

# Implementation of the Incoming and Outgoing Mail Management Information System Application at STMIK Neumann Indonesia

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## Abstract

Managing incoming and outgoing mail is a crucial part of administrative activities in higher education institutions, including STMIK Neumann Indonesia. Currently, the process of recording and archiving mail is still done manually, which can potentially cause various problems such as delays in processing mail, lost documents, and difficulties in searching archives. To address these issues, a computerized and integrated Incoming and Outgoing Mail Management Information System application was developed. This application is designed with a web-based approach using the PHP programming language and a MySQL database. The main features developed include managing incoming and outgoing mail, agency data, mail classification, user management, and mail reports. This system is also equipped with an access rights-based login function to maintain data security. Test results show that the application can help administrative processes be faster, more efficient, and well-documented. By implementing this information system, STMIK Neumann Indonesia can improve the effectiveness of administrative services, accelerate the flow of mail disposition, and create a structured and modern digital archiving system.

**Keywords:** Information Systems, Incoming Mail, Outgoing Mail, STMIK Neumann, Digital Administration

## 1. INTRODUCTION

Correspondence administration is a crucial part of organizational governance, including at higher education institutions like STMIK Neumann Indonesia. Incoming and outgoing mail serve as formal channels for internal and external communication, supporting the smooth running of academic and non-academic operations. Therefore, correspondence management must be carried out systematically, promptly, and accurately [1] [2].

The manual management of incoming and outgoing mail at STMIK Neumann Indonesia has led to various administrative challenges, such as delays in mail disposition, difficulty tracking archives, and low efficiency and transparency in work processes. This poses a serious challenge, especially in the current digital era, which demands systemic and integrated transformations in educational institutions. Therefore, an information technology solution capable of effectively automating the mail processing process is needed. The development of an Incoming and Outgoing Mail Management Information System application is a strategic step to address these issues. This application is designed to digitally record, manage, and archive mail documents, complete with disposition features, status tracking, and keyword-based archive searches. The solution process begins with user needs analysis, system design, web-based technology implementation, and system testing and evaluation. With the implementation of this application, it is hoped that the mail processing process at STMIK Neumann Indonesia will be faster, more accurate, and digitally documented, in line with the institution's vision of supporting modern and efficient governance [3] [4].

In reality, the mail management system at STMIK Neumann Indonesia is still largely manual, using conventional record-keeping in diaries and physical document storage. This manual system creates various problems, such as delays in the mail disposition process, duplicated records, difficulties in document tracking, and the potential loss of important mail archives. This has implications for decreased work efficiency, low levels of documentation accuracy, and weak transparency in the flow of correspondence [5][6].

As information technology advances, the need for digital systems to support mail administration is becoming increasingly important. Implementing a web-based Mail Management Information System (MIS) can automate the flow of incoming and outgoing mail, from recording, numbering, disposition, to real-time status tracking. This system also facilitates archiving and searching for documents by category, date, or keyword [7] [8].

Along with the development of information technology, the need has emerged to integrate mail administration processes into a more structured and easily accessible digital system. Mail Management Information Systems (MIS) are available as a solution to address various mail management issues, providing features such as automatic recording, digital archiving, online mail disposition, and real-time mail status tracking. Several previous studies have shown that implementing a MIS can increase administrative work efficiency by up to 40% and reduce the risk of losing important documents [9] [10].

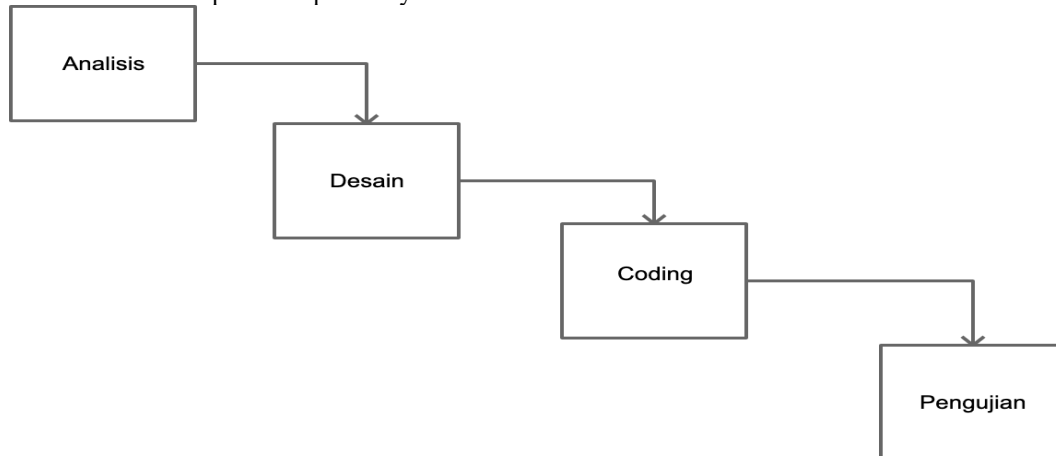
The implementation of SIMS not only improves the work efficiency of administrative staff but also forms part of the campus' digital transformation toward more responsive, transparent, and paperless public services. Therefore, the development of an Incoming and Outgoing Mail Management Information System application at STMIK Neumann Indonesia is expected to be a strategic solution in supporting effective and adaptive governance of educational institutions to technological developments [11][12]. Through the implementation of this information system, it is hoped that STMIK Neumann Indonesia will be able to optimize administrative performance and improve administrative

