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Design And Building Of Web-Based Letter Archives Management In The Medan Mayor's Office

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ABSTRACT

This research aims to design and implement an efficient and integrated web-based mail archive management system in the Medan Mayor's Office. Research data was obtained through observation, interviews and documentation studies related to the process of managing letter archives at the Medan Mayor's Office. The result of this research is the development of a web-based letter archive management system consisting of modules for receiving letters, indexing, storing and searching letter archives. This system allows users to upload and search letters electronically, as well as manage metadata and mail history easily. Apart from that, this system also provides security features and access rights that can be configured according to user roles. This research can result in increasing the efficiency of mail archive management, reducing errors in mail searches, and increasing information accessibility for users. This research contributes to the development of an efficient and integrated mail archive management system in the government administration environment. It is hoped that this system can provide benefits in improving the performance of mail archive management at the Medan Mayor's Office and become a reference for developing similar systems in other government agencies.

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1.   INTRODUCTION

Mail archive management is an important part of government administration that requires an efficient and integrated system. The process of managing mail archives is still done manually and does not use a web-based approach (Akbar et al., 2022). This condition causes several problems to arise so that a website-based correspondence application is needed (Khaliq & Sari, 2022; Sulistianingsih et al., 2019). So that it can overcome problems that arise in manual systems. Manual processes in managing mail archives tend to take a lot of time and effort. Incoming mail must be printed, copied, and physically stored, which requires significant storage space. In addition, searching for the required letters becomes difficult and time-consuming, because there is no structured system for managing and indexing the letters (Mutaqin et al., 2021). Accessibility of information is limited in the management of mail archives which is still manual. Users must manually search for letters through physical archives, which is prone to search errors and wastes v(Akbar et al., 2022; Wadly & Fitriani, 2023; Wahyuni & Wadly, 2023)aluable time . In an increasingly advanced digital era, it is important for the Medan Mayor's Office to adopt a web-based approach in managing letter archives so that information can be accessed easily and quickly(Hendry et al., 2023).

Not integrating data and information on incoming and outgoing letters affects the efficiency and effectiveness of government administration processes (Akbar et al., 2022; Sulistianingsih et al., 2019; Wahyuni et al., 2022). Without an integrated system, managing letter archives becomes inefficient and has the potential to cause errors, such as losing letters or repetition in the archiving process (Kurnia et al., 2021).

So a web-based letter archive management application at the Medan Mayor's Office is needed to be relevant (Wahyuni & Marbun, 2020). By adopting a web-based system, it is hoped that it can

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increase efficiency, accessibility and integration in managing mail archives, as well as reduce errors in government administration processes (Hariyanto et al., 2019).

2. RESEARCH METHOD

1. Analysis of the running system

The ongoing procedures for archiving incoming and outgoing letters at the Langkat Housing and Settlement Area Service are still very manual and inefficient. The current procedures for incoming mail archives at the Medan Mayor's Office are as follows:

- Procedure for filing Incoming Letters

Firstly, when a letter comes in, the letter is recorded by the general administration in the agenda book. After being recorded by the general administration, the letter is handed over to the Head of General Affairs to be read. Then the Head of General Affairs sends a letter to the main director to dispose of the letter to the director of the relevant field. Then the relevant director distributes the letter again to the relevant Head of Division and gives it to the secretary. The next process is that the secretary returns the letter to the general administration. After that the general administration gives and orders the letter to the Head of General Affairs to be recorded in the agenda book. Once completed, the general administration distributes the letters to the intended divisions.

- Procedure for filing Outgoing Letters

First, the letter is typed by staff in the general department. Then it is handed over to the Head of Department for signature. After being signed by the Chief of Staff, the letter is stamped in the general section and placed in an envelope. Then the letter to be sent is recorded first in the agenda book. Once completed, the letter is sent to its destination.

