



# Design and Construction of a Web-Based Work Permit and Leave Application Information System for CV. Dodi Brothers

Nessa Marshanda<sup>1\*</sup>, Suhartini<sup>2</sup>, Jepri Yandi<sup>3</sup>

<sup>1,2,3</sup>Universitas Prabumulih

[nessamarshanda37@gmail.com](mailto:nessamarshanda37@gmail.com)<sup>1\*</sup>, [suhartinisr79@gmail.com](mailto:suhartinisr79@gmail.com)<sup>2</sup>, [yhandijefry@gmail.com](mailto:yhandijefry@gmail.com)<sup>3</sup>

---

## Abstract

CV Company. Dodi Brothers is a private company engaged in the procurement of goods and services. At this time the company CV. Dodi Brothers does not yet have a website for applying for work permits and leave, so the aim of this research is to make it easier for employees to apply for work permits and leave, and to make it easier for admins to approve work permit and leave applications submitted by employees. The research method uses a qualitative descriptive method with data collection techniques in the form of observation, interviews and literature study, data sources consist of primary and secondary. Meanwhile, the method for system development used is the RAD (Rapid Application Development) method. The system design tool used is UML (Unified Modeling Language). This website is designed using the PHP (Hypertext Processor) programming language. MySQL database and coding using Visual Studio Code.

**Keywords:** Website, RAD, UML, PHP, MySQL

---

## 1. Introduction

With the advancement of technology, work permits and leave can now be processed online, simplifying data collection. However, many companies still lack regularity in managing work permits and leave. As noted in the journal by [1], the existing employee leave and permit application administration system in companies is not fully operational. This has led to issues such as unclear standard operating procedures for administrating leave and permit applications, messy work permit and leave archives, and unorganized work permit data. Therefore, technology such as computers and the web is essential to streamline the administration and filing of work permits and leave. This problem is not unique to one company, as is the case at CV. Dodi Brothers. CV. Dodi Brothers is a private company engaged in the procurement of goods and services. The company is located on Jalan Belitung Perumnas Griya Sejahtera, Gunung Ibul Subdistrict, East Prabumulih District, Prabumulih City, South Sumatra. The company's goal is to serve companies operating in various sectors, such as contracting, trading, piping installation, clothing and food procurement, and mining and oil and gas businesses. The work permit and leave application process at CV. Dodi Brothers is still manual, with employees requesting work permits and leave by speaking directly with or calling their superiors. The downside of this manual application system is that employees requesting work permits and leave must obtain approval from the manager, while information received by the manager can be hampered because the manager is not always in the office and has other commitments. Based on these problems, the author will write a thesis entitled "Design and Construction of a Web-Based Work Permit and Leave Application Information System at CV. Dodi Brothers." The aim is to simplify the work permit and leave application process and provide information such as the length of leave and details of the work permit that has been submitted. The system being designed is currently website-based.

## 2. Theoretical Basis

### 2.1. Understanding Systems

According to [2], the word "system" originates from the Latin "systema" and the Greek "sustema." A system is defined as a unit consisting of components or elements connected together to facilitate the flow of information, material, or energy to achieve a goal. Alternatively, a system can be defined as a collection of interrelated and interdependent elements that interact to achieve a goal. In general, a system is a group of elements or components that interact to achieve a specific goal. These elements or components can be physical objects, processes, or abstract concepts. Systems can be found in various fields, such as information technology, business, science, and so on [3].

## 2.2. Understanding Information

Information is data or facts that have a specific meaning or significance for the recipient. Information can be in the form of a statement or message about an object, event, or situation. Information can be conveyed through various media, such as writing, audio, images, or video [3]. According to [4], information is a collection of data processed into a form that is more useful and meaningful to the recipient. Without information, a system will not run smoothly and may eventually fail. In other words, the source of information is data.

## 2.3. Understanding Websites

A website is a collection of related web pages accessible via the internet. These web pages contain information, images, videos, or other elements that can be accessed through a web browser. Websites are often used for various purposes, such as promoting products or services, providing information, presenting content such as articles, blogs, or social media, or for entertainment purposes [3]. According to Elgamar in [5], a website is a media that has many interconnected pages (hyperlinks), where the website has the function of providing information in the form of text, images, videos, sound, and animation or a combination of all of them.