services for correspondence, while also supporting the digitalization of document management in a modern and professional academic environment.

## 2. RESEARCH METHODOLOGY

### 2.1 Research Methods

This research aims to design and develop an information system for incoming and outgoing mail at STMIK Neumann Indonesia. To achieve this goal, the author uses the Waterfall method, which was chosen because of its systematic and structured nature, allowing development to be carried out in a clear sequence of stages, namely needs analysis, design, implementation, testing, and maintenance [13][14]. This method is very suitable for this research, where each stage of development needs to be completed sequentially.



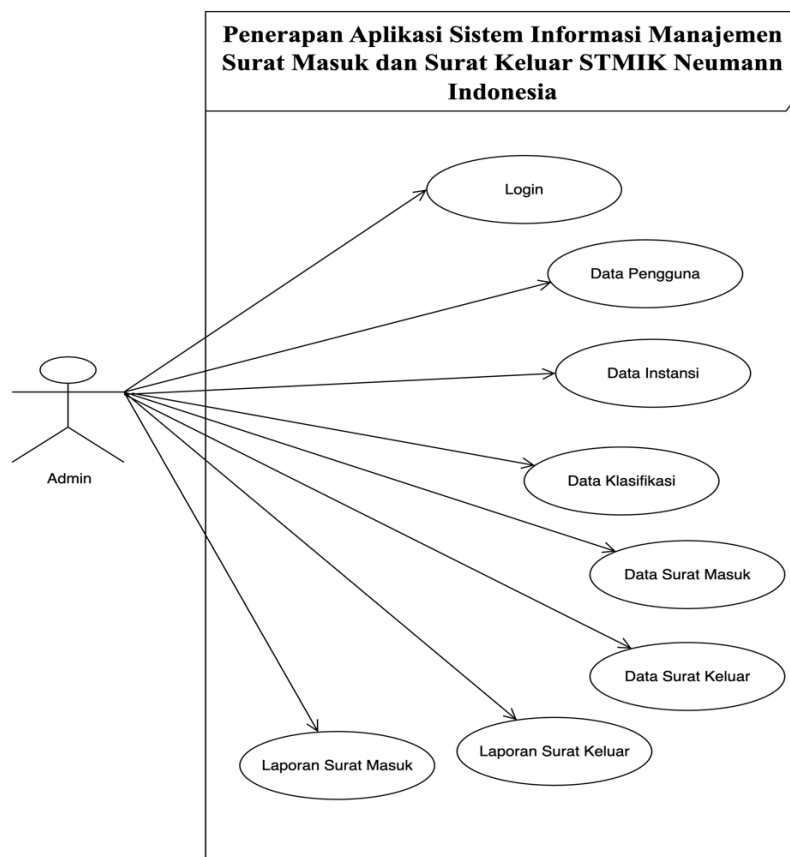
**Figure 1.** Research Stage Diagram

### 2.2 Needs Analysis

In the first stage, system requirements analysis provides an overview of a system that will then be designed according to the design requirements. This includes analysis of hardware and software, the importance of processes, inputs, and outputs, and analysis of the importance of data and data collection processes. In system development, requirements analysis is a key element [15].

### 2.3 Use Case Diagram

The use case diagram in the figure illustrates the interaction between actors (users) and the Incoming and Outgoing Mail Management Information System application system of STMIK Neumann Indonesia. This use case diagram is used to explain the main functions that can be performed by users in the system. The following is an explanation of each component: This use case diagram shows that the system built has a main function that supports digital mail management, starting from organizing user and agency data, grouping letters, recording incoming and outgoing letters, to reporting. This diagram illustrates the comprehensive and appropriate scope of the system to support the official document management process in the STMIK Neumann Indonesia environment.



