Employee Payment Information System Petro Perkasa Indonesia

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Abstract— In this modern and sophisticated era, technology has become a part of everyday life. Almost everything that is usually done manually, one example is the System. Payroll Information. Payroll Information System is a way to recap salaries and make reports on employee salary slips by using the internet as a medium. With the Payroll Information System website, it is hoped that it will make it easier for the company to recap employee salaries and make employee salary slip so that they can work effectively and efficiently in the process. In this study the author uses the prototype method using the PHP programming language with the Codeigniter3 framework. This employee payroll information system aims to assist in the admin process of managing employee payroll data and making it easier for employees to view and print salary data. The results of this employee payroll information system are 2 users, namely admin and employees.

Keywords—Information System, Website, Payroll, Employees

I. INTRODUCTION

In this era of globalization, information is very important for a company. Information from one part is interrelated with other parts, so that the information provided by one part greatly affects the activities of the other parts. Information that is fast, precise and integrated will expedite the process in the relevant sections within a company. One of them is a bio diesel sales company at PT Petro Perkasa Indonesia, which is in Muara Kembang Village, Muara Jawa District, Kutai Kartanegara Regency which is engaged in the field of fuel oil services, providing bio diesel oil. For the marketing area, PT Petro Perkasa Indonesia's Biosolar company can penetrate local and regional markets. However, at PT Petro Perkasa Indonesia there are several problems with the development of the technology, including the current employee payroll system, which is still conventional, that is, all transactions are recorded using a ledger, thus making the work process must be done repeatedly and takes a long time. Based on the explanation described, it can be concluded that there are still many shortcomings in the process of the employee payroll system at PT Petro Perkasa Indonesia manually, so that it can hamper performance in the payroll process. Then we made an information system that can simplify and help to manage the employee payroll system. Therefore, the researchers raised a title namely Employee Payroll Information System PT Petro Perkasa Indonesia.

II. LITERATURE REVIEW

A. Study of Literature

Research conducted by Tengku Cut Al-Saidina Zulkhaidi, Yulianto, and Suswanto with the title of implementing a web-based electronic product sales information system using the Laravel framework. used to purchase products simply by logging into the web, selecting the preferred item and paying using the transfer system, the goods will be delivered to the intended address. In Indonesia, the development of sales information systems has been very rapid and will continue to increase rapidly with the spread of the internet to all corners of the region. The results showed that making a sales information system using the laravel framework is convenient because laravel has provided plugins that can be used to help build complex systems and database design is not an obstacle because laravel has separated database design from display design. The sales information system is also known to have 3 important aspects, namely: cart menu and login, admin dashboard and payment page(Al-Saida 2019).

Research conducted by Yuliadi Riyanto, Tri Kartika Dewi, with the title application of the waterfall method in the design of payroll information systems at SMK Bina Karya KarawangSmk Bina Karya 2 Karawang is a vocational school in the automotive sector that was established in 2000 with the ownership status of the Budi Compassionate Foundation. In carrying out the process of recording absent data, the calculation of the payroll of SMK Bina Karya 2 Karawang still uses a manual process, the process of calculating payroll using a manual process does have several obstacles such as the problem of calculating the salary, which is quite long, and the accuracy of the data is not precise. An information system that can facilitate the processing of salary data and minimize errors when processing salary data so that it can produce more accurate reports and process data efficiently. Utilization of information technology today

can be used as a solution to overcome the problems faced by an institution.

Research conducted by Hamid Kurniawan, Widya Apriliah, Ilham Kurniawan, and Dede Firmansyah with the title of applying the waterfall method in the design of payroll information systems at SMK Bina Karya Karawang Smk Bina Karya 2 Karawang is a vocational school in the automotive sector that was founded in 2000 with foundation ownership status compassion. In carrying out the process of recording absent data, the calculation of the payroll of SMK Bina Karya 2 Karawang still uses a manual process, the process of calculating payroll using a manual process does have some obstacles such as the problem of calculating the salary, which is quite long, and the accuracy of the data is not precise.

The research was conducted by Rohmat Taufiq, Risma Rohmatul Ummah, Irfan Nasrullah and Angga Aditya Permana. From Informatics Engineering, Faculty of Engineering, University of Muhammadiyah Tangerang with the title "Design of a Web-Based Employee Payroll Information System at Madrasah Ibtidaiyah Nurul Huda Tangerang City". Madrasah Ibtidaiyah Nurul Huda Tangerang City is one of the private schools whose payroll data processing is still not integrated. This school still uses a conventional payroll system that is calculated manually. As a result, there are many problems/obstacles faced by the school in its payroll activities including the payroll process, calculating salaries, making salary slips, and making payroll reports. Because it is done conventionally and uses physical documents.

