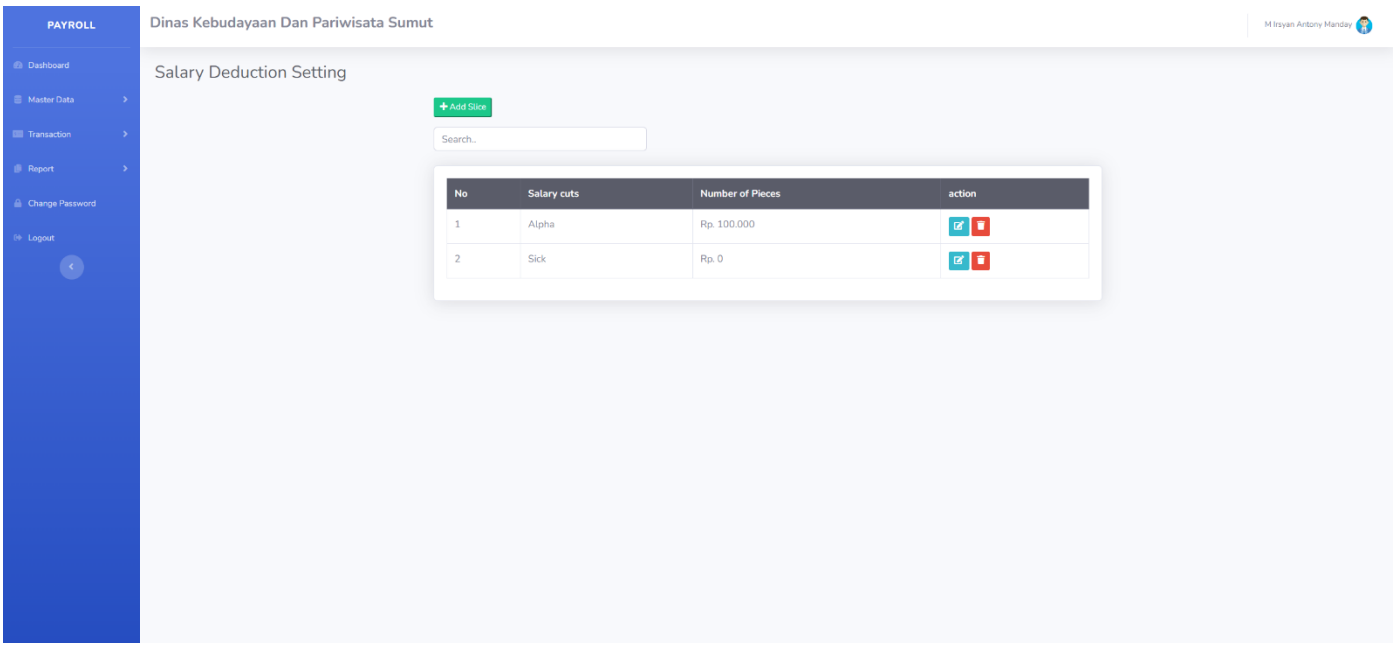

Figure 13 Salary deduction page

This page displays employee salary deductions for employee absences.