**Figure 2.** Use Case Diagram

### 3. RESULTS AND DISCUSSION

The results of the development of the Incoming and Outgoing Mail Management Information System application at STMik Neumann Indonesia show that this system is capable of replacing the manual process previously used in managing correspondence. This system was successfully developed with key features such as management of incoming and outgoing mail, mail classification, user data, and periodic reports that can be exported or printed. Through this application, letters entering the institution can be recorded in real-time, attached as digital files (PDF or images), and distributed directly to relevant parties through the electronic disposition feature.

#### 3.1 Implementation

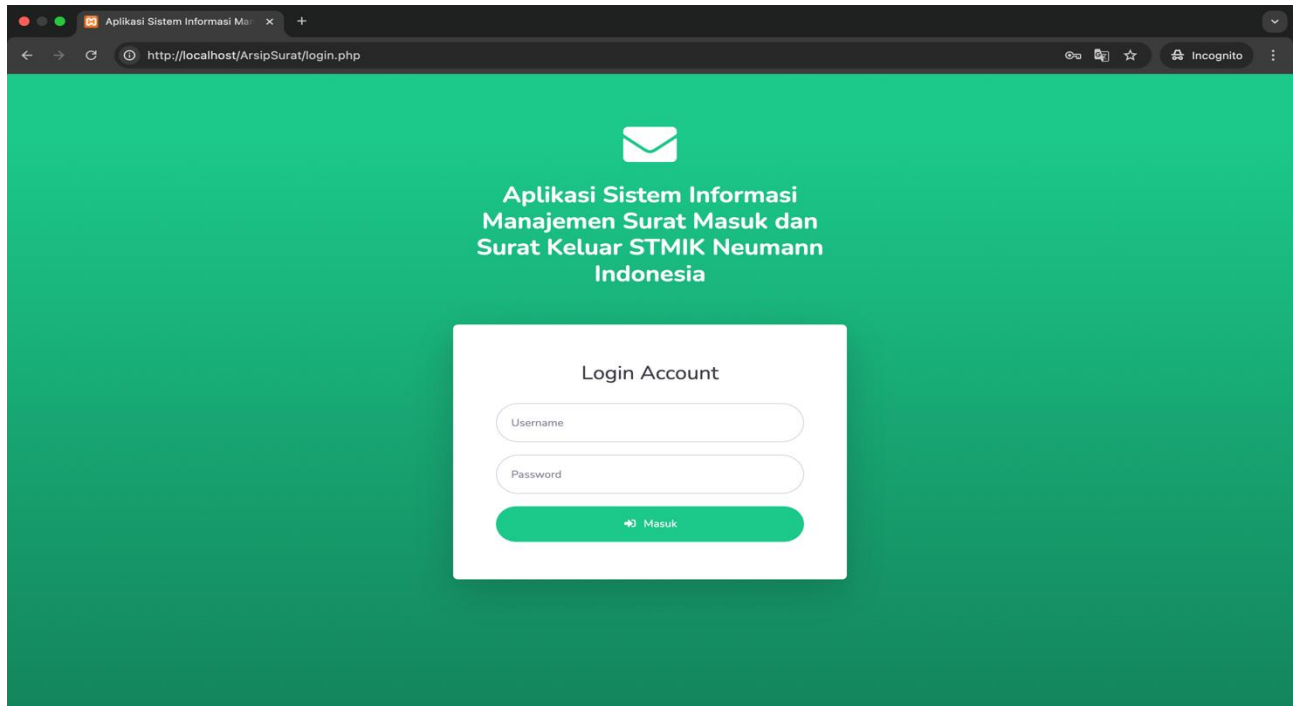
The results of the discussion indicate that the implementation of this system can improve the work efficiency of administrative staff, accelerate the distribution of information between units, and reduce the risk of losing important documents. Furthermore, this system also supports the campus' document digitization and paperless policy. Overall, the implementation of this application has had a positive impact on mail management at STMik Neumann Indonesia. With this system, administrative processes have become more organized, transparent, and modern, in line with the needs of higher education institutions in facing the era of digital transformation.

#### 3.2 Application View

The following is an overview of the user interface (UI) of the Incoming and Outgoing Mail Management Information System application at STMik Neumann Indonesia. This interface is tailored to the system's primary functions and the principles of simple, efficient, and user-friendly interface design. The interface is implemented on each page of the application and is presented in the form of a program file. The interface design is implemented using the PHP programming language, while the form design uses Bootstrap software and the CSS framework.

