Development Employee Payment Information System on CV Borneo Andeska Maja Samarinda

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Abstract—This research is motivated by the unavailability of an employee payroll information system that facilitates data processing on CV Borneo Andeska Maja Samarinda in finance/treasury. Current the company from the finance/treasury section is still using Microsoft Excel in making employee salary recaps. Therefore the purpose of making a payroll information System in this study is to provide convenience and help reduce administrative costs or administrative costs and of course it can be a better information system. As for the development using the System Development Life Cycle (SDLC) with the PHP Programing language Framework Laravel. The data structure used is Entity Relationship Diagram (ERD) and Physical Diagram Model (PDM) and for the database using phpMySQL. The result of this study are expected to provide convenience for the company CV Borneo Andeska Maja Samarinda, especially in the finance department in terms of employee payroll which is carried out every month.

Keywords—Information System, Employee Payroll, CV Company Borneo Andeska Maja.

I. INTRODUCTION

In the era globalization, technological developments are increasingly rapid with various forms and benefits that we can experience today, many things take various forms and take advantage of developments through information technology. Salary is a sum of money given to an employee or employee as a reward for the effort or work that has been done to the company. In giving salary, the company has different system. Payroll is one of the important things for a company because it is a factor that determines employee performance and employee payroll is a very sensitive regarding payroll reporting data or things that are not reasonable and desirable regarding payroll which is usually done at the end of the month.

The payroll system must be implemented effectively and defiantly so that there are no errors in the payroll for employee CV Borneo Andeska Maja Samarinda is accompany that operates in two fields, namely the traditional health care sector and the plantation sector. Employee payroll is a routing activity carried out at CV Borneo Andeska Maja Samarinda and where this company also employs quite a number of employees white the system used is still semi-manual.

The purpose of this research is to design and create a web-based employee payroll information system, to provide detailed information about employee payroll analyses data at CV Borneo Andeska Maja and of course this web-based employee payroll information system is to provide convenience and help reduce administrative costs or administrative costs and of course can be a better information system.

II. LITERATURE RIVIEW

A. Study of Literature

Lecture of Dharmapala STMIK Riau (Winreis, 2017) three years ago to do research titled finger print information system web-based payroll at PT. Sigma Petrotech. Where the system that has been created aims to increase management satisfaction, as well as provide a positive effect or the employees concerned to be more disciplined to reduce the percentage of errors and omissions to be small.

According to (Imtihan et al, 2017) in a study entitled Honorary Teacher Payroll Information System Using Agile Software Development Concepts with Extreme Programming Methodology (XP) at Bangun Bangsa Vocational School. The design of a computerized payroll information system at Bangun Bangsa Vocational School will facilitate the treasurer in the process of calculating teacher attendance, recapitulation of salary calculations, and reporting.

According to (Annurfaida, 2020) from the Indonesian Computer University From Research Conducted With the Title Designing a Web Based Payroll Accounting Information System at the Bandung Sneaklin Shoe Laundry. In this journal, the purpose of the research conducted is to design an information system application that manages web-based salary data for Sneaklin Laundry in Bandung.

(Safudin et al, 2020) from Bina Sarana Informatika University also conducted a study Entitled Design of a Web-Based Payroll Information System Case Study of PT. Raya Permai. In the research journal, it is intended

that each person can receive a salary by the specified number of working hours, then an accurate calculation is treated.

(Hakim et al, 2020) students of the STMIK Bina Sarana Global Information System Study Program also conducted a study entitled Teacher Salary Informatics System Using a Web Application at SD Markup Tangerang. According to the salary payment system, it still uses the manual method with calculating absenteeism, basic salary, period of service allowances where errors in the salary calculations often occur so that the admin and finance departments are out of sync.

B. Information Systems

The system according to Kertahadi, 1995 is a tool to provide information in such a way, so that it is useful for the recipient (Muslihudin et al., 2016).

The information system according to Hendry Lucas is an activity of organized procedures when executed will provide information to support decision making and internal control (Rahman et al, 2020).

C. Salary

Salary is remuneration in the form of money received by the employee as a consequence of his position as an employee who contributes to achieving organizational goals. Or, it can also be said as a fixed fee received by someone from his membership in an organization (Hariandja, 2002).

For employees, salary is the main reason for working. In fact, perhaps for him, salary is the only reason to join the company, besides to meet the needs of the family and bear other needs. Salary is the right to work received and expressed in the form of money for a job and/or service that has been or will be performed. Salaries are paid according to a work agreement, agreement, or legislation (Mulyapradana et al, 2016).