Some of the literature used as a guide and reference in this final project include Research conducted by Melati Suci Mayasari from STMIK Atma Luhur with the title analysis of the application design of employee payroll information systems at PT Aditya Buana Inter Sungailiat Bangka. The purpose of this research is to produce a computerized employee payroll information system where the employee payroll information system of PT Aditya Buana Inter previously used the manual system. The results to be achieved from this research are the application of a computerized employee payroll information system that can provide convenience in service and presentation of information, improve performance and data processing to be better, more precise.

B. System Information

Information systems are activities of organized procedures that are used to provide decision-making and control information in an organization. -specific purpose(Kurniawan et al. 2021).

C. Payroll

Payroll is a system used by companies to provide wages and salaries to employees for the services they provide. Salary is several payments to employees who are assigned administrative and management tasks which are usually set monthly. While wages are rewards given to workers who do menial work and rely more on physical strength, the amount of wage payments is usually determined on a daily basis or based on units of work completed. (Kurniawan et al. 2021).

D. Employee

An employee is someone who does work for an employer, whether the status is permanent or non-permanent, based on a written or unwritten collective work agreement, with the aim of completing/doing a job with a certain position or activity determined by the employer. (Taufiq et al. 2020; Bound, 2022).

E. Website

Website is a medium for conveying information on the internet. For example, it can be used as a commercial information provider (online store), service (web SMS service), (Teguh et al, 2023) and news provider (online newspaper application). Websites are formed and created from a series of scripts or certain codes from certain programming languages. (Tani, Bagre, and Adam 2018; Aroyssi et al, 2022).

F. PHP

PHP is a popular scripting language that is often used for web development. Created in 1994 by Rasmus Lerdorf, PHP's first incarnation was a set of simple Common Gateway Interface (CGI) binaries written in the C programming language (bin Uzayr, 2022; Bhardwaj, 2021). PHP 3.0 was the first version that was very similar to PHP as it exists today. In the winter of 1998, shortly after PHP 3.0 was officially released, Andi Gutmans and Zeev Suraski began work on a rewrite of PHP's core. The design goal is to improve the performance of complex applications and improve the modularity of the PHP codebase. The new engine, dubbed the 'Zend Engine' (consisting of their first names, Zeev and Andi), met this design goal successfully, and was first introduced in mid-1999. PHP 4.0, based on this engine, (Suharyanto, Chandra, and Gunawan 2017).

G. Codeigniter

Codeigniter is an open-source web application framework used to build web applications. The main purpose of developing codeigniter is to help developers in developing applications faster than writing code from scratch and codeigniter is one of the fastest php frameworks available today. (Novianto 2016).

H. Unifield Modeling Language (UML)

According to Sukamto and Salahuddin (2018), it defines that "UML is a standard language used to analyze and design and describe program architecture in object-oriented programming". UML (Unified Modeling Language) is a substitute for object-oriented analysis and design-oriented methods. ob(OOAD&D/object oriented analysis and design) which emerged in the late 80's and early 90's(Kurniawan et al. 2021).

I. Prototype

Prototyping is the process of creating a simple software model that allows users to have a basic idea of the program as well as perform initial testing. Prototyping makes it easy for developers and users to interact with

each other during the manufacturing process so that developers can easily model the software to be made. Prototyping is a software development method that is widely used (Widiyanto 2018).

III. RESEARCH METHODS

A. Research Procedure

According to (O'Brien, 2013) The writing of this thesis uses the System Development Life Cycle (SDLC) with the prototype method in system design which is a system development cycle that is used to describe several stages in the software development process created, can be seen in picture 1.
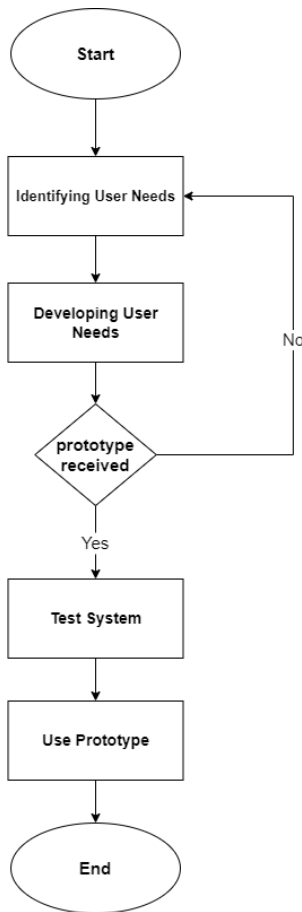
Picture. 1. Waterfall model