##### 3.2.1 Login View

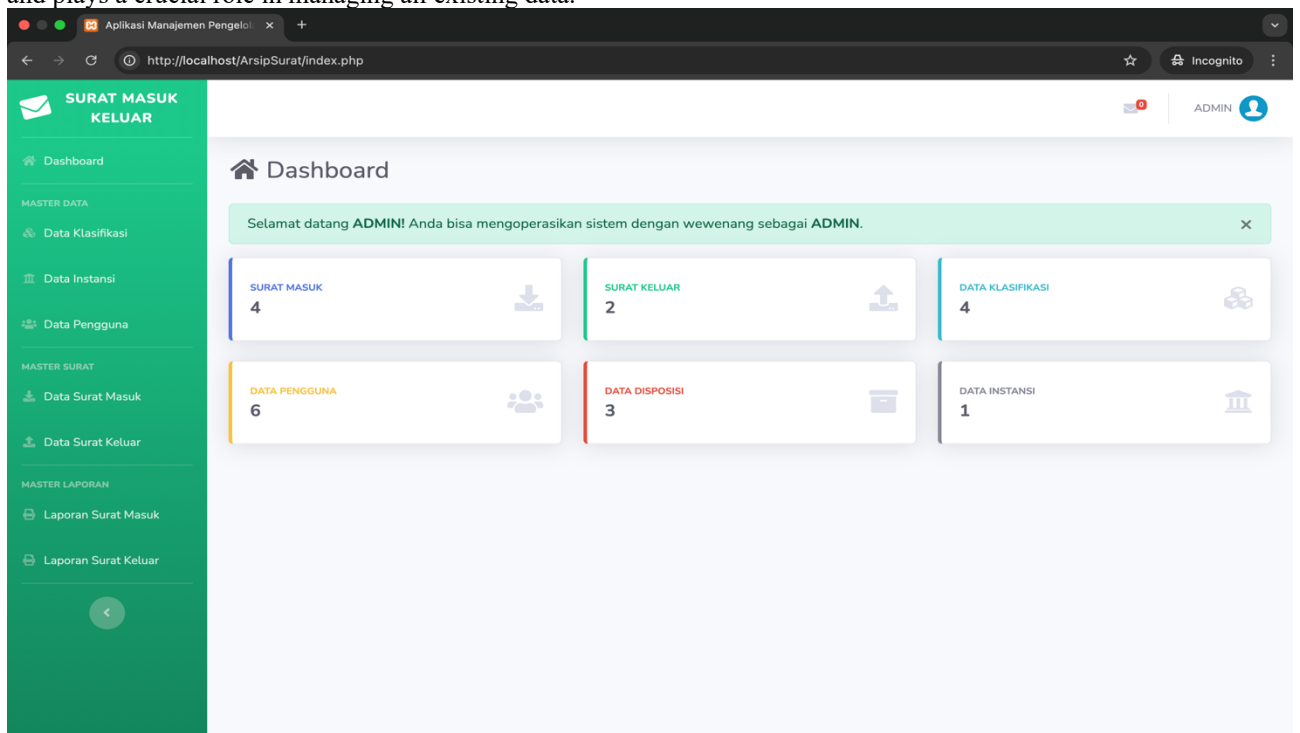
The login display of the Incoming and Outgoing Mail Management Information System Application at STMik Neumann Indonesia is the initial page that functions as an entrance to the system, which can only be accessed by registered users such as admins. This display is designed with a simple, professional, and easy-to-use interface.



**Figure 3.** Login Display Page

### 3.2.2 Main Menu View

The main page displays an admin who has successfully logged in to the incoming file acceptance website. The attached image shows the main menu (dashboard) of the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System Application. This display is the interface after a user successfully logs in as an admin, and plays a crucial role in managing all existing data.



**Figure 4.** Main Menu Display Page

### 3.2.3 Agency Data Menu

The display page displays the "Agency Data" page of the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application. This page stores and displays profile information for the system's user agencies.