## 2.4. Understanding PHP (Hypertext Preprocessor)

PHP is a server-side scripting language designed for web development. It can also be used as a general-purpose programming language [6]. According to [7], PHP (Hypertext Preprocessor) is a server-side programming language used to translate a program's code base into machine code that can be understood by computers and added to HTML.

## 2.5. Understanding MySQL

MySQL is software classified as an open-source DBMS (Database Management System). Open-source means that the software comes with source code (the code used to create MySQL), as well as executable code that can be run directly on the operating system [7]. According to [3], MySQL is a popular open-source relational database management system (RDBMS) used for managing and storing data.

## 2.6. Understanding Xampp

XAMPP is defined as free software, encompassing a number of compiled programs that can support multiple operating systems. XAMPP functions as a localhost (a stand-alone server) [8]. According to [9], XAMPP is open-source software used to create a web development environment on a local computer.

## 2.7. Understanding Databases

According to [10], a database is a useful tool for efficiently producing and managing large amounts of data while maintaining long-term security. It consists of a collection of data-accessing programs that store this data, also known as a database. This information is crucial to an organization and its goals. The primary purpose of a database is to provide resources for easy and efficient data storage and retrieval. A database is a collection of related data stored together with controlled redundancy to optimally serve one or more applications. Data is stored in such a way that it is independent of the program used to access it. Access to add new data, edit data, and retrieve existing data from the database is universal and controlled. A database is also defined as a collection of logically related information, stored together, designed to meet the information needs of an organization [11].

## 3. Research Methods

A research method is an effort to investigate and explore a problem using scientific methods carefully and thoroughly [12]. The research method used in this study is a qualitative descriptive research method. Qualitative research methods are research based on the philosophy of postpositivity used to examine natural object conditions where the researcher acts as an instrument [13].

### 3.1. Primary Data Sources

1. Observation  
Observation is the activity of directly and in-depth observation of an object to obtain accurate information about it. The purpose of research and observation is to collect data or make assessments.
2. Interviews  
The interview technique is a technique for gathering information through direct conversation between the researcher and the participant.

### 3.2. Secondary Data Sources

Secondary data sources are data obtained by researchers from other existing sources, not directly from the object. Secondary data can be obtained through various sources such as books, journals, articles, and documents. Documents are recorded data or information that can be seen, read, or heard and can be used as evidence or information. Documents can be handwritten, printed, or electronic.

### 4. Overview of the proposed system

The proposed overview is a concise and comprehensive explanation that describes the plan, idea, or concept to be implemented. This web-based information system aims to assist employees in applying for work permits and leave, as well as assist the administrator in storing employee data.

