IMPROVING AND MANAGING HUMAN RESOURCES MANAGEMENT BY IMPLEMENTING APPLICATIONS FOR EMPLOYEE DATA WITH WEBSITES

Raihansa Romadhon
Informatics Study Program, National University, Jakarta, Indonesia
Email : raihansaromadhon2020@student.unas.ac.id

Rima Tamara Aldisa
Information Systems Study Program, National University, Jakarta, Indonesia
Email Correspondence Author : rima.tamara@civitas.unas.ac.id

Abstract
This research aims to explore the application of a website-based personnel data information system as a strategy for improving and managing human resource management (HR) effectively. The research method used is descriptive analysis and case studies of organizations that have implemented this information system. The research results show that implementation of a website-based personnel data information system makes a positive contribution in increasing efficiency in the HR management process, facilitating better data accessibility, and supporting more timely and data-based decision making. The implication of these findings is the use of technology in HR management can be an effective strategy, increase productivity and achieve better business goals.
Keywords: Management, Information Systems, Personnel Data, Websites, HR Management

INTRODUCTION

In the ever-growing era of globalization and digital transformation, human resource management (HR) has become an important aspect that every organization must pay attention to. Effective HR management is not only the key to an organization's operational success, but is also a determining factor in achieving predetermined business goals. To face these challenges, organizations need to adopt information technology as a tool to improve the efficiency and effectiveness of their HR management. One approach that has become the main focus in efforts to improve HR management is the implementation of a website-based personnel data information system. By leveraging website technology, organizations can automate many administrative processes related to HR management, enable better data accessibility, and facilitate more timely and data driven decision making.

Researchers obtained several other references such as according to; [1] Produce valid personnel data to assist leaders in planning the formation, promotion and career development of employees in the future. [2] Integration of technology into information systems to provide effective and efficient solutions in attendance management. [3] Supports the management of personal information combined with technology to

provide information quickly, accurately and concisely. [4] Developing electronic based government administration to optimally improve the quality of personnel services. [5] Analyze human resource management in digital based development and examine the obstacles faced. The last reference obtained by the author is [6] Building a new personnel information system for employee activities, personnel data collection, and personnel information management can be carried out more effectively and efficiently. From several references that have been obtained, it is explained that this research aims to design how the implementation of a website-based personnel data information system can improve and manage HR management effectively. Through in-depth analysis and case studies of organizations that have implemented these information systems, this research will provide a better understanding of the positive impacts and strategic implications of the use of information technology in HR management.

By understanding the role and benefits of website-based personnel data information systems, it is hoped that organizations can take the right steps in improving their HR performance, optimizing employee potential, and achieving competitive advantage in an increasingly complex and dynamic market.

RESEARCH METHODOLOGY
Waterfall Method

The waterfall method is a sequential and linear information system development model. This model is a method in software development and is often used as a basic approach to information systems [7]. Waterfall method is a structured software development approach consisting of a series of stages carried out sequentially from start to finish.

The following is the implementation of the Waterfall method in the context of the title Improving and Managing Human Resource Management by Implementing a Website-Based Personnel Data Information System:
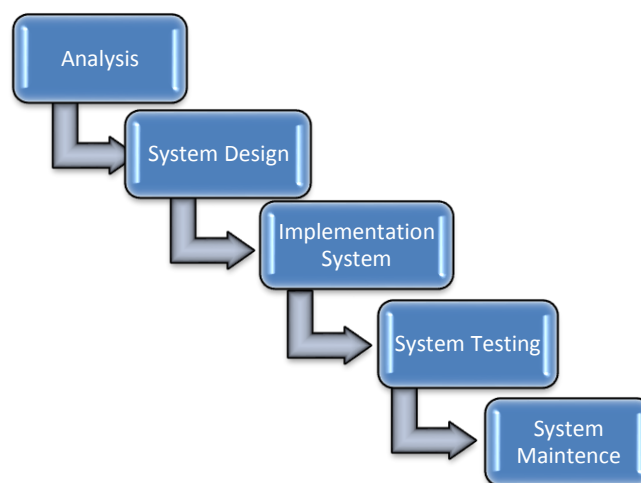

Figure 1. Waterfall Method

a) Analysis:

- Identify the need to collect information about business processes related to HR management that will be automated by the system.
- Interview potential users and stakeholders to understand needs.

b) System Design:

- Designing the architecture of a website-based personnel data information system, including database structure, user interface and business logic.
- Prepare a data flow diagram to describe the flow of data in the system.
- Determine the technology and platform that will be used in system development.

c) System Implementation:

- Developing a website-based personnel data information system based on the design that has been created.
- Integrate system components and ensure that the system functions according to established specifications.

d) System Testing:

- Perform performance tests to evaluate system response to
- Conduct user acceptance testing to validate whether the system meets user expectations.

e) System Maintenance:

- Provide training to users on how to use the system effectively.
- Identify and fix bugs or problems that arise after system implementation.
- Carry out routine maintenance to ensure system performance remains optimal and in line with the organization's developing needs.

By following the stages sequentially, the development of a website-based personnel data information system can be carried out in a structured and efficient manner according to the Waterfall method approach.