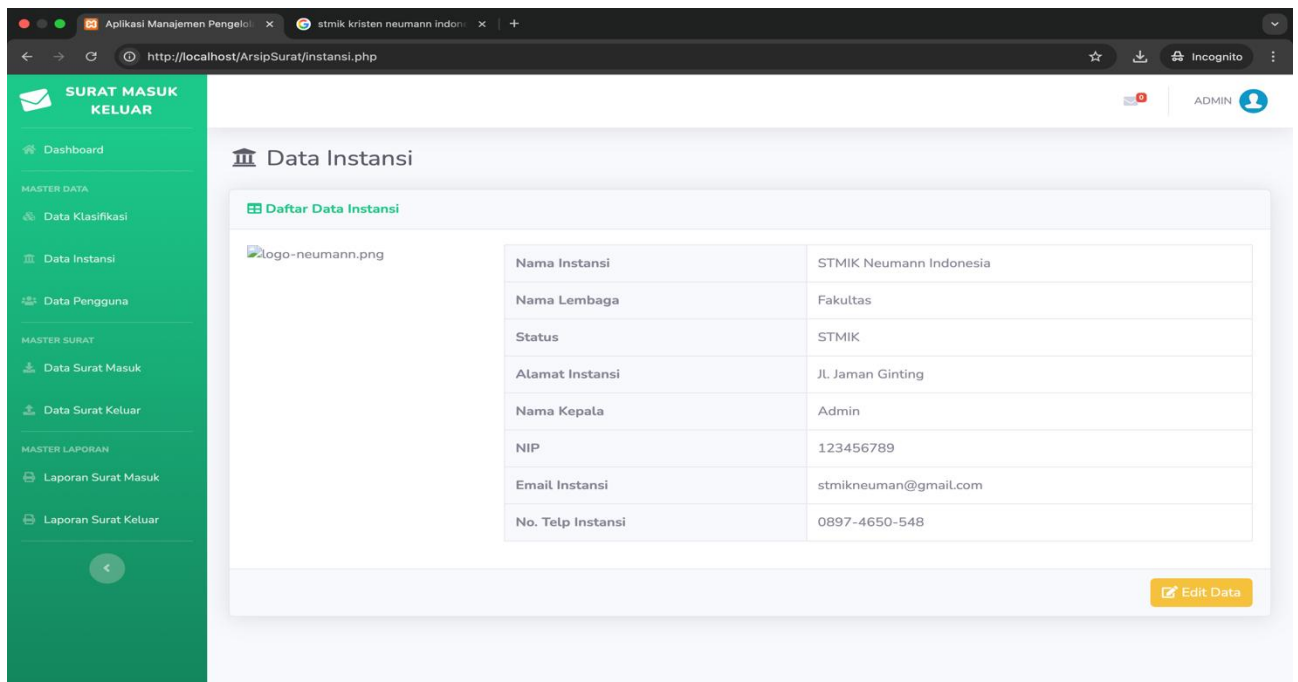


Figure 5. Agency Data Display Page

### 3.2.4 User Data Menu

The User Data Display in the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application is a page used to manage system user accounts according to their respective roles and responsibilities. This page is crucial for administrators in determining who has access and what level of access.