B. System Development Design

a. Use Case Diagram

Use case diagrams are used to graphically describe the interactions between actors and the use cases involved can be seen in picture 2, with the following explanation:
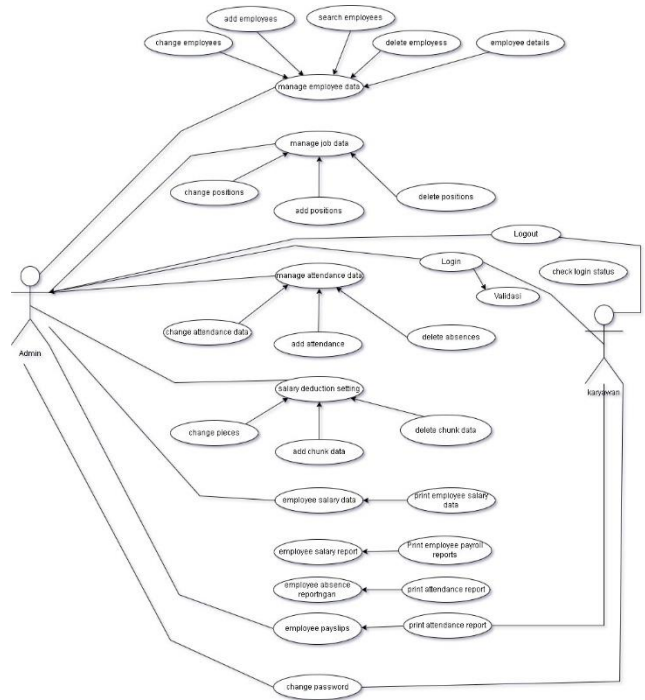
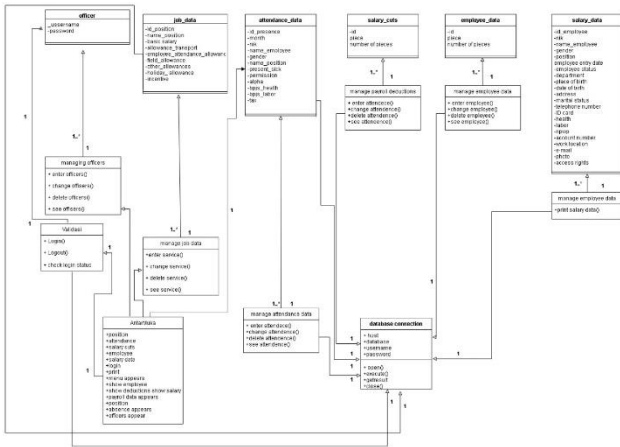Picture. 2. Use case diagram

b. Activity Diagram

The following is an activity diagram that serves to describe business processes and the sequence of activities in a process, can be seen in picture 3.
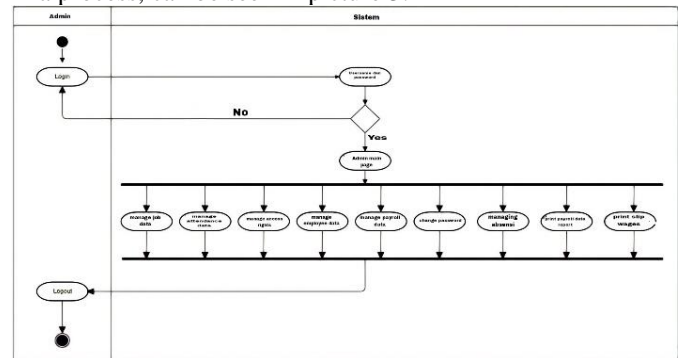
Picture. 3. Activity diagram

c. Class Diagram

The following is an overview of the Class Diagram of the Employee Payroll information system, can be seen in picture 4.