RESULT AND DISCUSSION

Usecase Diagram

Use case is a technique in system analysis and design that is used to describe interactions between the system to be built and other actors or entities. Use cases describe how the system will be used by users to achieve certain goals. Includes steps or scenarios that describe how an actor or user interacts with the system to achieve a specific goal.
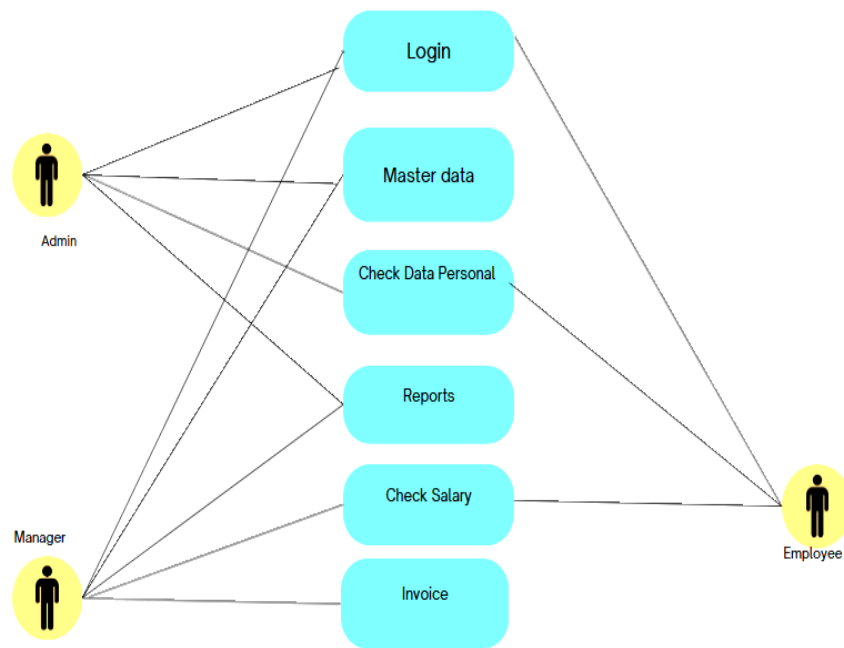
Figure 2. Use Case Diagram

In Figure 2 above is a Use Case Diagram which has an explanation for each of them;

Manager: Can log into the application, can add, delete and update employee data, produce or monitor reports related to personnel data to support decision making, can update company invoice data.

Admin: Data logs into the application, can add, delete and update employee data, can check personal data, view results of personnel data reports.

Employees: Data logs into the application, can view and update their personal information, such as contact data, work history and performance, can see salary slips, deductions, cash receipts every month.

Apps View

Figure 3. New Account (Registration)

In figure 3 is the initial registration stage to have a new account which consists of a username and password to enter the application
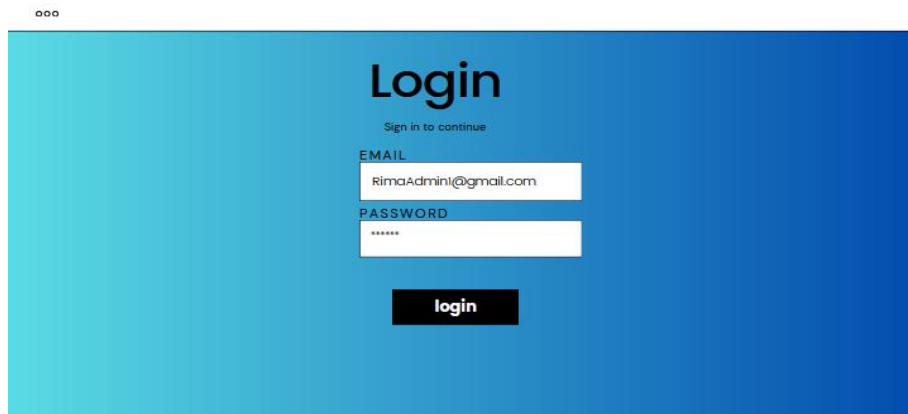
Figure 4 Login

In figure 4 is login menu which the second stage after register using the email and password that was registered in the first stage. After filling click login button to enter application
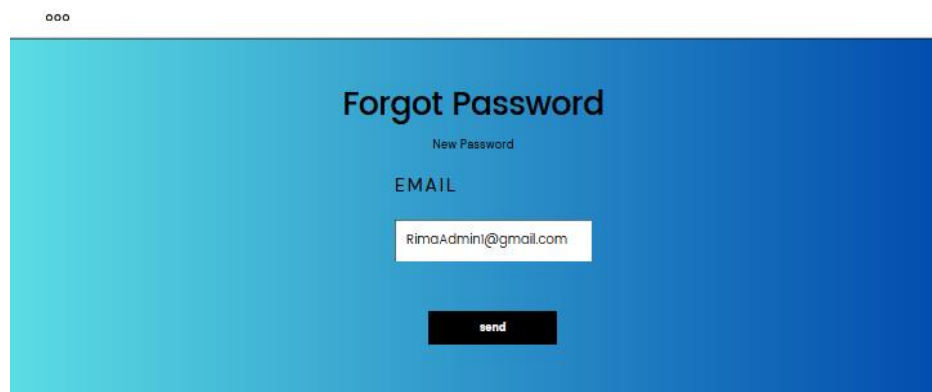

Figure 5 Forgot Password

In figure 5 is menu for forgetting the password that was registered in first stage. Then you have to refill your email and click the send button, then a new password will be automatically sent or entered in the email, then user has to check the email to retrieve the new password.