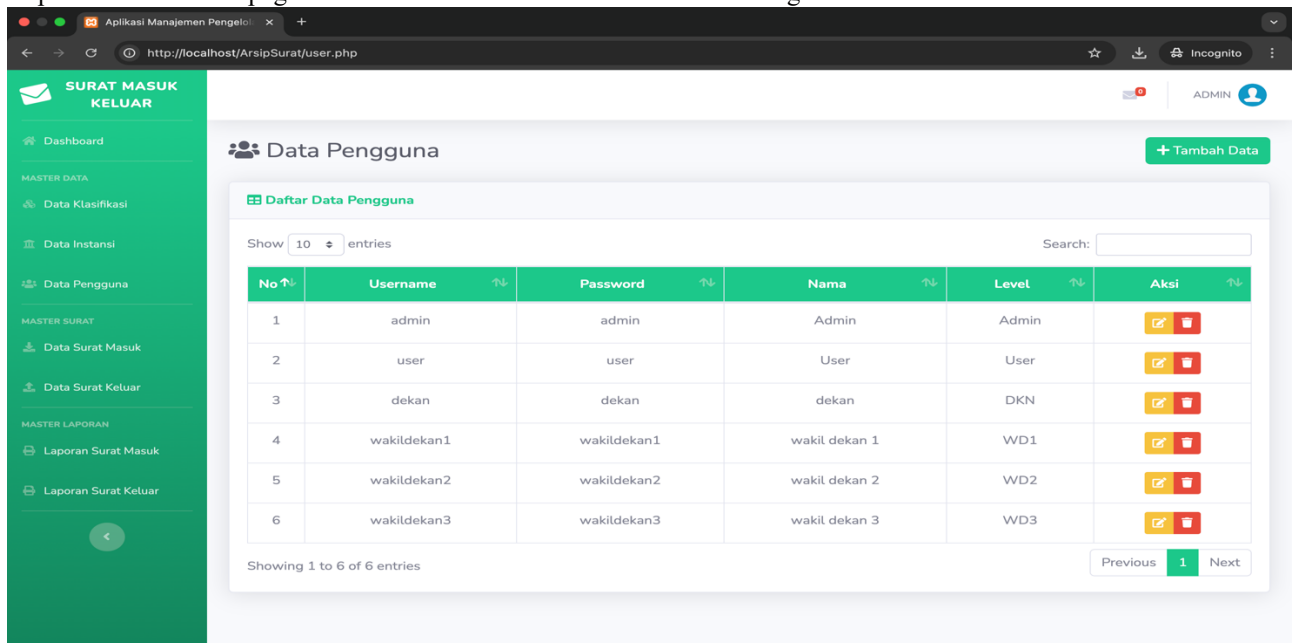


Figure 6. User Data Display Page

### 3.2.5 Inbox Menu

The Incoming Mail menu in the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application is a core feature that records, stores, and manages all mail received by the institution. This menu is designed to allow users, particularly those in the administration or administration department, to digitally and efficiently input mail data and monitor its distribution.

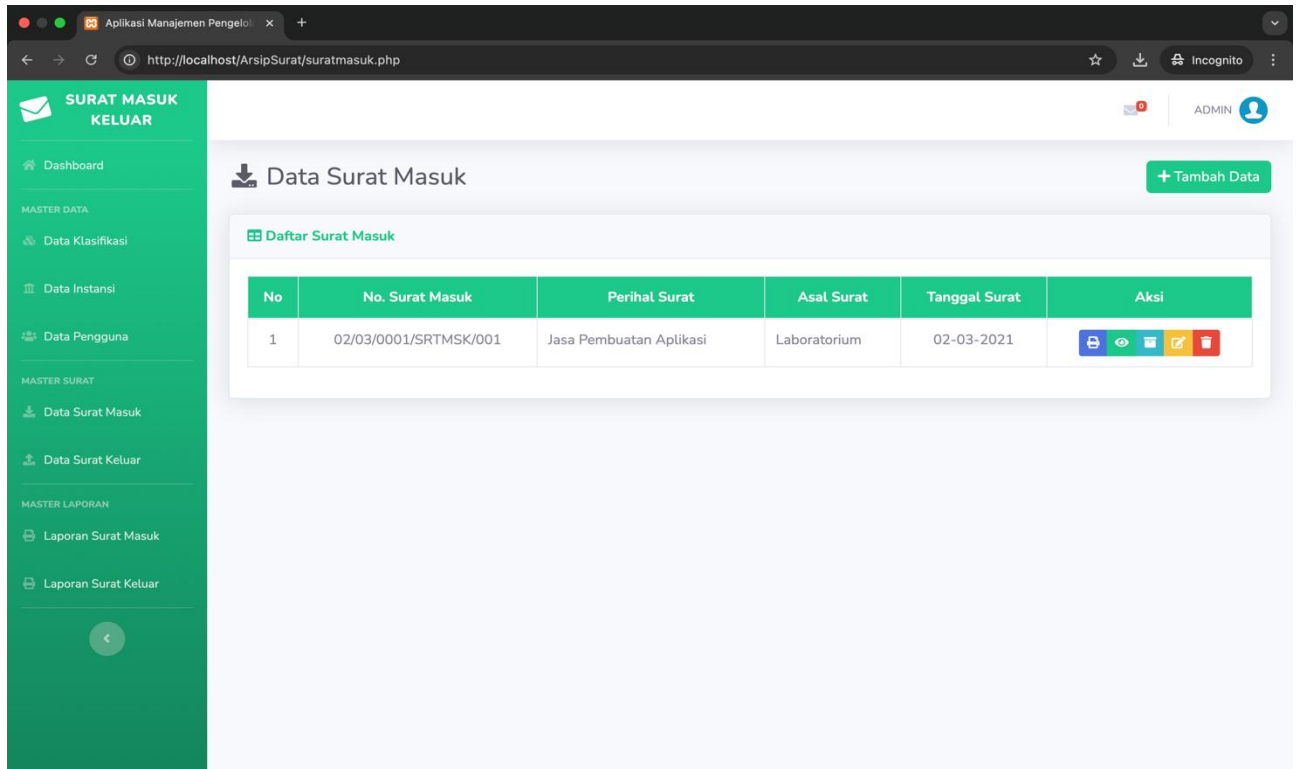


Figure 7. Incoming Mail Data Display Page

### 3.2.6 Outgoing Mail Menu

The Outgoing Mail menu in the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application manages the entire process of creating, recording, and archiving letters sent by the institution to external parties. This menu is crucial for supporting the smooth flow of official communication from the campus to other institutions, students, and collaboration partners.

