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The Design Of a Web-Based Letter Filing System

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ABSTRACT

In the present digital age, information technology has revolutionized how businesses and institutions conduct their operations, including managing documents and archives. This condition also pertains to the Indonesian Mosque Council, which is crucial in coordinating and overseeing religious activities at multiple mosques throughout Indonesia. A vital element of operating it is the management of archiving and correspondence. This study aims to create an online letter storage system for the Indonesian Mosque Council in the Baleendah District. The system will aid the Indonesian Mosque Council in virtually and systematically organizing letters and associated documentation. The study was conducted using the development system methods approach. The system development method involved building a prototype by first exploring the requirements for constructing the system, planning the development of the prototype, and subsequently executing the development and evaluation of the online letter storage system prototype. The online letter storage system prototype was prepared for the Indonesian Mosque Council and is currently being tested and evaluated for its usability. This system includes recording incoming and outgoing mail, conducting document searches, ensuring secure storage, managing access permissions, and generating reports to enhance productivity and efficiency in preserving correspondence and streamlining the information retrieval procedure. The built system includes specific features like logging mail, conducting searches, ensuring secure storage, managing access permits, and generating customized reports to cater to the operational needs of the Indonesian Mosque Council. However, it is limited in that it cannot be applied to different objects due to varying user requirements. The study's constraint is that the web-based letter filing system was only evaluated and implemented at the Indonesian Mosque Council in Baleendah District. Therefore, the system's findings and efficacy cannot be generally applied to other sub-districts or religious organizations in Indonesia with different requirements and circumstances.

Keywords: Mail Filing System, Web, Document Management Efficiency, Data Security.

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INTRODUCTION

In the present digital epoch, information technology has revolutionized the way diverse organizations and institutions conduct numerous facets of their operations, encompassing document and archive administration. The Indonesian Mosque Council (DMI) also plays a crucial role in coordinating and overseeing religious activities in multiple mosques around Indonesia. An essential aspect of running it is preserving and managing correspondence. (Huang, 2022)

Currently, numerous DMIs rely on manual techniques for storing letters and papers, which are often inefficient, vulnerable to harm, and challenging to access for authorized individuals. Furthermore, monitoring correspondence and pertinent documents becomes exceedingly intricate and laborious. Web-based technology provides a streamlined and comprehensive option for submitting DMI letters in this particular situation. The online Indonesian Mosque Council letter filing system will streamline storing incoming and departing letters while facilitating effective management, simple indexing, and quick retrieval of archived papers. (Fachrizal et al., 2020)

Mail archive management undergoes digital change, resulting in numerous notable advantages. Web-based systems facilitate expedited and effortless retrieval of necessary documents. By employing a highly effective search technology, individuals with proper authorization can swiftly locate specific letters or documents within seconds instead of the time-consuming process of manual techniques. In addition, this system also facilitates automatic indexing, allowing for the assignment of suitable labels and categories to each incoming and outgoing letter. This feature simplifies the search procedure in the future. (Cemellini et al., 2020)

Web-based filing systems provide enhanced security in comparison to traditional approaches. Digitally stored documents can be safeguarded using several security measures, including data encryption, user authentication, and regular backup. This condition mitigates the potential for document loss or damage resulting from natural catastrophes, fire, or vandalism. Furthermore, the user's authorization level can be used to manage access to sensitive documents, so access to particular information can only be restricted to those who have been granted authorization. (Banjar et al., 2021)

Integrating a web-based mail filing system can enhance DMI's operational effectiveness and efficiency. By minimizing paper consumption, DMI can mitigate the environmental consequences and decrease the financial expenses related to acquiring, storing, and handling tangible documents. Furthermore, an automated and integrated archiving process can enhance labor efficiency, enabling DMI personnel to concentrate on more important duties that directly influence religious services. (Hikmah & Muqorobin, 2020)

This method enhances transparency and accountability in the execution of DMI responsibilities. A digital audit trail enables the tracking and recording of every action performed in the system, hence facilitating the verification and internal audit process. This not only guarantees adherence to legislation and operational standards but also enhances public confidence in DMI as a reputable and open institution. (Rajapaksha et al., 2022)

Furthermore, a web-based letter filing system facilitates enhanced coordination among the several stakeholders engaged in mosque management, in addition to the advantages above. Mosque administrators, government officials, and other relevant stakeholders can efficiently exchange information and collaborate via a unified platform. This condition promotes synergy and integration in the execution of religious programs, guaranteeing that each endeavor can be accomplished with greater effectiveness and efficiency. (Kruger et al., 2021)

When creating a web-based letter filing system for DMI, it is essential to consider several technological and functional factors. The system should be developed with an intuitive and user-friendly user interface. It is crucial to ensure that the system is accessible and user-friendly for all users, even those with limited knowledge of the technology. The system must effectively manage substantial and expanding quantities of data, considering the potentially vast quantity of letters and documents handled by DMI. It is essential to consider integrating with other pre-existing systems, such as financial and membership management, to guarantee efficient operations. (Asmoro et al., 2022; Jiang et al., 2020)

The involvement of several stakeholders is crucial in the construction of this system. Collaboration between mosque administrators, DMI workers, and information technology professionals is necessary to develop suitable system needs and specifications. In addition, training and outreach programs for end users are necessary to ensure that all stakeholders can effectively and efficiently run the system. (Hidayatulloh & Ramadhan, 2022)

Given the context provided, the study's problem is creating and implementing a web-based letter filing system to enhance and streamline document and correspondence management at the Indonesian Mosque Council. This research aims to provide a thorough, effective, and environmentally friendly solution that enhances DMI's operational efficiency and promotes transparency, accountability, and collaboration in executing religious obligations. Therefore, this internet-based method for organizing letters can serve as a prototype that can be used by other religious institutions in Indonesia and potentially on a global scale.