2. System Design Proposal

- Admin use case diagram

The use case design flow is only used by admins, where the first process is that the admin logs in to enter the letter archiving system website, then the admin can access data processing for incoming and outgoing letters and view data reports for incoming and outgoing letters. The use case flow can be seen in Figure 1. below:
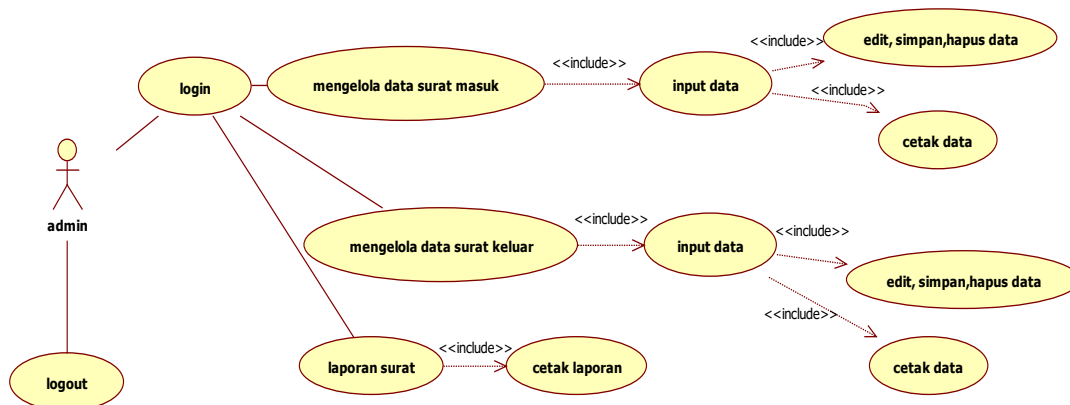

Figure 1. Admin use case diagram

- Use Case Diagram for Head/User

The use case flow used by the Head of Division is where the Head of Division can log in to the system only to view reports of incoming and outgoing mail and print reports of incoming and outgoing mail. The use case flow can be seen in Figure 2 below:
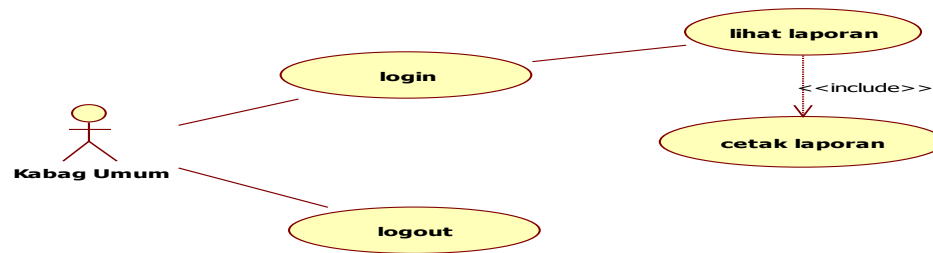
Figure 2. Admin use case diagram