3.7 Salary Slip Page

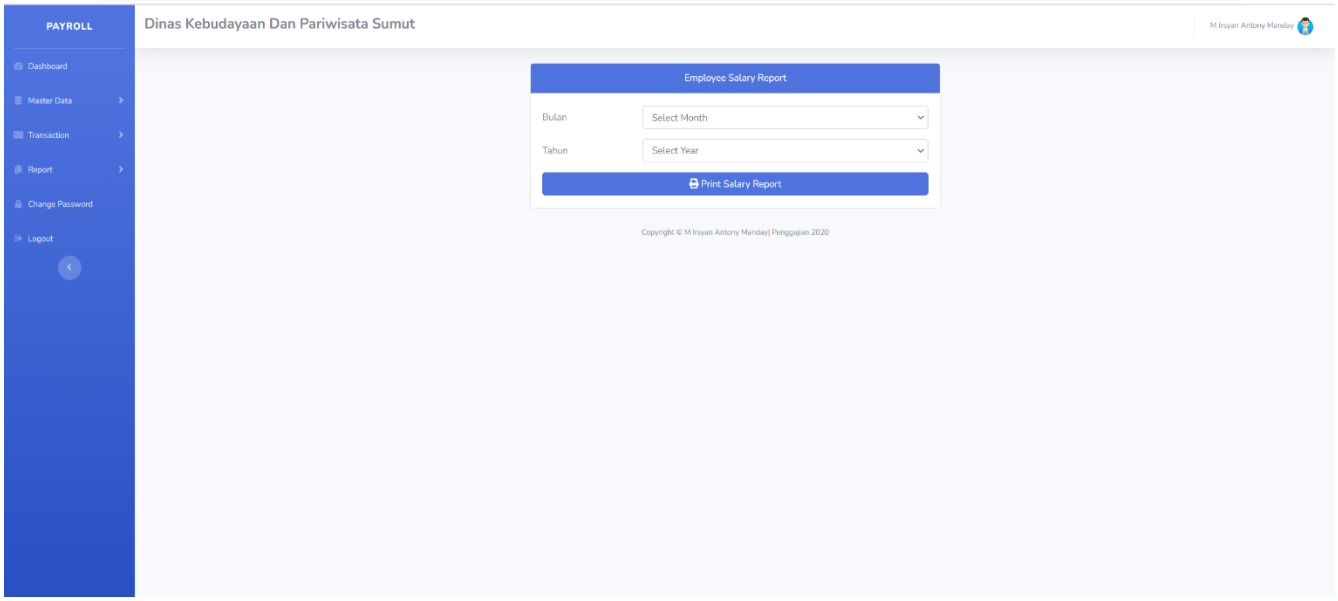

Figure 14 Salary slip page

This page displays the form for the amount of employee salary that will be received and includes deductions for absenteeism.

3.8 Payroll Page

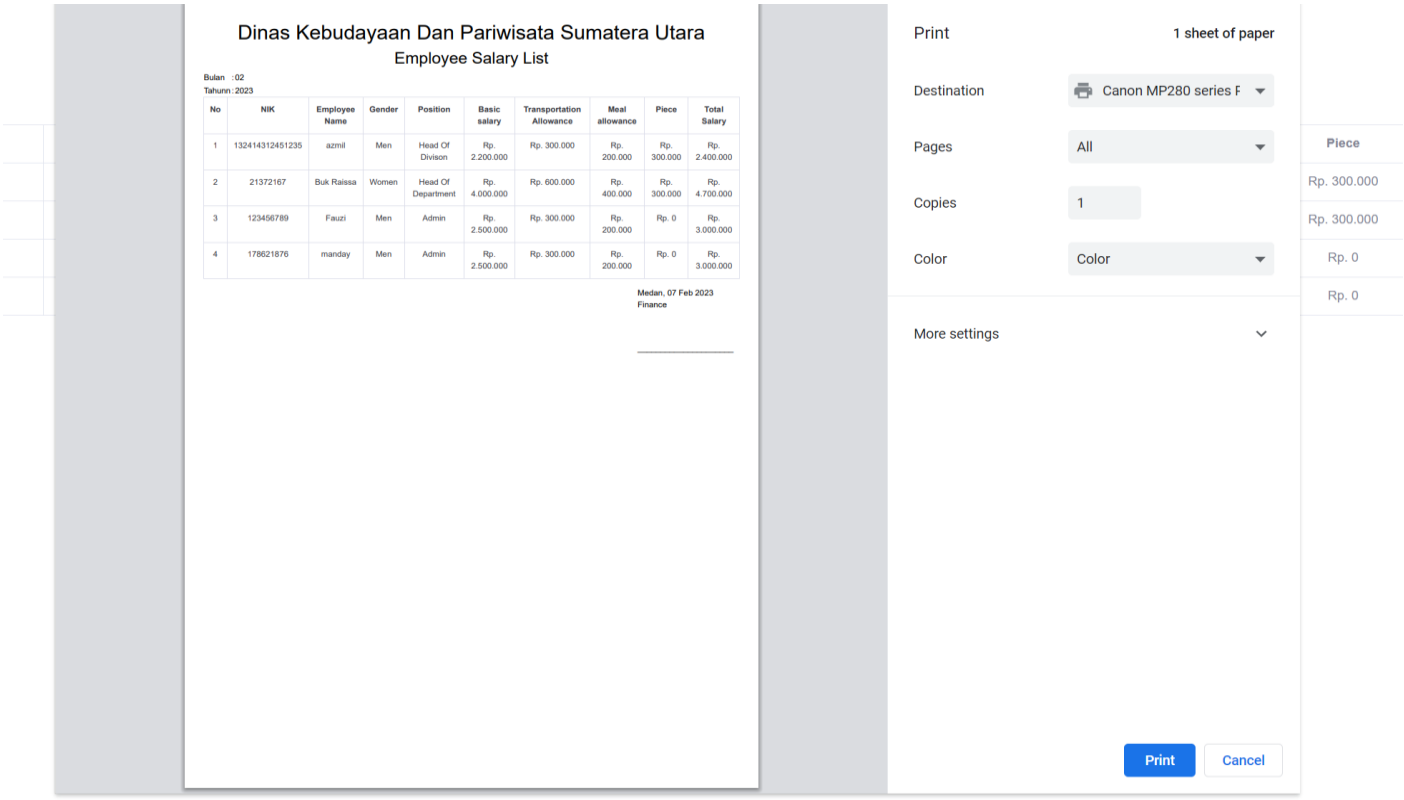

Figure 15 Payroll page to print employee salary reports.