D. Payroll Information System Payroll

The information system is part of the human resource information system resource information system which is a sub-system of the management information system (MISI). SISDM aims to provide recording facilities, manage and handle personnel databases, and the employee payroll process automatically so that they can provide information in the form of list reports and recapitulations needed by management quickly, accurately, and always up-to-date regarding the condition of their payroll staff (Lestari, 2014).

Arif Giyarti in his research "Development of employee payroll information system" concluded that the employee payroll information system is an important function that is the responsibility of human resource management. Where it serves to provide compensation for employees in the form of salaries in exchange for their contributions to the organization/agencies (Imtihan etal, 2017).

E. Framework Laravel

The framework is a programming component that is ready to be reused at any time so that programmers do not have to create the same script for the same task. Laravel framework is a work activity. Framework laravel also be interpreted as a collection of scripts especially (classes and functions) that 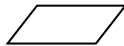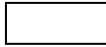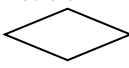can help developers/programmers in the various issues in programming, as the connection to the database, calling variables, files and others that work developers more focused and more quickly build applications (Yudhanto et al, 2019).
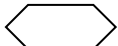
F. Flowchart

To develop an algorithm that is structured and easily understood by others (especially the programmer in change of implementing the program), then the required tools in the form of a flowchart. The flowchart illustrates the sequence of the logic of a problem-solving procedure so that flowcharts are problem-solving steps written in certain symbols. The purpose of problem-solving in a simple, unraveled, neat, and clear manner using standard symbol (Sitorus, 2015).

Table 1 are the flowchart symbols used will be to describe the algorithm in the form of a flow chart and the use of the symbols in question (Sitorus, 2015).
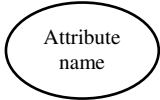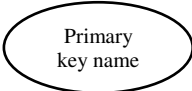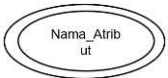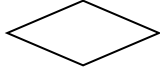
Table 1. Flowchart Symbols

Notation / Name	Function
Terminal	Indicated the start or end of a program.
Input/output	State the process of input or output regardless of the type of equipment.
Process	Stating an action (process) performed by the computer.
Decision	Indicates a certain condition that will result in two possible answers: yer/no.
Connector	Specifies the connection from progress to other process in a different page.
Offline Connector	Specifies the connection from one process to another in a separate page
Predefined Processor	Indicates input from the card the output in written to the card.
Punched card	Indicates input from the card the output is written to the card.
Punched tape	Indicates input/output using perforated paper tape
Document	Prints the output in the form of a document (via a printer).
Flow	State the flow of a process

G. Entity Relationship Diagram (ERD)

ERD is used for relational data-based modeling. ERD has several streams of notation such as Chen notation developed by Peter Chen, Barker, Ian Palmer, Harry Ellis. Crow's foot notation, and several other notations. However, what is widely used is Chen's notation. Table 2

are the symbols used in ERD with Chen notation (Rosa AS et al, 2013).

Table 2. ERD Symbols

Name / Symbol	Description
Entity *(Attribute name)*	The Entity is the core data to be stored, for the table in the database, objects that have data and must be stored data can be accessed by computer applications, and naming entities are usually more like nouns and is not a table name yet.
Primary Key Attribute *(Primary key name)*	Field or column of data that needs to be stored in an entity. The desired usually in the form of id, primary key. Can be more than one column, as long as the combination of several columns can be unique (different without being the same).
Multivalued Attribute *(Nama_Atribut)*	Field or column of data needs to be stored in an entity that can have more than one value.
Relationships *(diamond symbol)*	Relationships connect between entities, usually stating with the verb.
Association *(line symbol)*	Connecting between relationships and entities where both ends have a multiplicity of a possible number of uses.

