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The Development of an Application for The Management of ZISWAF at LazNas PHR

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Abstrak

Kemajuan teknologi informasi telah merevolusi cara lembaga dan instansi beroperasi. Untuk mengikuti perkembangan ini, LazNas PHR perlu mengembangkan aplikasi untuk Manajemen ZISWaf. Proses penerimaan konvensional tidak efisien dan tidak menggunakan internet, mengakibatkan laporan dan distribusi terlambat. Aplikasi manajemen ZISWaf berbasis website dibuat untuk menyederhanakan proses penerimaan, pengumpulan data, distribusi, dan pembuatan laporan. Proses pengembangan melibatkan analisis kebutuhan, desain, pengembangan, pengujian, dan penarikan kesimpulan. Aplikasi dikembangkan menggunakan metode pengembangan sistem aplikasi satu halaman dan diuji melalui uji penerimaan pengguna. Hasil uji menunjukkan evolusi positif, menunjukkan bahwa aplikasi berhasil membantu petugas dalam mengelola ZISWaf. Aplikasi berhasil mengintegrasikan penggunaan teknologi informasi dalam pengelolaan ZISWaf di LazNas PHR, berkontribusi pada kemajuan dan modernisasi Lembaga.

Abstract

The advancement of information technology has revolutionized the way institions and agencies operate. To keep up this progress, LazNas PHR needed to develop an application for ZISWaf Management. The conventional reception process was inefficient and did not use the internet, resulting in delayed reports and distributions. A website based ZISWaf management application was created to streamline the acceptance, data collection, distribution, and report generation

process. The development process included needs analysis, design, development, testing and conclusion drawing. The application was developed using the single-page application system development method and was tested through user acceptance tests. Results of the tests showed positive evolution, indicating that the application successfully assisted officers in managing the ZISWaf. Application has successfully integrated the use of information technology into the management of ZISWaf at LazNas PHR, contributing to the advancement and modernization of the institution.

Introduction

In the current organizational context, data and information play a crucial and significant role. Efficiency and accuracy in managing data and information are determining factors for the growth and progress of an organization. Therefore, effective management of data and information is considered a crucial aspect in maintaining the smooth flow of work processes and for analysing the development of tasks themselves. In this regard, the presence of computerized application systems is deemed an unavoidable necessity in the effort to optimize data and information management (Sovia, Yanto & Nursam, 2020). Computerized application systems can enhance the efficiency and accuracy of data management compared to manual systems, aid in making better decisions, and reduce the risk of human errors (Ghasemi, Shafeiepour, Aslani & Barvayeh, 2011). These systems also facilitate quick and easy accessibility to data, thereby recommended for improving organizational productivity (Al-Ahdal, 2020).

The concept of applications, according to (Ramadhan, 2022) refers to the use of systematically organized instructions or statements in a computer to process input into output. An application is a transformative process that involves transitioning from manual methods to computer-based ones with the goal of developing a system or program capable of optimizing the efficient and effective use of data (Kaur & Kaur, 2022). The developed application offers practicality and easy access to information. The primary objective of information technology development in companies and institutions is to enhance efficiency in data processing and presentation (Haleem, Javaid, Qadri & Suman, 2022). In this context, the application facilitates more effective use of data and simplifies information access for external parties. Additionally, the application is expected to expedite the processes of service delivery, data storage, and presentation to enhance efficiency and service quality (Dwivedi *et al*, 2023).

Lately, the User Interface technique known as Single Page Application (SPA) has experienced development. SPA is a UI technique that displays only one page without changing the URL when users navigate (Kornienko, Mishina, Melnikov, 2021). Content corresponding to user interactions is dynamically fetched, and the server only needs to update specific parts of the page without refreshing the entire page. SPA enhances the speed and responsiveness of web applications, as well as improving the user experience (Irudayaraj & P, 2019).