- Activity Diagram Login
  activity Login that will be used by Admin and Head of Division. Where the admin and head of division log in to the system by first entering the website, then the system will display a login form, after that the admin and head of division fill in the username and password on the login form and then the system displays validation if the username and password are correct then the system immediately displays the main menu form, and If the username and password are incorrect then the system displays an error.
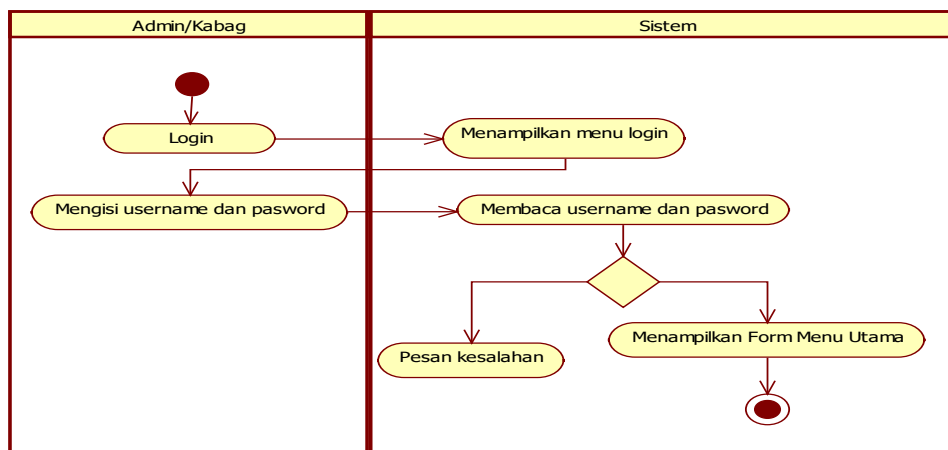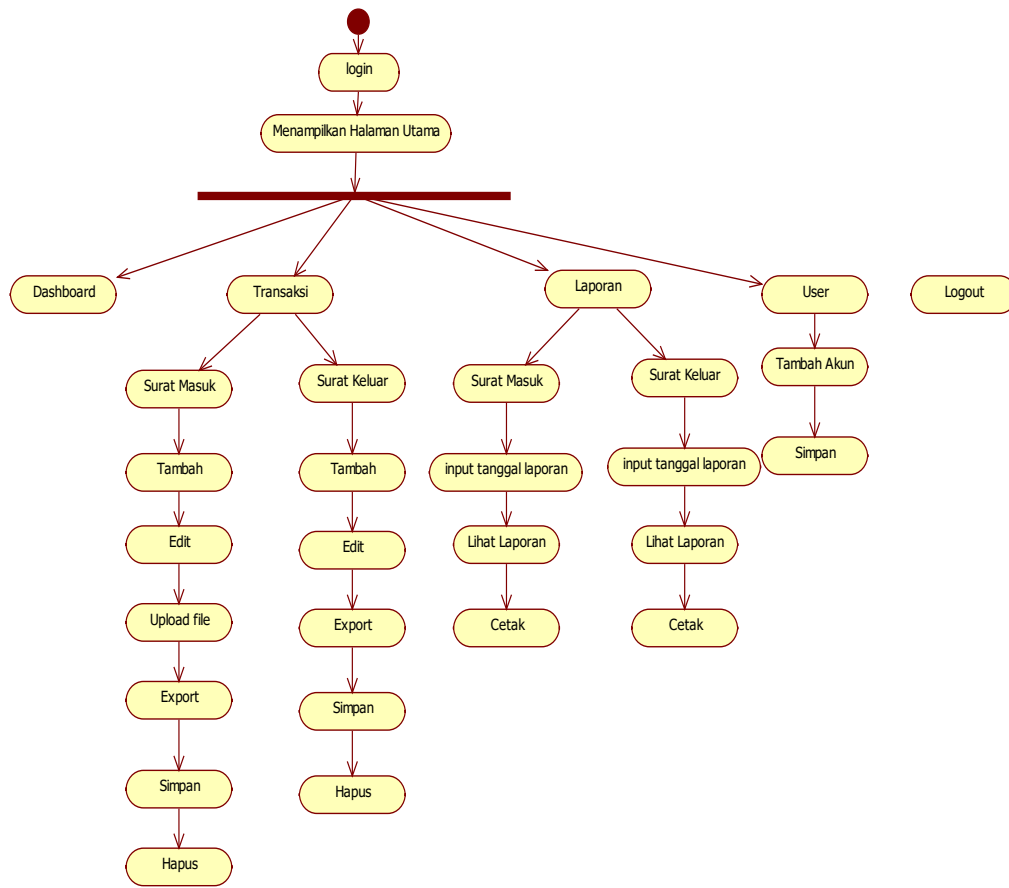