III. RESEARCH METHODS

A. Research Procedure

In developing this payroll information system author uses a system development life cycle (SDLC). With the waterfall method in system design which is a development cycle system that will be used to describe several stages in the development process. There are steps that must be done first. Picture 1 is the stage of making an employee payroll information system design at CV Borneo Andeska Maja.
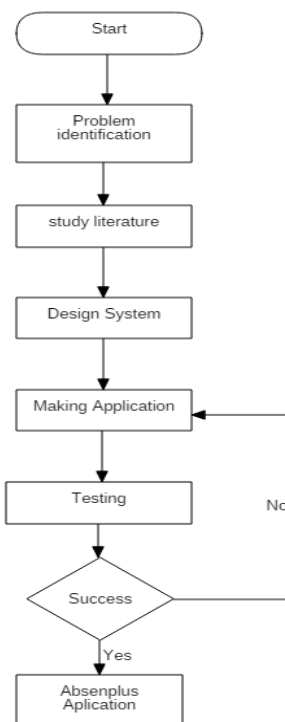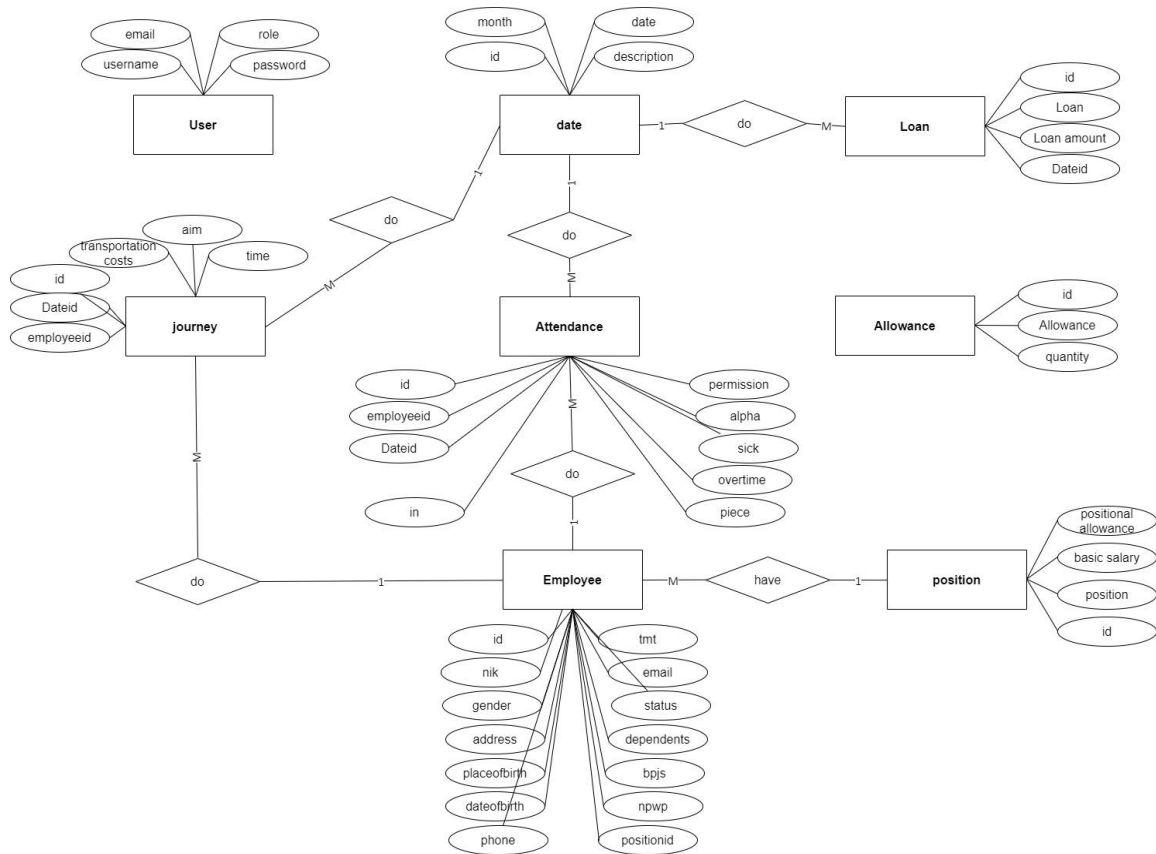

Picture 1. Stage of System Development

B. Development System

1. Entity Relationship Diagram (ERD)

The related entities in this proposed system design are described in the form of an entity Relationship Diagram (ERD). Picture 2 is an Illustration of the employee payroll ERD Diagram.