Picture. 4. Class diagram

d. Sequence Diagram

Under This is the admin Sequence Diagram used in the employee payroll information system at Petro Perkasa Indonesia Ltd. Muara Kembang site, can be seen in picture 5.
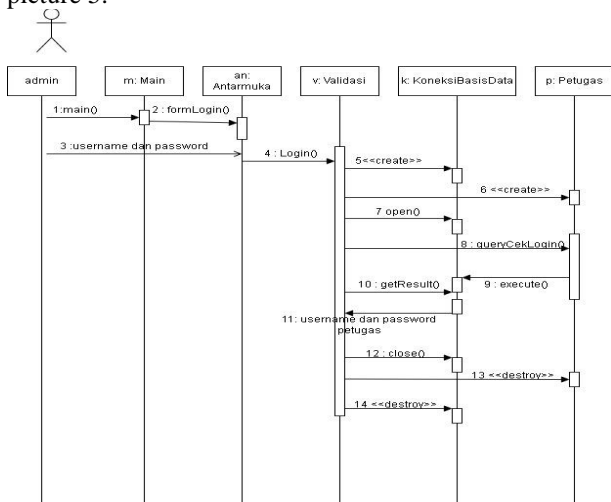

Picture. 5. Sequence diagram

IV. RESULTS AND DISCUSSION

The results of the employee payroll information system of PT Petro Perkasa Indonesia that can be accessed by the admin, among others, are as follows.

A. Login Page

Picture 6 shows the login page display, on this page, there are two users, namely admin and employee. Before the user enters the main page, the user must log in by entering the correct username and password.
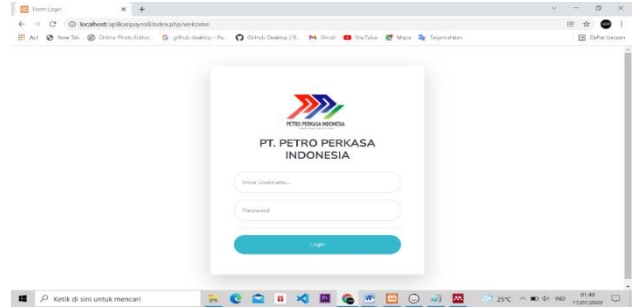

Picture. 6. Login page

B. Dashboard Page

Picture 7 is the display of the admin dashboard page. The admin dashboard page can be accessed when the admin successfully logs in. On this page, there is information on the amount of data that has been inputted by the admin.
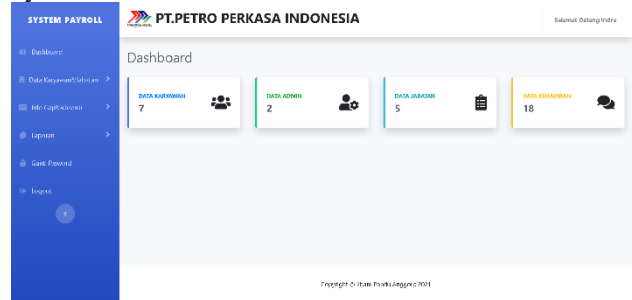
Picture. 7. Dashboard page
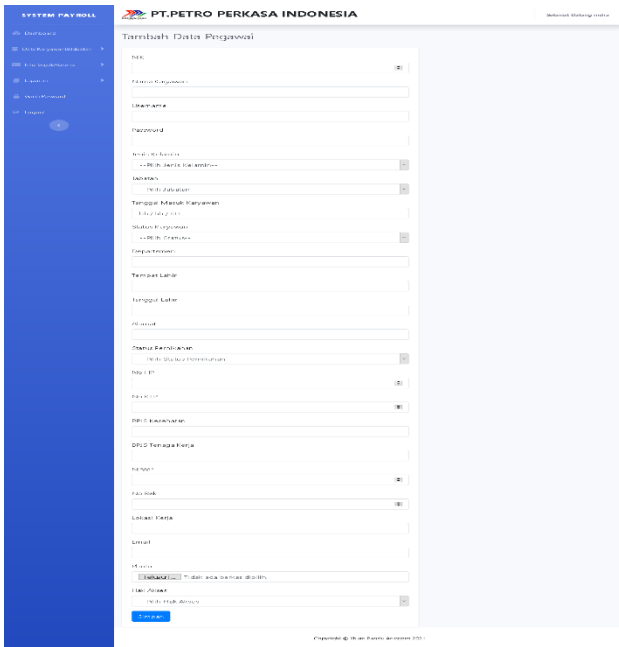
C. Employee Data Page