The National Amil Zakat Institution (LAZnas) Chevron District-Rumbai is an organization with a strong focus on carrying out its duties. They are committed to facilitating zakat payments for muzakki (those who give zakat) and providing assistance to mustahik (those who receive zakat), aiming to enhance their dignity and humanity. Local resources and funds from zakat, infaq, shodaqoh, endowments (ZISWaf), as well as other humanitarian social funds, are the mainstays of this institution. These financial resources primarily come from Muslim employees of Chevron working across Chevron Districts in Indonesia.

In 1994-1997, zakat funds were traditionally collected through mosques, from collection to distribution. However, the zakat collection has now evolved, and it can be done through the PIZSA account. The funds are accumulated from a 2.5% deduction from employees' salaries and other funding sources. The Amil Zakat Institution has expanded in each district, and in 2007, the National Amil Zakat Chevron Indonesia (LAZnas Chevron) was established during the Zakat Seminar at the 38th MTQ forum in Dumai. The name LAZnas later changed to LAZnas Rokan Employees of Pertamina Hulu Rokan (PHR) and currently is known as LAZnas Pertamina Hulu Rokan.

LAZnas zakat collection also includes a program called Salary Allotment (SALOT). SALOT is a special program for PHR employees who are interested in paying their zakat monthly. This program is still manually operated through WhatsApp to send a monthly salary deduction authorization letter, and if approved, a receipt will be sent after receiving the zakat from the institution's treasurer. This receipt is also sent along with a notification that LAZnas has received and distributed the zakat, delivered via WhatsApp. Overall, this program is still manually operated and not well-computerized. The recording of zakat funds received by LAZnas is also manually done through Microsoft Excel. With such a system, the financial department of LAZnas often faces difficulties in receiving, recording, and reporting the funds they have received, especially as accountability to regular donors.

The lack of integration between the receipt systems has resulted in delays in distributing funds to mustahik (those who receive zakat) because the reports of receipts from the receiving points are not immediately conveyed. To distribute funds and rice to mustahik individually, receipt reports are needed to calculate the amount to be distributed. Currently, the calculation process is still manual, leading to situations where funds and groceries that should be distributed are not fully utilized. This issue arises because distribution occurs simultaneously with the ZISWaf receipt process at the central receiving point. Consequently, officers have to visit mustahik individually to accurately distribute the remaining funds and groceries that have not been distributed.

In terms of supporting the efficiency and effectiveness of managing zakat, infaq, shodaqoh, and endowments (ZISWaf) at LazNas PHR, a specific application is needed to assist in various activity processes. The application will cover receipt, mustahik data collection, distribution, reporting, as well as calculating the amount to be distributed to mustahik and reporting distribution to muzakki. In this research, the focus is on developing an applied research application that is practical and relevant to the needs of LazNas PHR. This research is important as a concrete solution to support integrated ZIS management at LazNas PHR. Based on this background, it is necessary to design and build a ZISWaf Management Application that will serve as a tool to enhance work effectiveness, facilitate information exchange, and data processing at LazNas PHR.

The research problem formulation is how to manage ZISWaf funds with a single-page application at LazNas PHR? Therefore, the objective of this research is to understand the management of ZISWaf funds with a single-page application at LazNas PHR. Furthermore, the implications of this research are to provide information and references for the community, including practitioners, academics, and regulators, related to the management of ZISWaf funds conducted by LazNas PHR. The novelty of this research lies in the design of a Single Page Application-based application for managing ZISWaf funds.

Method

This research is a case study that adopts a phenomenological approach. The method used in this research is qualitative descriptive. The phenomenological approach aims to obtain a profound understanding of human or societal responses to their existence and the

experiences they undergo in interaction. The research was conducted at LAZnas PHR located in Pekanbaru. The research subjects consist of the Fund Collection Department, Fund Distribution Department, Muzakki (those who give zakat), and Mustahik (those who receive zakat). The focus of this research is the analysis of the ZISWaf fund management system in the organization.

The method used in this research is a systematic case study analyzing qualitative data. This method pays special attention to specific cases that emerge in the research object. In this analysis, all collected data, both primary and secondary, are carefully processed and organized in a structured manner. The data are grouped based on identified patterns and themes, classified, and interconnected with each other. This analysis process is carried out continuously, starting from the data collection stage in the field to in-depth analysis (Lester, Cho & Lochmiller, 2020).