Picture 2. Employee Payroll ERD

2. Physical Data Model

Picture 3 is an Illustration of the physical data Model (PDM) of the Employee Payroll Information System.
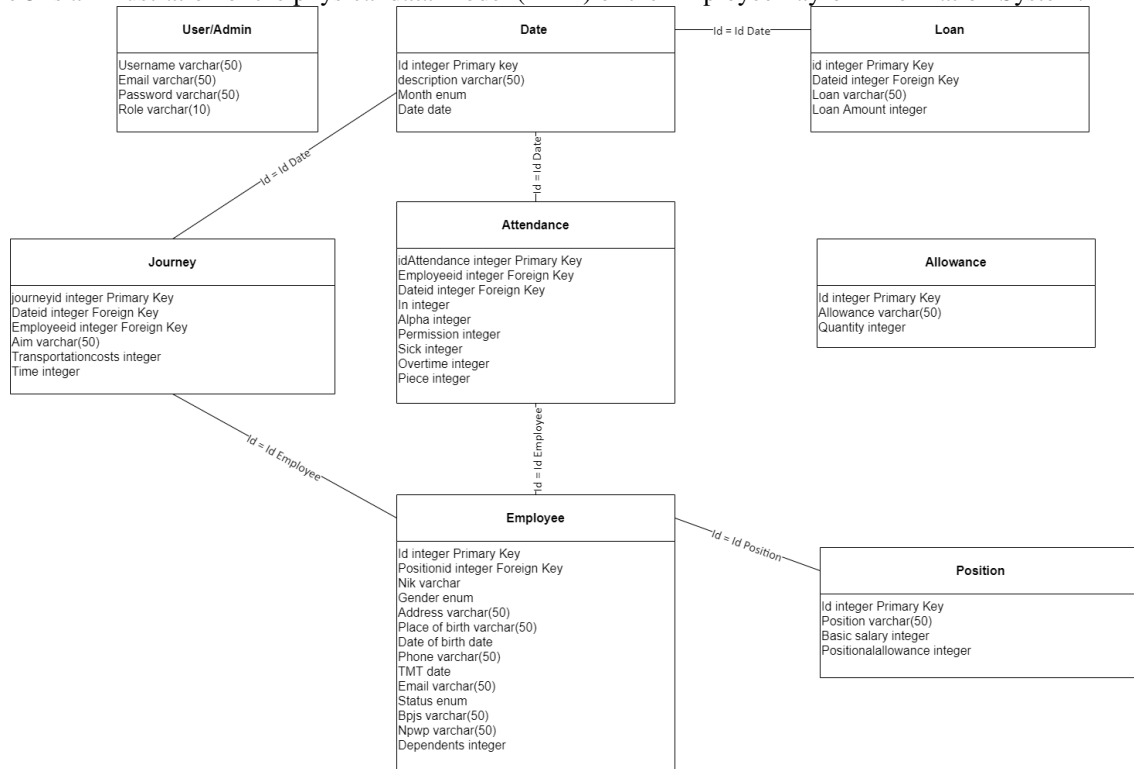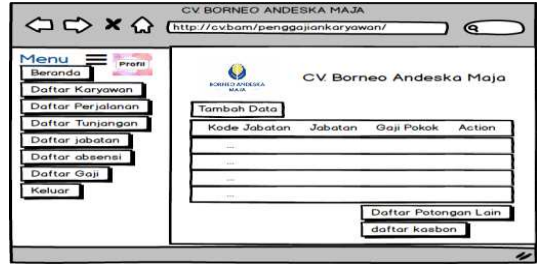

Picture 3. DFD Level 0 / Context Diagram
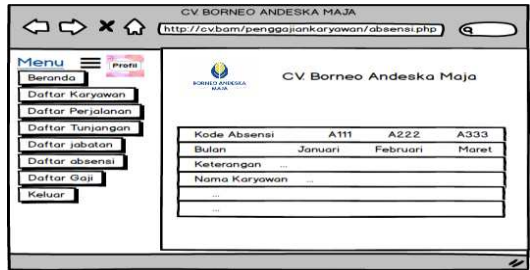
3. Interface Design

In interface design, you can see how the payroll information system will look when it is finished. The interface design can be seen in Pictures 4, 5, 6, 7, 8, 9, and 10.
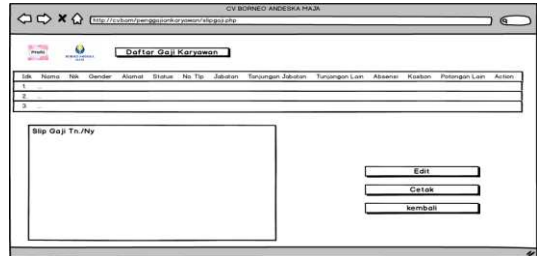
Picture 4. Login