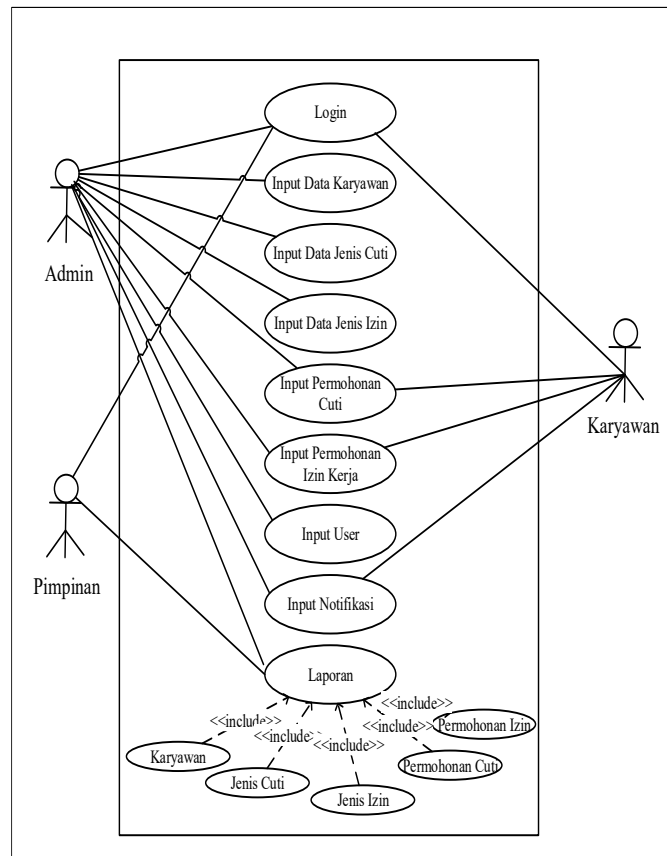


Fig. 1 : Use Case Diagram of the proposed system

The proposed use case analysis explains the analysis of work permit and leave application procedures at CV. Dodi Brothers. The proposed analysis is at CV. Dodi Brothers.

### 5. Implementation and Testing

#### 5.1. Interface Implementation

In the interface implementation section, the researcher created the website display, as follows:

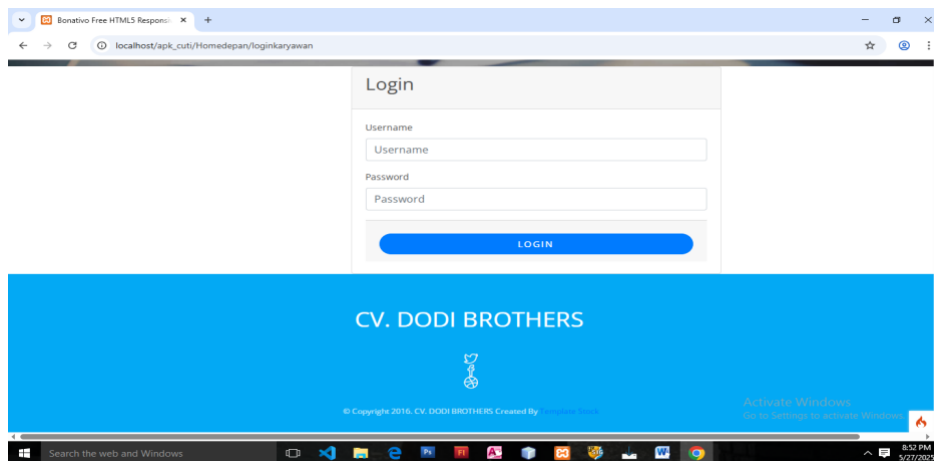


Fig. 2 : Employee Login Page View

The image above shows the employee login page, where employees log in to access the work permit and leave application process by entering their username and password.

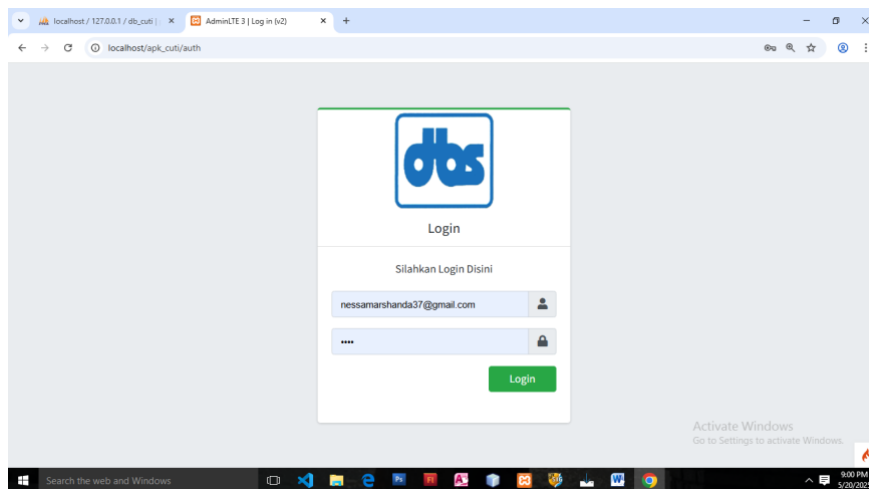


Fig. 3 : Admin Login Page View

The image above shows the login page display which functions for admins who want to enter and use the system. If the admin wants to open the website, they must first log in by entering their username and password.