Picture 8 is a page display that displays employee data. After successfully adding employee data, the system will display the employee data page.
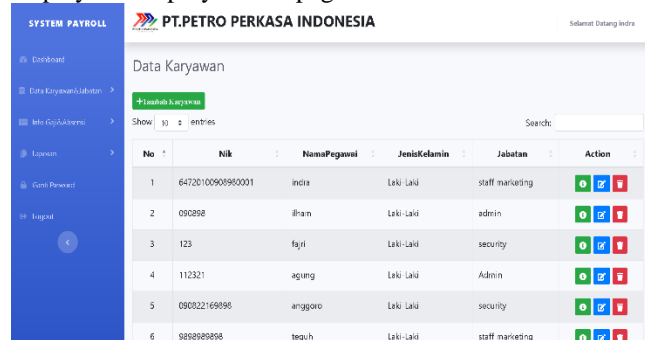
Picture. 8. Employee data page

D. Employee Input Data Page

Picture 9 is an employee input data page for adding employee data to the system. On this page, the admin can manage employee data in the company.

Picture. 9. Employee input data page
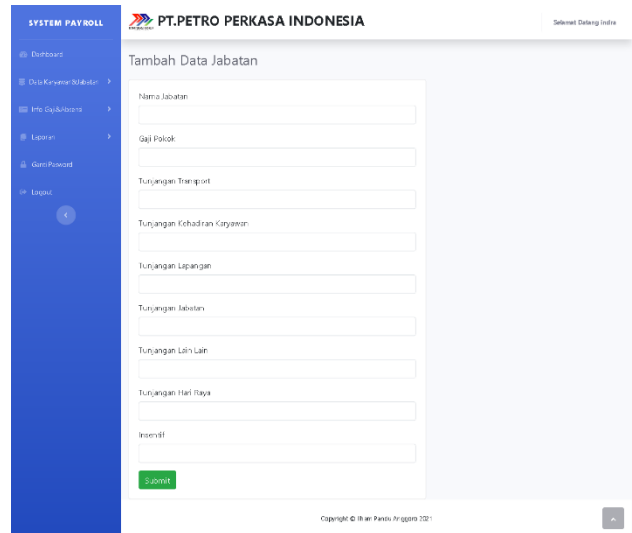
E. Job Data Page

Picture 10 is a display of job data pages. After successfully adding job data the system will display the job data page. On this page there is edit and delete buttons which can be managed by the admin. Picture 21 is a page display that displays employee data. After successfully adding employee data, the system will display the employee data page.

Picture. 10. Job data page

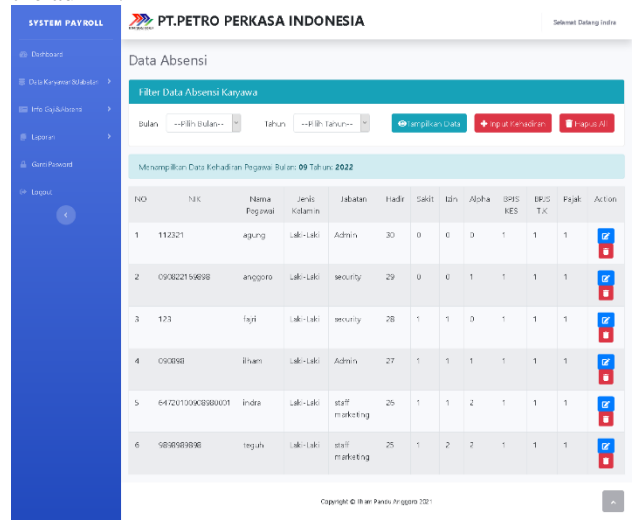### F. Job Input Data Page

picture 11 is the job input data page, on this page the admin can add position data to the employee data in the company.

Picture. 11. Job input data page
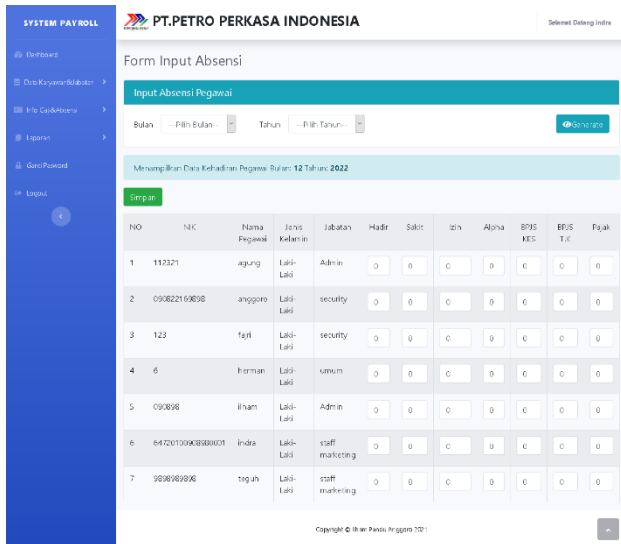
G. Attendance Data Page