Picture 5. Attendance List Display

Picture 6. Travel List Display

Picture 7. Employee List Display

Picture 8. List Display Allowance

Picture 9. Display of Position List
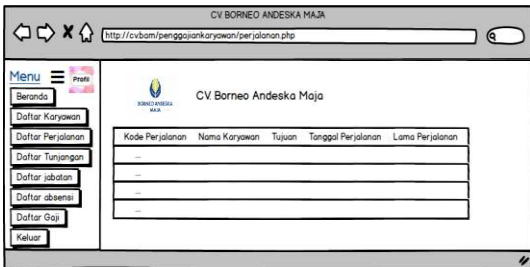

Picture 10. Display of salary slip
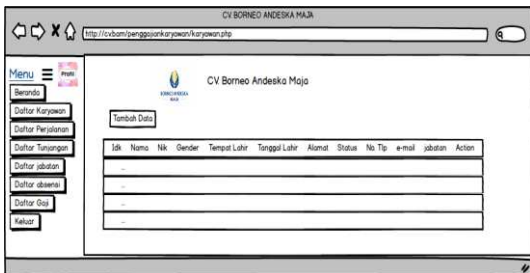
IV. RESULT AND DISCUSSION

A. Results

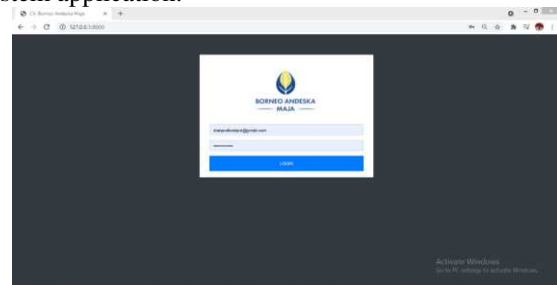The results expected from the information system has been created, namely:

1. Login page

Picture 11 shows, a display image login where this view serves to enter and drive into a system that is accessed by the leadership. In this view, it only requires an email and password that has been registered in the database or that has been created by the admin, in order to manage/view this employee payroll information system application.
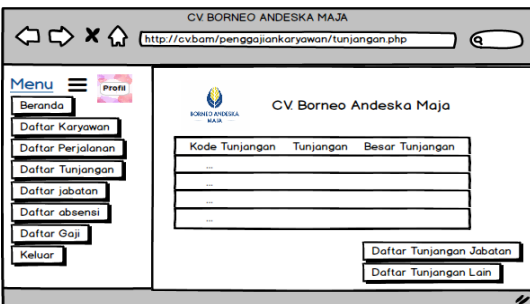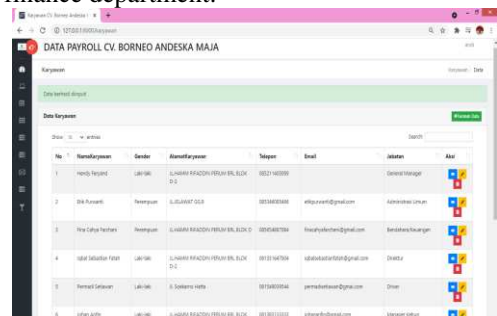

Picture 11. Display Login Page

2. Employee Display

Picture 1 shows, a display list view of employee data where this view serves to display data that has been input by the finance department.

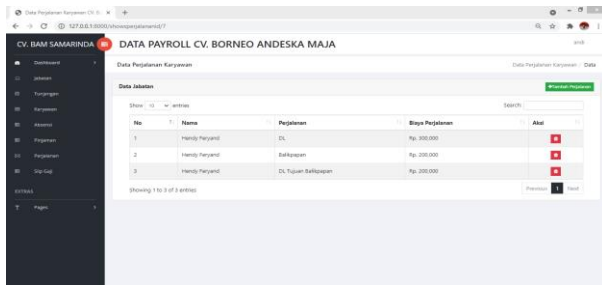Picture 12. Employee List Page Display

3. Attendance Page

Picture 13 shows, a display of the finance section where this view serves to input overtime wages and deductions from employees if any and is carried out every month which contains a recap of overtime pay in 1 month.


Picture 13. Travel Page

4. Travel Page

Picture 14 shows, a display of employee travel where this view serves to display data that has been input by the administration and finance sections.