Figure 3. Activity Diagram Login

Figure 4. Activity Diagram Login

Head of Division login activity, where after logging in to the system he can enter the transaction and report form, where in the transaction form the Head of Division cannot fully control the transaction form, Head of Division can only see input of incoming and outgoing letters but cannot edit incoming and outgoing letters. outgoing mail. In the report form, the division head can only view and print reports of incoming and outgoing letters.
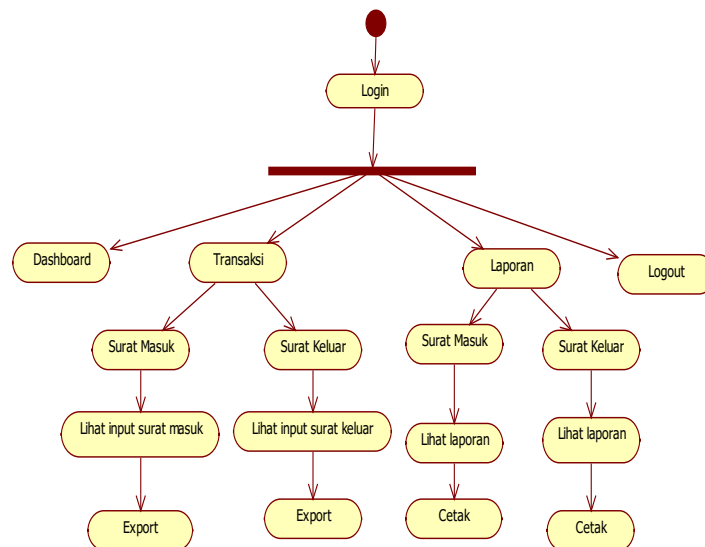
Figure 5. Activity Diagram Login
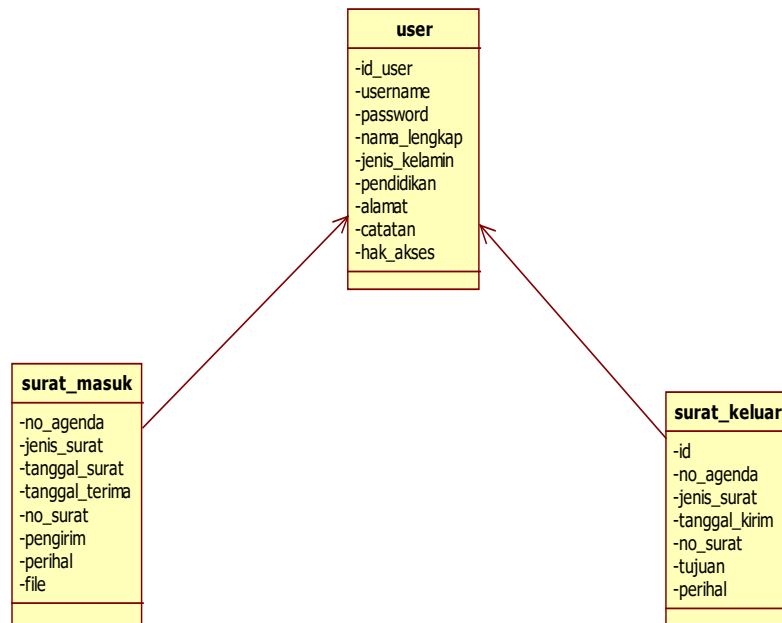
- *Class Diagram*