The Theoretical Foundation

a. Comprehending Design

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As per Maimunah's statement, design entails ensuring that each design fulfills the requirements of its consumers and operates effectively. Functions emerge as a response to human needs in an endeavor to sustain and advance life and existence in this universe.

b. Comprehending the System

A system can be characterized as gathering, manipulating, retaining, examining, and distributing data for a specific objective. Similar to other systems, an information system has input (data, instructions) and output (reports, calculations).

c. Letter Definition

According to the prevailing consensus, a letter expresses intentions through written communication. Commonly, letters are primarily recognized as a medium for transmitting written information. This perspective is a limited understanding that arises from the belief that letters are solely a means of transmitting news, even though letters encompass far broader features, such as written information. The term "written information" refers to news or updates presented in written form, such as announcements, orders, inquiries, and appeals.

Letters, such as evidence, identity cards, deeds, and contracts, can be written documentation. Based on the given description, a letter can be defined as a genuine form of written communication that serves as a tool for correspondence, adhering to specific requirements. Intending to communicate a message, one side may use a letter addressed either in the name of an individual or in the name of a position or organization. Correspondence refers to persons or organizations exchanging letters with one other, and the individuals involved in this activity are known as correspondents.

d. Comprehending Archives

Archives refer to a compilation of materials that serve a particular purpose, are organized methodically, and can be easily retrieved.

METHOD

The research methodology employed in this study is:

1. Observation is a method of gathering data by directly inspecting, examining, and analyzing registration and data processing system procedures.
2. An interview is used to gather data by posing inquiries to the Baleendah District Indonesian Mosque Council.

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3. The Literature review requires gathering data from guidebooks or references required for research writing.

The Prototype Method is a system development technique that uses a prototype to illustrate the system, enabling the client or system owner to understand the system that the development team will construct precisely.

The stages of the prototype development approach are as follows:

1. Transmission of information or exchange of messages between individuals or groups.

   Application developers and clients convene to establish the software's overarching goals, ascertain the necessary requirements, and outline the software to be constructed.
2. Efficient Strategy

   A prototype design was executed to determine the plans. This phase is executed expeditiously to ascertain the comprehensive blueprint for software architecture.
3. Rapid Design Modelling

   This condition is accomplished by developing a comprehensive design encompassing all program elements to be utilized, serving as the foundation for producing the prototype.
4. Prototype construction

   This is accomplished by converting the design outcomes into a programming language that is computer comprehensible. The outcome of this phase is a software prototype prepared for assessment.
5. Implementation, Distribution, and Response

   Assess prototypes developed and utilized to describe software requirements and evaluate accomplishments in software design.

RESULTS and DISCUSSION

A business process refers to a systematic arrangement of interconnected activities or tasks to resolve a specific issue or generate a product or service. The current DMI administration business procedure is as follows:

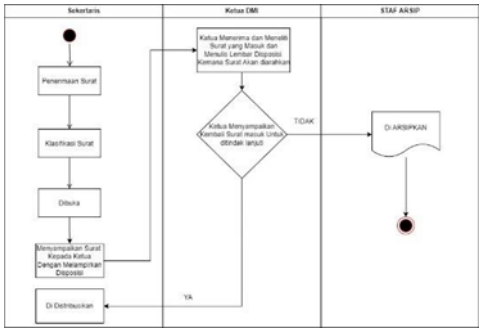

Figure 1. Business Process Analysis

SWOT analysis is a methodical process used to identify and evaluate key factors that contribute to the success of a company or related organisation. It involves analysing strengths, weaknesses, opportunities, and threats, which

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are then used as a reference for planning the development of a new system. By conducting a SWOT analysis, we can determine the existing strengths of the current system in DMI Baleendah District, as well as its weaknesses. This allows us to explore opportunities for improvement and anticipate potential threats to the system. Below is a SWOT analysis of developing a web-based administrative information system (using the case study of DMI Baleendah District), which includes:

Tabel 3.1 Analisis SWOT

Kekuatan (*Strength*)	Kelemahan (*Weakness*)	Peluang (*Opportunities*)	Ancaman (*Threaths*)
Sistem Administrasi yang sedang berjalan saat ini memiliki keunggulan di bagian rekap surat yang berjalan dengan baik,	Belum adanya sistem yang dapat merekap data Surat Masuk dan Surat Keluar secara otomatis	Dengan adanya sistem yang akan dibangun, meminimalisir terjadinya kesalahan pendataan dan pengarsipan surat	Ancaman yang dapat menimbulkan kerusakan atau celah pada sistem yaitu saat melakukan pendataan secara otomatis bisa saja di retas oleh pihak luar bila lalai dalam menjaga keamanan sistem