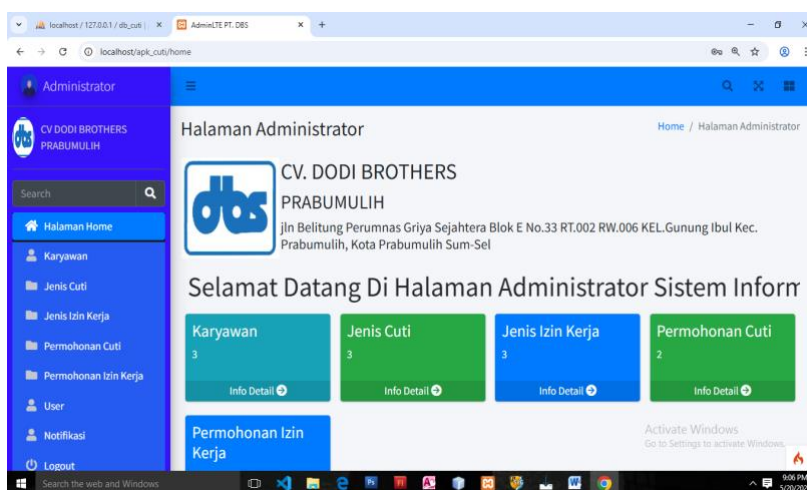


Fig. 4 : Administrator Page View

The image above shows the administrator page, where all the menus are located. The menus on the administrator page include employees, leave types, work permit types, leave requests, work permit requests, notifications, and users.

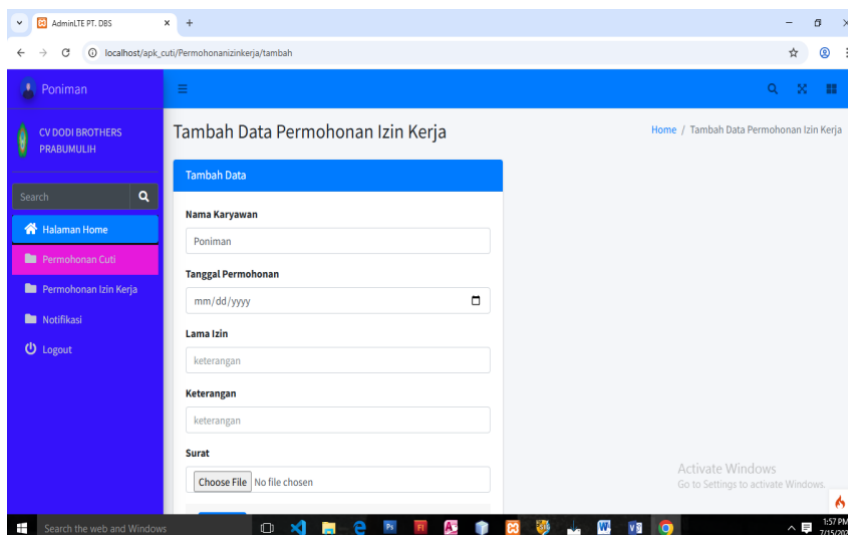


Fig. 5 : Work Permit Application Page View

The image above shows the display for applying for a work permit, where employees who wish to apply for a work permit must fill out the work permit form by entering the date, type of permit, number of permits, information and letter.