This paper is written by addressing the formulated problem to be examined. The problem analysis to create solutions in this writing is conducted by reviewing relevant literature. The method employed involves a literature review that will be aligned with conceptual ideas and existing problems. The development of the website utilizes the Waterfall Development Model, also known as the Sequential Linear Model (Tjahjanto, Arista & Ermatita, 2022). This Development Model is categorized as a sequential software development approach that progresses through stages of analysis, design, coding, and testing (Wijayanto, Kumarahadi & Prabowo, 2023).

For this research, a structured and scientific approach was undertaken to meet the research needs. The method used was application programming through the development of source code tailored to the desired application requirements. The research steps include Needs Analysis, Application Design, Application Development, Testing, and Conclusion Drawing.

Zakat, Infaq, Shodaqoh, and Wakaf (ZISWAF)

Zakat is a religious obligation in the form of financial wealth and is considered one of the pillars of Islam (Waliyansyah, Hermawan & Herlambang, 2022). Thus, zakat can be interpreted as an act of worship carried out in fulfilling the command of Allah. There are two types of zakat, namely zakat fitrah and zakat mal. Zakat fitrah is a form of zakat that must be given by all Muslims, including men, women, adults, and children, at a specified time, namely before the first day of Syawal. According to (Kirsan, Arisa & Putra, 2022), Infaq can be defined as the act of giving wealth, spending wealth, or expending wealth for good purposes, including as a donation or to fulfill personal and consumptive needs. Meanwhile, Shadaqah refers to the expenditure of wealth or funds with the intention of drawing closer to Allah, as an act of worship or righteous deed (Jaenudin & Herianingrum, 2022).

User Acceptance Test

User acceptance testing is the final stage where employees interact directly with the system to ensure compliance and enhance productivity (Kirsan, Arisa & Putra, 2022). This testing aims to verify whether the existing functions have been operating according to needs or functionality. After testing is conducted, the obtained data is measured using Likert's Summated Rating (LSR) method. According to (Khabsa *et al*, 2023), the Likert's Summated Rating measurement scale is used to assess the attitudes, opinions, and perceptions of individuals or groups towards an event or phenomenon.

Each respondent has an interpretation of the total score, consisting of the maximum score, which is the highest score achievable, calculated by multiplying the maximum score for one respondent by the number of respondents. The minimum score is the lowest score achievable, calculated by multiplying the minimum score for one respondent by the number of respondents. The median score is the middle score, calculated by multiplying the median score for one respondent by the number of respondents. The first and third quartile scores are scores that divide the

data into four equal parts, calculated by multiplying the first and third quartile scores for one respondent by the number of respondents. The interpretation of the total score is that the obtained score falls between the third quartile and the maximum score.

Result and Discussion

This research results in the design of an application for managing zakat, infaq, wakaf, and shodaqoh. This design includes the application structure, flowchart, data flow diagram, and database. The application has two interfaces: the administrator and the muzakki (the one who gives zakat). Each interface has functionalities and access rights tailored to the user's role in the system.

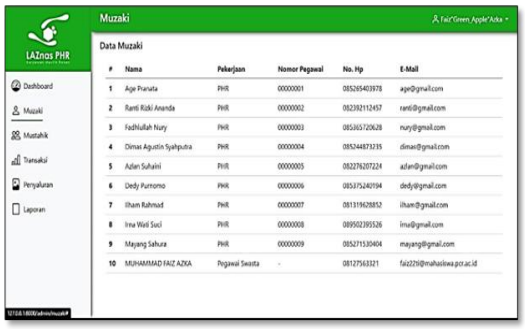
User Login Interface

The login page is the interface accessed by users. Users use the login form available on this page to access the application. Figure 1 shows the display of the login page that can be seen.