Figure 2. SWOT Analysis

Proposed New System

1. Use Case Diagram

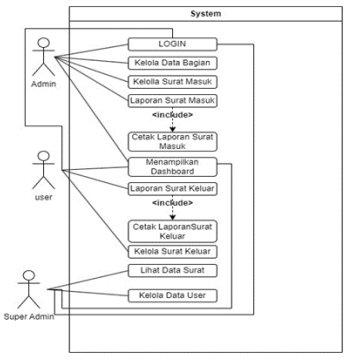

Figure 3. Use Case Diagram

2. Scenario Table

TipeUsecase	Normal		
Aktor	Administrator, Kepala Shift, Manager		
KondisiAwal	Menampilkan Halaman Login		
Kondisi Akhir	Aplikasi menampilkan menu utama		
Skenario Utama			
AksiAktor		Aksi TanggapanSistem	
1	Masuk Aplikasi	2	Menampilkan form login
3	Memasukan Username dan Password Aktor Serta memilih tombol login	4	Melakukan koneksi ke database
		5	Melakukan query
		6	a. Jika benar, menampilkan menu utama b. Jika salah, menampilkan validasi dan kembali kemenu Login

Figure 4. Scenario Table

3. Activity Diagrams

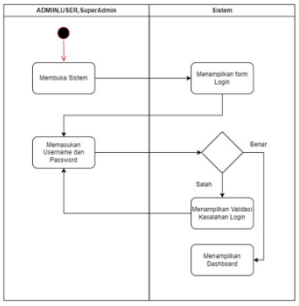

Figure 5. Activity Diagram

System Planning

1. Database Design

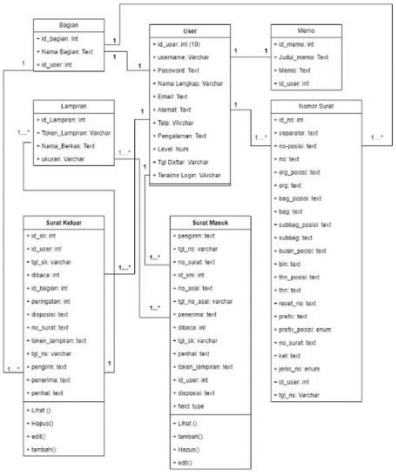

Figure 6. Database Design

Table 1. User Table

No.	Field	Type	Size
1	User_id	Int	10
2	Username	Varchar	100
3	Passwords	Text	

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4	Full name	Varchar	100
5	E-mail	Text	
6	Address	Text	
7	Telephone	Varchar	30
8	Experience	Text	

2. Interface Design

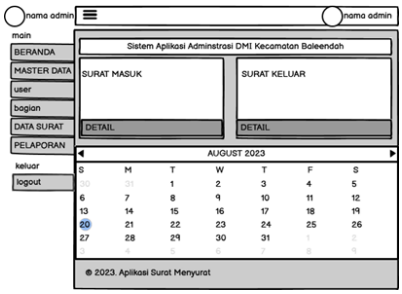

Figure 7. Interface Design

The system implementation step involves the description of an application system to prepare it for operation.

1. Login Page Display

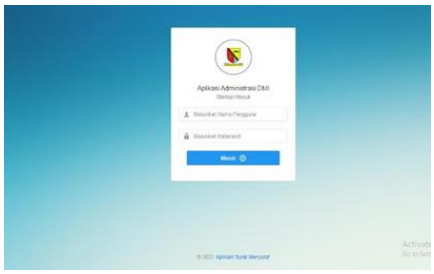

Figure 8. Login Page Display

2. Home Page/Dashboard Display

Figure 9. Home Page/Dashboard Display

3. Incoming Mail Page Display

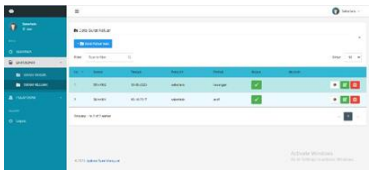

Figure 10. Incoming letter page display

CONCLUSION

Considering the issues discussed in the previous chapters, an information system has been developed to facilitate the management of incoming and outgoing mail data. This system offers various advanced features, such as automating the archiving of incoming and outgoing letters, which saves time and effort in managing documents. It also ensures the security and durability of electronic records, minimizing the risk of damage or loss of essential documents. Additionally, it expedites the internal audit and monitoring process, enhancing organizational accountability. Furthermore, it provides improved access to interested parties, such as mosque administrators, the government, and the public, who value transparency. These conclusions suggest a few recommendations for consideration. Firstly, the program should be adaptable to incorporate technological advancements over time. Secondly, the warning section of outgoing letters should include notes for letter errors to enhance precision and accuracy in mail management.

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