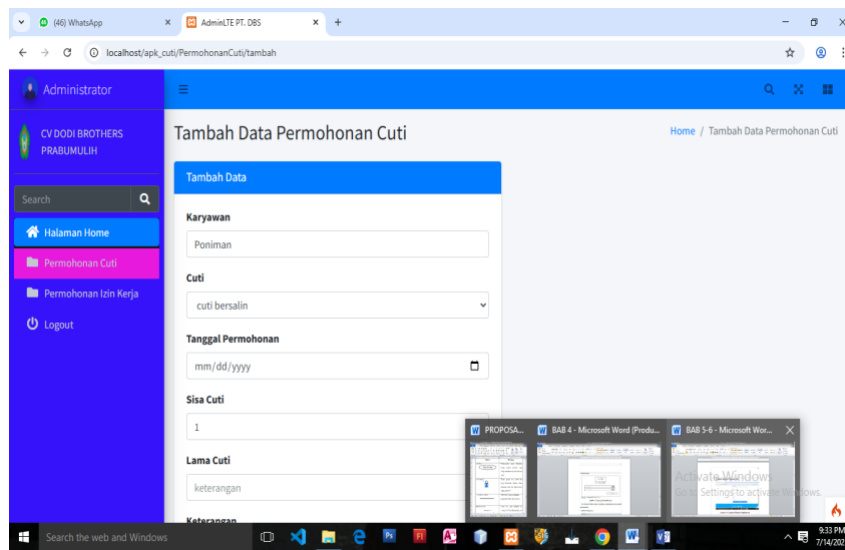


Fig. 6 : Leave Application Page View

The image above shows the display for submitting leave applications, where employees who wish to submit leave must fill out the leave form by entering the date, type of leave, amount of leave, and information.

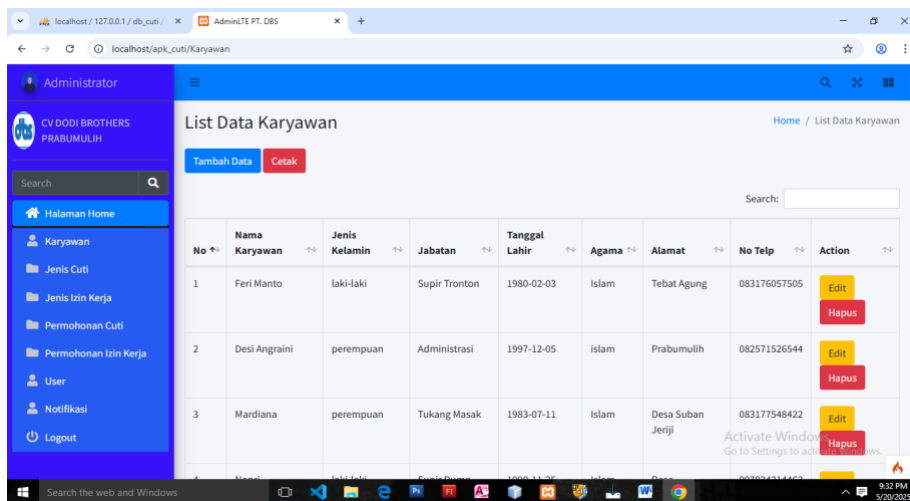


Fig. 7 : Employee Page View

The image above shows the employee page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print the data to a file by clicking "Print."

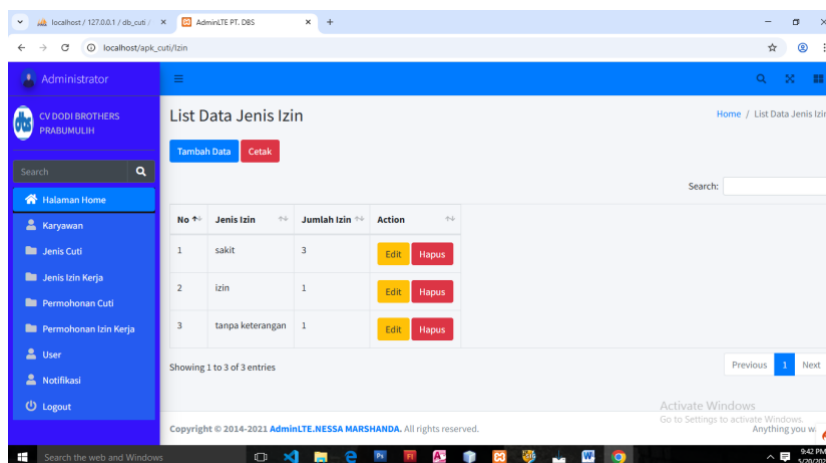


Fig. 8 : Work Permit Type Page View

The image above shows the work permit type page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print the file by clicking "Print."