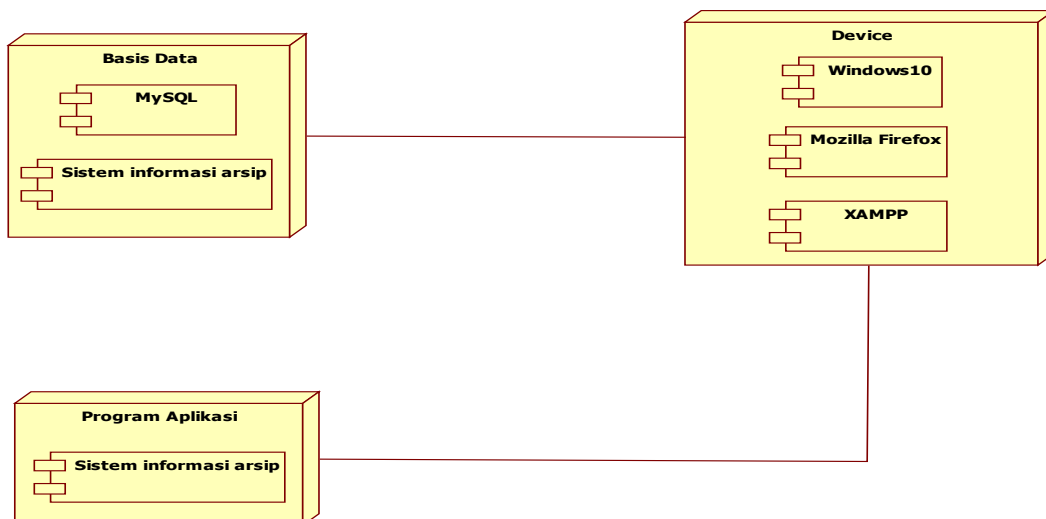Figure 6. Class Diagram

- *Deployment Diagram*

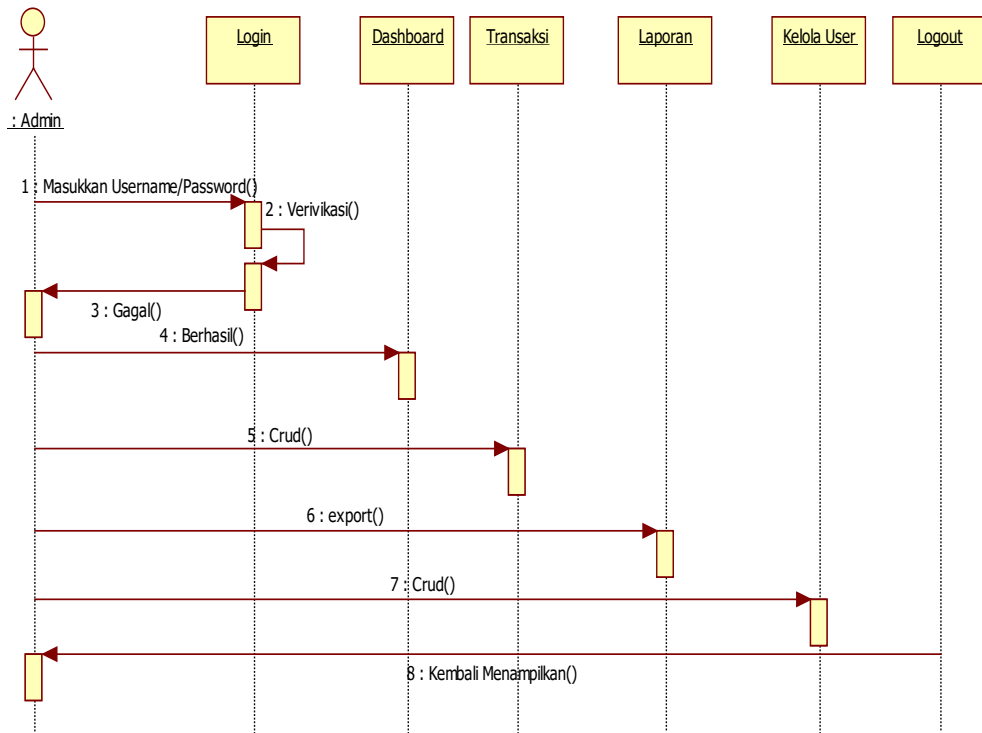Figure 7. *Deployment Diagram*

- *Sequence Diagram*

Figure 7. Sequnce *Diagram*

3. RESULTS AND DISCUSSION

- Login Page

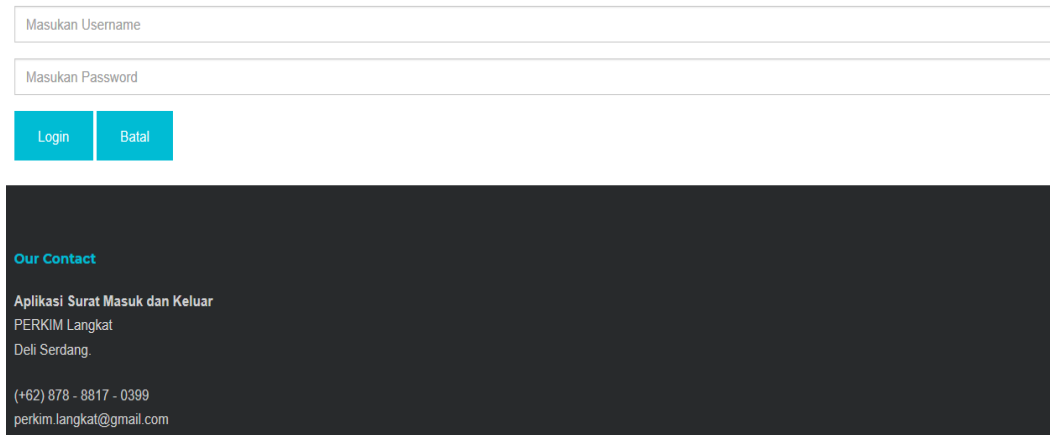The login page can be seen in the display shown in Figure 8 below :