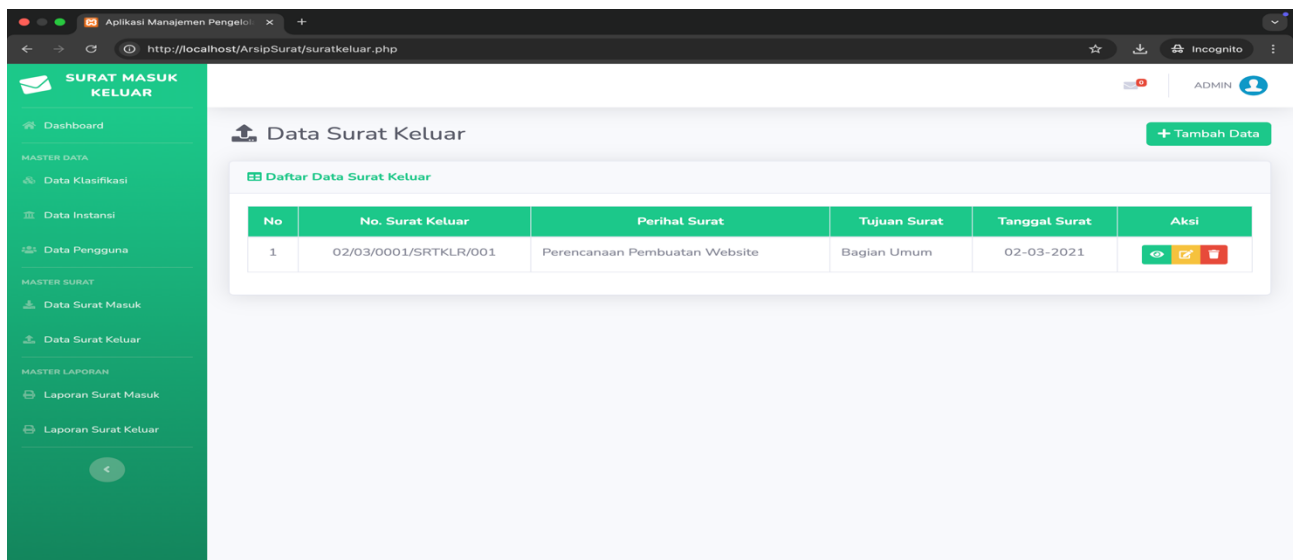
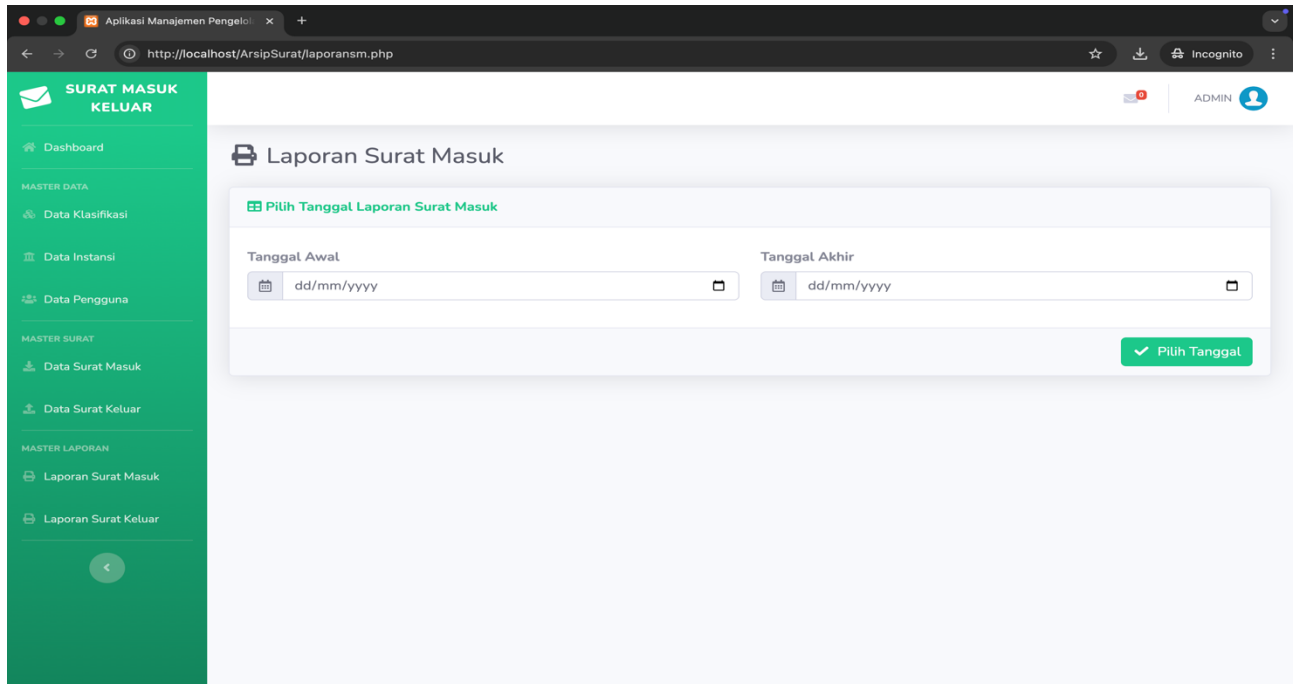