Picture 1. User Login Interface
Source: Research Data, 2023

Admin Login Interface

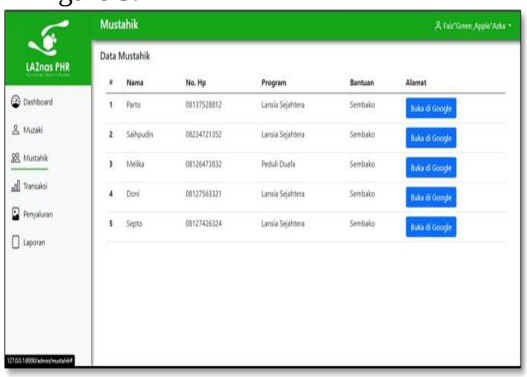
Below is the result of the application interface design that includes the administrator interface. One of the features provided is multiple menus consisting of the dashboard, Muzakki, Mustahik, Transactions, Distribution, and Reports. In the Muzakki menu, it contains data about registered muzakki with details such as name, occupation, employee ID, phone number, and email. After the user successfully logs in, the Homepage becomes the main menu for the user. The display of the Homepage can be seen in Figure 2.



Picture 2. Admin Login Interface
Source: Research Data, 2023

Interface for Mustahik Menu Accessed as Admin

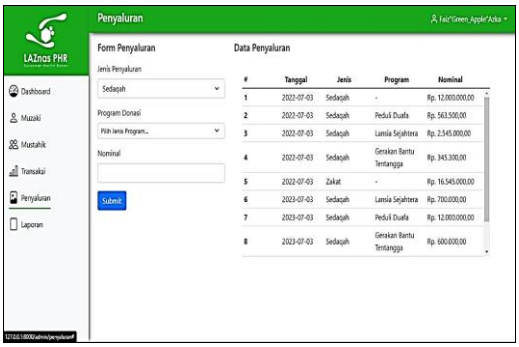
In the Mustahik menu, it contains data about registered mustahik with details such as name, phone number, Program Type, Aid Type, and address. In the address section, there is a button that connects directly to Google Maps, making it easier for the amil to find the mustahik's house during distribution. The display can be seen in Figure 3.



Picture 3. Interface for Mustahik Menu
Source: Research Data, 2023

Distribution Menu Interface

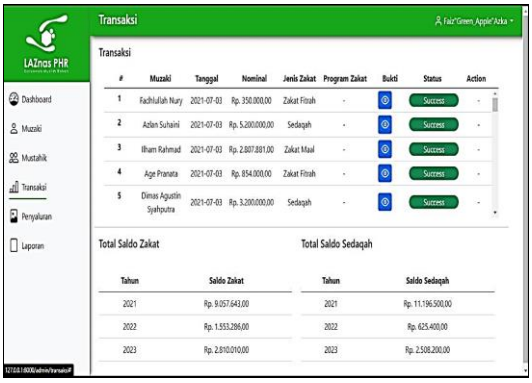
The design of the application interface includes a distribution menu interface consisting of several menus, such as Home and Distribution. After a successful login, the Home page becomes the main menu. On this page, it displays information similar to the administrator interface. The following is an image that illustrates the display of the distribution menu interface.



Picture 4. Distribution Menu Interface
Source: Research Data, 2023

Transaction Menu Interface

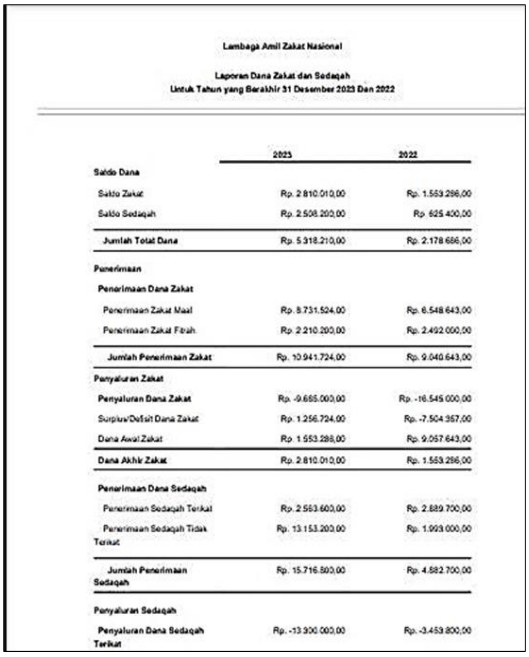
In the transaction menu, there are details of transaction updates when a muzakki has made a fund transfer. In this transaction menu, there is data such as the muzakki's name, transfer date, transfer amount, selected type of zakat, program type, transfer proof, status, and action. Furthermore, at the bottom, there is a total of collected ZISWaf, with details of the year and ZISWaf balance. Figure 5 illustrates the display of the transaction menu that can be viewed.