Figure 6 Employee data at branch offices

In figure 6 is the entire employee data from several company branch offices

Figure 7 Employee Attendance

In Figure 7 is employee attendance data consisting of employee ID, employee name, entry time and exit time.

Figure 8 Print ID Card

In figure 8 is an employee ID card that can be printed

Results and Discussion
Results:

The implementation of a website-based personnel data information system makes a significant contribution to increasing efficiency and management of human resource management (HR) at XYZ Company. With the adoption of information technology, administrative processes related to managing employee data become more efficient and automated. Features such as employee data management, attendance scheduling, absenteeism, and reporting are more easily accessible and integrated on one platform. This allows HR managers to focus more on HR development strategies and data-based decision making. Apart from that, the use of a website-based personnel data information system also increases information accessibility for all members. Employees can easily access information about themselves, such as employment history, biodata, salary, benefits, or performance appraisals. Thus, this system not only provides benefits for HR managers, but also for employees who can be more proactive in managing their careers.

Discussion:

The implementation of a website-based personnel data information system has had a significant positive impact on HR management. Improved efficiency in administrative processes leads to savings in time and resources, as well as reducing the potential for human error in data management. Additionally, the ability to produce accurate, data-driven reports allows HR managers to make more timely decisions. On the other hand, employee information is sensitive data, appropriate steps need to be taken to protect the data from cyber security threats. In the future context, it is necessary to continue evaluating and updating the personnel data information system to ensure that it remains relevant to the company's evolving needs. Collaboration between HR departments, IT and upper management will be key in ensuring successful implementation and management of this system in the long term.

CONCLUSION

In this research, it can be concluded that the implementation of a website-based personnel data information system significantly increases the efficiency and management of human resource management (HR). With the adoption of information technology, administrative processes related to managing employee data become more efficient and automated. Features such as employee data management, attendance scheduling, and report generation become easier to access and integrate on one platform. The main advantages of implementing a website-based personnel data information system are: Increased efficiency in HR administration and management processes, Increased accessibility of information for HR managers and employees, Produced accurate and data-based reports to support better decision making, Reduced the potential for human error in employee data management. In this way, we can continue to utilize information technology as a tool to increase the efficiency and effectiveness of HR management, as well as achieve larger business goals.

REFERENCES

[1] Dharmawan, I. W., Raka, A. G., & Mardika, I. M. (2019). Implementasi Program Sistem Informasi Manajemen Kepegawaian (SIMPEG) Berbasis Web Di Badan Kepegawaian Dan Pengembangan Sumber Daya Manusia (BKPSDM) Kabupaten Badung. *Public Inspiration: Jurnal Administrasi Publik*, 4(1), 31-38.

[2] Prasta, A., & Halim, Z. (2023). Rancang Bangun Sistem Informasi Pengelolaan Data Pegawai Menggunakan Geolocation Berbasis Website. *KLIK: Kajian Ilmiah Informatika dan Komputer*, 4(3), 1819-1828.

[3] Fradito, A., Amiruddin, A., & Handayani, O. (2023). Evaluasi Penerapan Sistem Informasi Manajemen Kepegawaian Madrasah Berbasis Website. *MindSet: Jurnal Manajemen Pendidikan Islam*, 177-185.

[4] Samauna, R. H. (2022). Analisis Penerapan Sistem Informasi Manajemen Kepegawaian (Simpeg) Dalam Pengelolaan Administrasi Kepegawaian (Studi Kasus Pada Kantor LAPAS Perempuan Kelas III Mamuju). *Jurnal Ilmiah Universitas Batanghari Jambi*, 22(3), 1849-1856.

[5] Gusriani, I., Salabi, A. S., & Yuliza, Y. (2023). Manajemen Sumber Daya Manusia dalam Pengembangan Madrasah Berbasis Digital pada Madrasah Aliyah Negeri Lhokseumawe. *Indonesian Journal of Islamic Educational Management*, 6(2), 56-63.

[6] Indonesiawan, R. C. S., Putra, A. B., & Fitri, A. S. (2023, November). RANCANG BANGUN SISTEM INFORMASI KEPEGAWAIAN DENGAN ANALISA PIECES BERBASIS WEB. In *Prosiding Seminar Nasional Teknologi dan Sistem Informasi* (Vol. 3, No. 1, pp. 147-154).

[7] Rifqi, M. N., & Aldisa, R. T. (2024). INFORMATION SYSTEM FOR SALES OF CAKES USING THE WATERFALL METHOD IN THE RATIH SHOP. *INTERNATIONAL JOURNAL OF ECONOMIC LITERATURE*, 2(3), 841-847.