3.9 Print Attendance Page

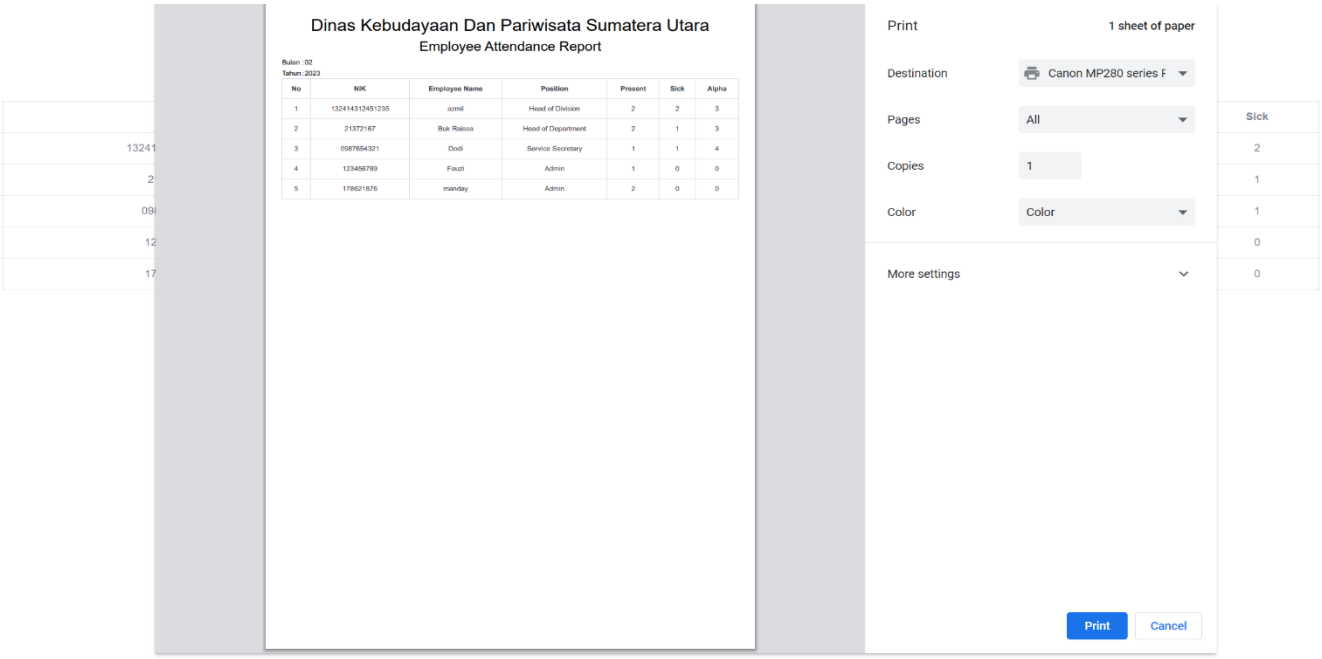

Figure 16 Print Attendance Page

In this view, employees can see their own salary data directly, which can then be printed directly on the payslip.

4. CONCLUSION

Based on the results of observations made at the North Sumatra Culture and Tourism Office. The Employee Payroll information system at the North Sumatra Culture and Tourism Office is still manual, so a web/database-based payroll information system is needed to make it easier for Finance Managers to process payroll and create more effective and efficient employee payroll reports. The employee payroll information system that has been created has services in the form of information such as position data, employee data, allowance type data, salary allowance data, attendance data and attendance reports and payroll reports. With this system, managing employee payroll is easier, admins and Finance Managers no longer need to manually record data via Microsoft Excel. All management has been provided by a system that has been built to avoid data loss. As for suggestions that can be given by the author so that the Web-Based Employee Payroll Information System at the North Sumatra Culture and Tourism Office can be better in the future. It is hoped that there will be further system development efforts so that later it can become a better Web-Based Payroll Information System Application with the addition of the latest features to facilitate employee salary processing

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