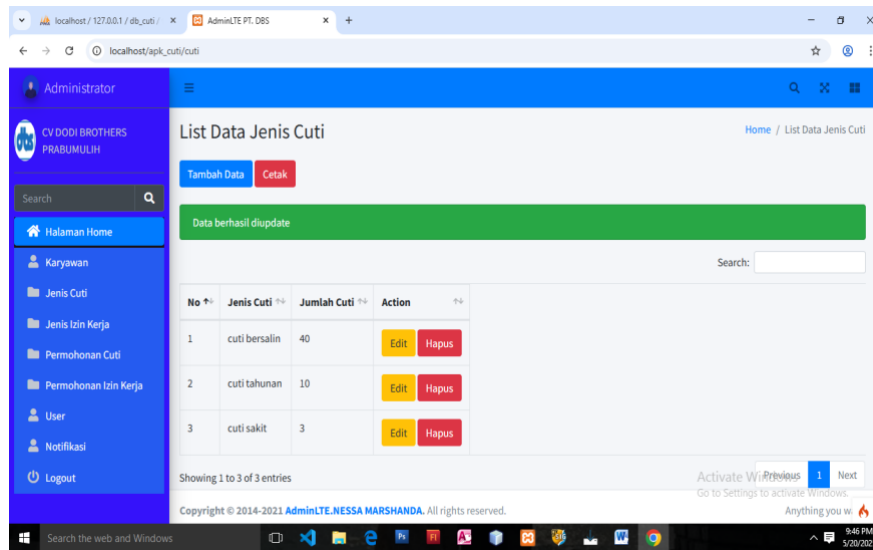


Fig. 9 : Leave Type Page View

The image above shows the leave type page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print it to a file by clicking "Print."

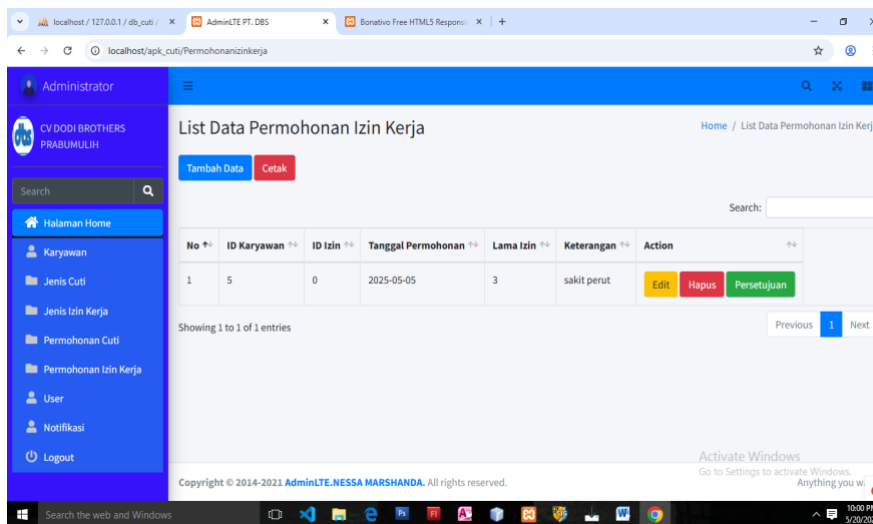


Fig. 10 : Work Permit Application Page View

The image above shows the work permit application page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print the file by clicking "Print." If the admin wants to approve the employee's work permit application, click "Approve."

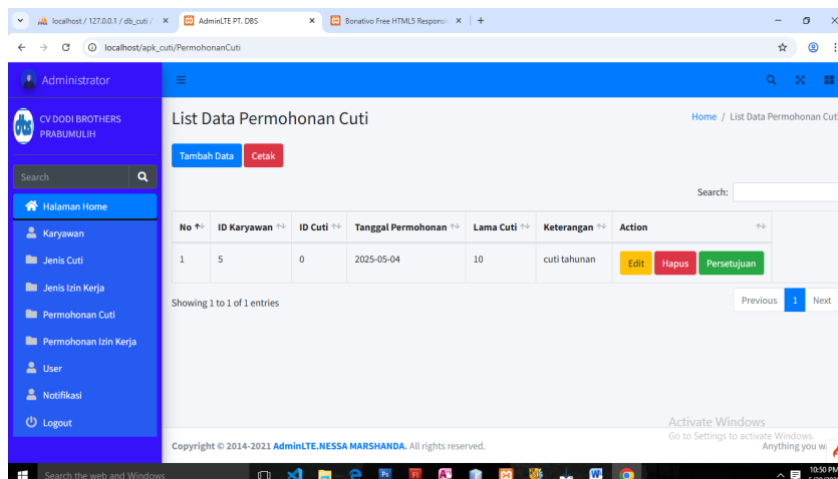


Fig. 11 : Leave Application Page View

The image above shows the leave request page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print the file by clicking "Print." If the admin wants to approve the employee's work leave request, click "Approve."