Figure 8. Login Page

- *Home Page*

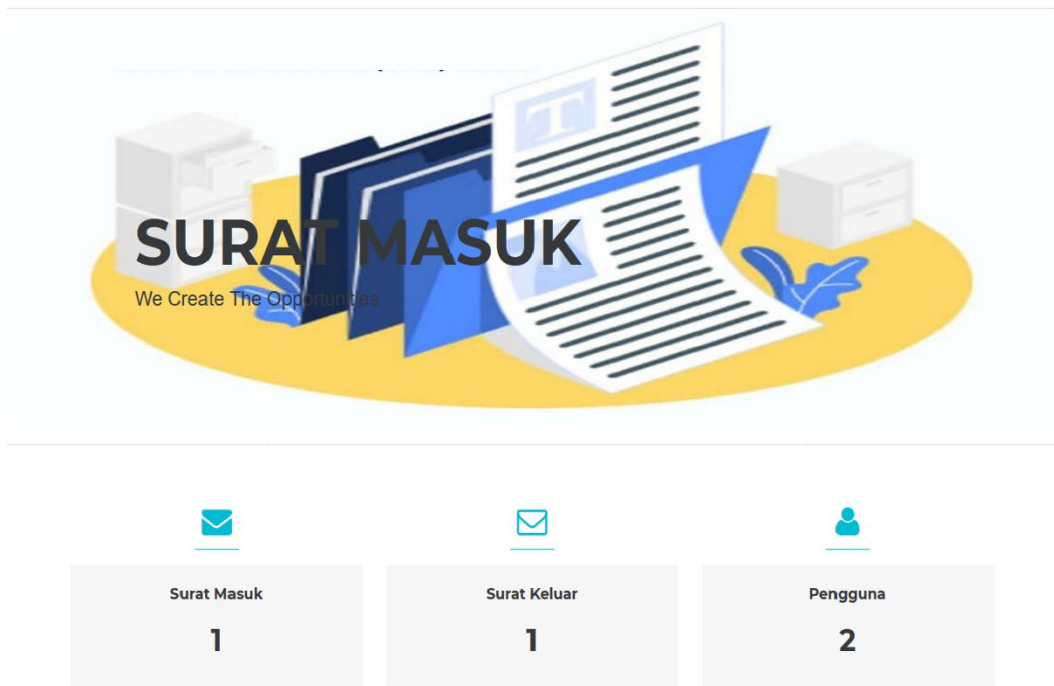The home page display can be seen in a display like Figure 9 below:

Figure 9. Home Page

• Incoming Mail Page

Figure 10. Incoming Mail Page

• Outgoing Letter Page

Add keluar

| No Agenda |
| Biasa ⌄ |
| Perihal |
| Tanggal Kirim | hh / bb / tttt |
| Tujuan Surat |
| No Surat |

Simpan   Batal

Figure 11. Outgoing Letter Page

- Report Page

Laporan Surat Masuk

No	No Agenda	Jenis Surat	Tanggal Diterima	Perihal	No Surat	Cetak Data
1	0292	Biasa	24-10-2020	Kementerian Dalam Negeri	12/02981911	🖶

Print

Laporan Surat Keluar

No	No Agenda	Jenis Surat	Perihal	Tanggal Kirim	Tujuan	No Surat	Cetak
1	232912	Biasa	Surat Kepala Desa	25-10-2020	Kades Medan	09829	🖶

Print

Our Contact

Aplikasi Surat Masuk dan Keluar

Figure 11. Report Page

4. CONCLUSION

Conclusions from the research
- Produce a letter filing information system at the Medan mayor's office.

- The administrative information system for filing letters at the Medan mayor's office can be used to assist with work and filing.
- This application system was built using PHP (hypertext processor) programming and a MySQL database using XAMPP software.

From the conclusions above, the author provides suggestions that are considered helpful and useful in the future. The suggestions that will be proposed are as follows:

- This application system still has shortcomings based on research and facts researched during interviews with resource persons.
- This system still uses a website system application so that in the future it is hoped that it will be better developed with an Android-based mobile phone application system.

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