Picture 5. Transaction Menu Interface
Source: Research Data, 2023

Report Menu Interface

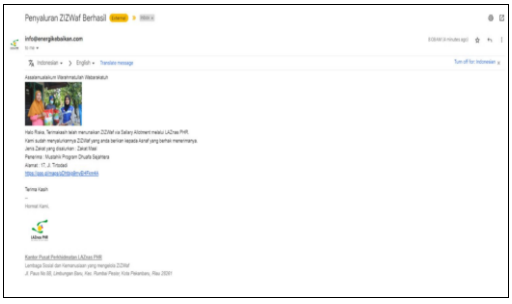
The output of this application is a fund usage report. All inputted data will be integrated into each account in this report. The format of this report is in accordance with PSAK 109, which is the standard for preparing Islamic accounting reports in Indonesia. The display of the report output can be seen in Figure 6.



Picture 6. Report Menu Interface
Source: Research Data, 2023

Distribution Notification Interface

Each Muzakki will receive information related to the distribution of ZISWaf funds that have been deposited. Notifications will be sent to each muzakki's respective email. The notification interface can be seen in Figure 7.



Picture 7. Distribution Notification Interface
Source: Research Data, 2023

Acceptance Testing Results

To assess the system's acceptance, the method employed involved administering a questionnaire to respondents. In this study, the questionnaire was tested among ZISWaf managers who served as respondents in LAZnas PHR. A total of seven respondents participated in this research, including Operational Managers, Financial Managers, Front

Office (FO), Da'wah Supervisors, Socio-economic Supervisors, Education Supervisors, and Multimedia Supervisors. Each test consisted of presenting ten questions to the respondents, each with four answer options. Evaluation was conducted using the Likert scale, and the calculation results can be observed in Table 1.

Table 1. Testing Result

Respo	Testing Result										Total
nden	1	2	3	4	5	6	7	8	9	10	
1	4	4	4	4	4	4	4	4	4	4	40
2	4	3	4	4	3	3	3	4	4	4	36
3	3	4	4	4	4	4	4	4	4	3	38
4	3	3	4	4	4	4	4	4	4	4	38
5	4	4	3	4	4	3	4	4	4	4	38
6	4	4	4	4	3	3	4	4	3	3	36
7	4	4	3	4	4	4	4	4	4	3	38
Total											264

Source: Research Data, 2023

After conducting the user acceptance test, it was found that the total score from the 10 questions posed to the 7 respondents was 264. This score falls between the median and the third quartile in the Likert scale interpretation, indicating that the respondents provided a positive assessment and that the application created has been successful.

Conclusion

The development of the zakat, infaq, wakaf, and shodaqoh management application has been successfully completed and can provide assistance to officers in terms of collection, recording of mustahik data, and distribution of zakat, infaq, and shodaqoh. By using this application, the conventional process of managing zakat, infaq, wakaf, and shodaqoh can be replaced. Every data entered by officers will be integrated, preventing delays in the distribution of zakat, infaq, wakaf, and shodaqoh. Additionally, the application also provides information to muzakki about the distribution of their funds. After conducting the acceptance test with seven respondents answering ten questions, the total score obtained was 264. Therefore, it can be concluded that the application has a positive impact, is successful, and is beneficial for use by LAZnas PHR.

For future researchers, it is recommended to develop an Android-based application design for ease of use anytime and anywhere. Additional menus for mustahik are needed so that muzakki can obtain more detailed information by adding photos and a life history list.

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