Figure 8. Outgoing Mail Data Display Page

### 3.2.7 Incoming Mail Report Menu

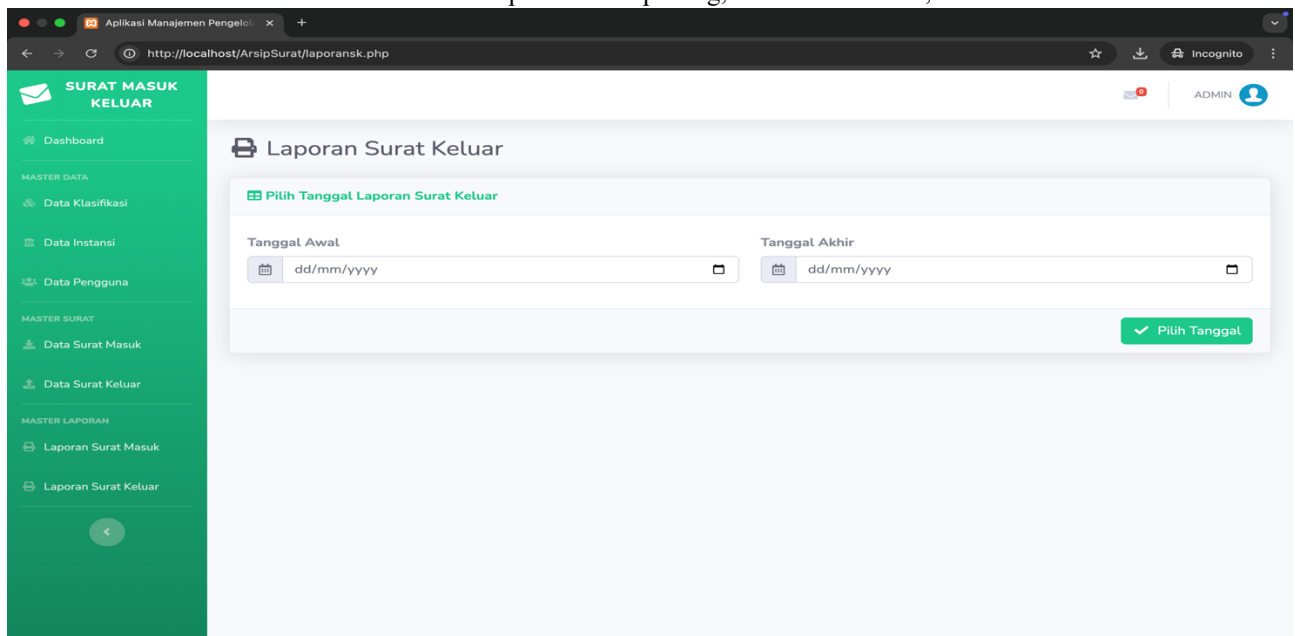
The Incoming Mail Report menu in the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application serves as a feature for displaying a systematic and structured summary and documentation of incoming mail. This menu is very useful for administrators or administrative staff for monitoring, searching archives, and generating periodic administrative reports.



**Figure 9.** Incoming Mail Report Display Page

### 3.2.8 Outgoing Mail Report Menu

The Outgoing Mail Report menu in the STMIK Neumann Indonesia Incoming and Outgoing Mail Management Information System application displays, monitors, and documents all outgoing mail activities carried out by the institution. This menu is crucial for periodic reporting, internal audits, and official documentation.



**Figure 10.** Outgoing Mail Report Display Page

## 4. CONCLUSION

The implementation of the Incoming and Outgoing Mail Management Information System Application at STMIK Neumann Indonesia has proven to significantly contribute to increasing the efficiency and effectiveness of managing correspondence administration on campus. This system is able to automate the process of recording, distribution, disposition, and archiving letters digitally and in a structured manner. With this system, letter processing time can be shortened, the risk of document loss can be minimized, and searching for letter archives becomes faster and more accurate.

In addition, the implementation of the system also encourages the realization of transparent and accountable administrative governance, in line with the digitalization efforts that are continuously developed by STMIK Neumann Indonesia. Therefore, this system is worthy of being implemented comprehensively as an administrative solution that supports the digital transformation of higher education institutions.

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