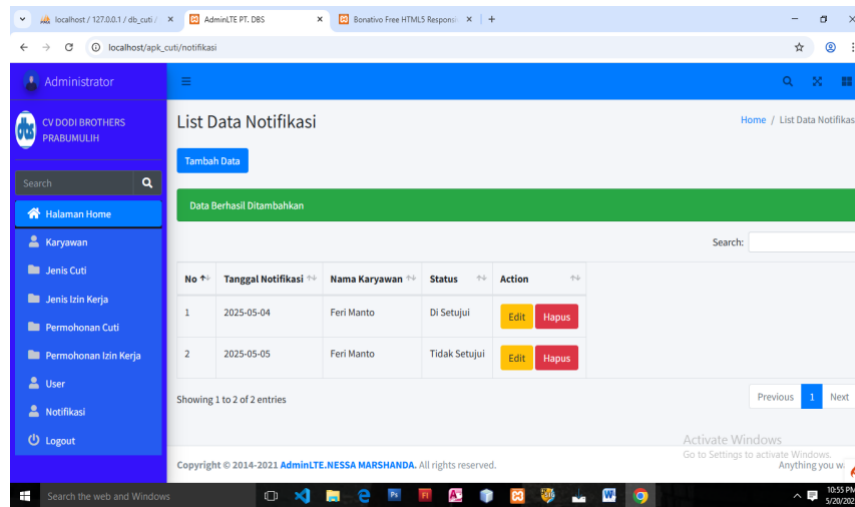


Fig. 12 : Notification Page View

The image above shows the notification page. If the admin wants to add data, click "Add Data." If you want to change or delete data, click "Edit" and "Delete." You can also print the data to a file by clicking "Print." This page displays notifications for work permit and leave requests. Once the request has been validated by the admin, it will be added to the notification data.

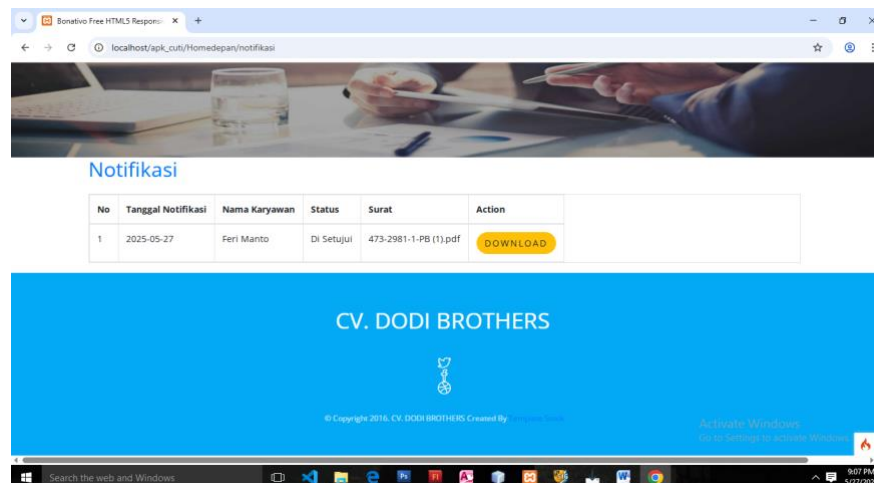


Fig. 13 : Employee Notification Page View

The image above shows the employee notification page where employees receive notification of admin approval, so employees can see whether the application is approved or not, and employees can see the reply letter from the admin.

## 5.2. System Testing Conclusion

Based on the results of previous testing conducted by researchers, it can be concluded that the work permit and leave application website for CV Dodi Brothers is functioning well.