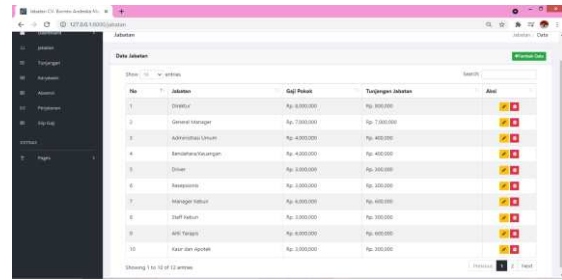Picture 14. Travel List Page Display

5. Allowance Page

Picture 15 shows, a display of employee allowance data list where this view services to display a list of allowances that have been input by the finance department.
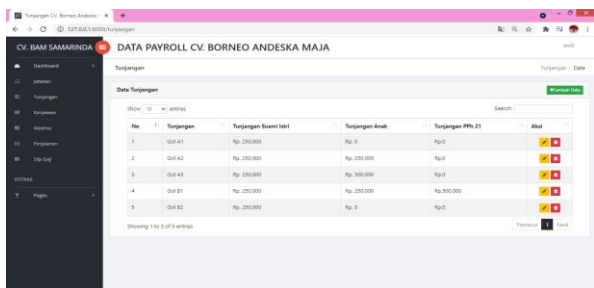
Picture 15. Display of Allowance List Page
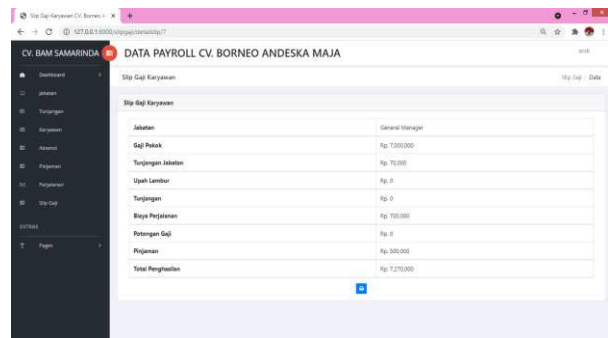
6. Position Page

Picture 16 shows, a display of employee position data list where this display serves to display position data that has been input by the finance department.

Picture 16. Display of job list Paget

7. Salary Slip Page

Picture 17 shows, a display of employee salary slips where this display the income and deductions earned by the employee for 1 (one) month.

Picture 17. Salary List Page Display

V. CONCLUSION

In this study, the author has succeeded in designing and creating a web-based employee payroll information system using the Laravel framework which is expected to process employee salary data and create salary slips/payroll receipts, provide detailed employee information regarding payroll analysis data, can help and simplify the payroll process. It is hoped that this employee payroll information system can be further developed in the future by adding features to make it more up-to-date and have a more attractive appearance so that this information system can be more attractive and useful for the company.

REFERENCES

Imtihan, K., Hadawiyah, R., & Asyari, H. (2017). Sistem Informasi Penggajian Guru Honorer Menggunakan Konsep Agile Software Development dengan Metodologi Extreme Programming pada SMK Bangun Bangsa. *Indonesian Journal on Networking and Security*.

Annurfaida, R. (2020). Perancangan Sistem Informasi Akuntansi Penggajian Berbasis Web pada Laundry Sepatu Sneaklin Bandung. *Journal Accounting and Finance*.

Safudin, M., Ghani, M. A., & Rahmawati, E. (2020). Rancang Bangun Sistem Informasi Penggajian Berbasis Web Studi Kasus PT. Buaran Raya Permai. *Indonesian Journal on Networking and Security*.

Muslihudin, M., & Oktafianto. (2016). *Analisis & Perancangan Sistem Informasi.* Yogyakarta: CV ANDI OFFSET.

Rahman, A., Dwiifanka, E., & Habibi, R. (2020). *Sistem Informasi Peminajaman Ruangan.* Bandung: Kreatif Industri Nusantara.

Yudhanto, Y., & Prasetyo, H. A. (2019). *Mudah Menguasai Framework Laravel.* Jakarta: PT. Elex Media Komputindo.

Hariandja, M. T. (2002). *Manajemen Sumber Daya Manusia.* Jakarta: PT. Grasindo.

Mulyapradana, A., & Hatta, M. (2016). *Jadi Karyawan Kaya.* Jakarta: VisiMedia

Sitorus, L. (2015). *Algoritma dan Pemrograman.* Yogyakarta: CV Andi Offset.

Lestari, D. (2014). *Perancangan Sistem Informasi Penggajian Karyawan Pada PR. Tunas Mandiri Kabupaten Pacitan.* Journal on Networking and Security.

Rosa A.S, & Salahuddin, M. (2013). *Rekayasa Perangkat Lunak.* Bandung: Informatika.

Hakim, Z., Tekat, E., Waluyo, B., & Hutasoit, A. R. (2020). Sistem Informasi Penggajian Guru Menggunakan Aplikasi Web pada SD Markus Tangerang. *Jurnal Sisfotek Globa*