Picture 12 shows the attendance data page display. After successfully adding attendance data, the system will display the attendance data page. On this page there is edit, delete, and detail buttons, which can be managed by the admin.

Picture. 12. Attendance data page

H. Attendance Input Data Page

Picture 13 shows the employee attendance input data page. On this page the admin can add employee attendance data in the form of attendance, illness, permission, alpha, health BPJS, labor BPJS, and taxes.

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Picture. 13. Attendance input data page

I. Salary Data Snippet Page

Picture 14 is a display of the salary deduction data page. After successfully adding the salary deduction data, the system will display the salary deduction data page. On this page there is edit, and delete buttons, which can be managed by the admin.

Picture. 14. Salary data snippet page

J. Salary Data Input Page

Picture 15 shows the employee salary deduction data page. On this page, the admin can add salary deduction data in the form of the type of deduction and the number of deductions.
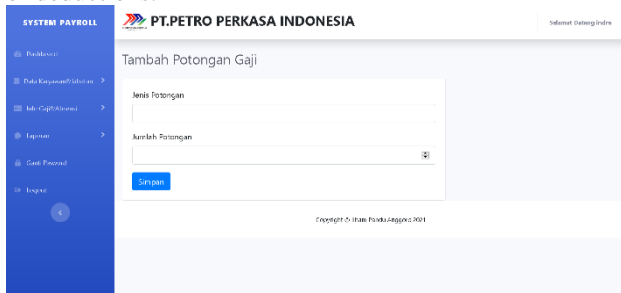
Picture. 15. Salary data input page

K. Print Employee Salary Data Page

Picture 16 shows a printable list of employees pay slips. After successfully adding salary data on the

position page and attendance on the attendance page, which can be managed by the admin.

Picture. 16. Print employee salary data page

L. Display Print Attendance Data Page

Picture 17 shows the employee attendance print page. After successfully adding attendance on the attendance page, which can be managed by the admin.

Picture. 17. Display print attendances data page

The results of black box testing on the design of employee payroll information systems were carried out by HRD at Petro Perkasa Indonesia Ltd. The Muara Kembang site can be seen in table 1.

Table 1. Black Box Testing

Input	Output	The Result
Login Page	Displays a page containing username and password.	Succeed
Login	Gain login access.	Succeed
Dashboard Page	Displays the initial display page after successfully logging in.	Succeed
Employee Data Page	Displays a page containing employee data.	Succeed
Add Employe Data Page	Displays the added employee data page.	Succeed
Delete Employee Data Page	Displays the deleted employee data page.	Succeed
Edit Employe Data Page	Displays the employee data edit page.	Succeed
Job data page	Displays a page that contains job data.	Succeed
Add Job Data page	Displays the added job data page.	Succeed
Delete Job Data page	Displays the deleted job data page.	Succeed
Edit Job Data page	Displays the job data edit page.	Succeed
Attendance Data Page	Displays a page containing attendance data page.	Succeed
Add Attendance Data Page	Displays the added attendance data page.	Succeed
Delete Attendance Data Page	Displays the deleted attendance data page.	Succeed
Edit Attendance Data Page	Displays the edit attendance data page.	Succeed
Salary Data Snippet Page	Displays a page containing salary data snippet page.	Succeed
Add Salary Data Snippet Page	Displays the added salary data snippet page.	Succeed
Delete Salary Data Snippet Page	Displays the deleted salary data snippet page.	Succeed
Edit Salary Data Snippet Page	Displays the edit snippet page.	Succeed

V. CONCLUSION

Based on the results of the design of the employee payroll information system at Petro Perkasa Indonesia Ltd. at the Muara Kembang site, the following conclusions can be drawn, this employee payroll information system is built using a prototype development model, and system design modeling using the PHP programming language with the Codeigniter3 framework, which is functional as expected. Using an employee payroll information system, it will overcome the problem of the old system, namely employees still come to HRD to take employee salary slips.

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