## 6. Conclusion

Based on the description and explanation above, the results of the design and development of the research system at CV. Dodi Brothers using the Rapid Application Development (RAD) method are as follows:

1. The system was designed using the PHP (HyperText Processor) programming language, a MySQL database, and coding using Visual Studio Code and the UML (United Modeling Language) tool.
2. By applying the Rapid Application Development (RAD) method, the development of the work permit and leave application system can be carried out effectively and efficiently.
3. Based on the research conducted to create the work permit and leave application website at CV. Dodi Brothers, the company has achieved its requirements. This is because the system allows employees to easily submit work permit and leave applications, and administrative approvals are more efficient.

## References

- [1] M. Ilyas and R. Sari, "Rancang Bangun Sistem Informasi Manajemen Karyawan Berbasis Web," *Reputasi J. Rekayasa Perangkat Lunak*, vol. 5, no. 1, pp. 62–68, 2024.
- [2] E. Effendy, E. A. Siregar, P. C. Fitri, and I. A. S. Damanik, "Mengenal sistem informasi manajemen dakwah (Pengertian sistem, karakteristik sistem)," *J. Pendidik. Dan Konseling*, vol. 5, no. 2, pp. 4343–4349, 2023.
- [3] M. Rifki, A. P. D. Yanti, S. B. Rizky, A. F. Lubis, and H. Hardjito, "Edukasi bahaya media sosial pada remaja di kelurahan pondok cabe kota tangerang selatan," in *Prosiding Seminar Nasional Pengabdian Masyarakat LPPM UMJ*, 2022.
- [4] A. Nitami, A. A. Munthe, and M. Masrizal, "Sistem Informasi Reservasi Hotel Rantauprapat Berbasis Web Dengan Framework Codeigniter," *J. Student Dev. Inf. Syst.*, vol. 1, no. 1, pp. 7–17, 2021.
- [5] A. Talia, S. Suhartini, and R. Suprianto, "Rancang Bangun Aplikasi Pelayanan Sistem Rujukan Pada Puskesmas Sukajadi Berbasis Web," *J. Minfo Polgan*, vol. 13, no. 2, pp. 1367–1376, 2024.
- [6] D. Novaldi, S. Suhartini, and F. Fajriyah, "APLIKASI BIMBINGAN SKRIPSI BERBASIS WEB PADA FAKULTAS ILMU KOMPUTER DI UNIVERSITAS PRABUMULIH," *J. Inform. dan Tek. Elektro Terap.*, vol. 12, no. 3S1, 2024.
- [7] P. Prahasti, S. Sapri, and F. H. Utami, "Aplikasi Pelayanan Antrian Pasien Menggunakan Metode FCFS Menggunakan PHP dan MySQL," *J. Media Infotama*, vol. 18, no. 1, pp. 153–160, 2022.
- [8] B. W. A. Pratama and P. T. Prasetyaningrum, "Implementasi Metode Certainty Factor Dalam Sistem Pakar Diagnosa Nomophobia Pada Remaja Berbasis Web," *J. Comput. Inf. Syst. Ampera*, vol. 5, no. 3, pp. 155–173, 2024.
- [9] K. T. Suli and N. Nirsal, "Rancang bangun sistem informasi desa berbasis website (studi kasus Desa Walenrang)," *D'computare J. Ilm. Teknol. Inf. dan Ilmu Komput.*, vol. 13, no. 1, pp. 24–32, 2023.
- [10] I. Fahzirah and M. I. P. Nasution, "Pengenalan Sistem Database: Konsep Dasar Dan Manfaatnya Dalam Perusahaan," *J. Ilm. Nusant.*, vol. 1, no. 4, pp. 673–678, 2024.
- [11] S. Hafidaty, "Sistem pengelolaan data base dan studi kelayakan mustahik pada pelaksanaan program pelayanan mustahik lembaga pelayanan masyarakat (LPM) Dompot Dhuafa Republika".
- [12] I. Tjahyadi, "Buku ajar metodologi penelitian (teori dan praktik)." CV Saba Jaya Publisher, 2024.
- [13] D. Sugiyono, "Statistika untuk Penelitian (Cetakan ke-30)," *Bandung Cv Alif.*, 2019.