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Designing a Web-Based Mail Management System at the Beringin Helvetia Sub-district Office

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ABSTRACT

The process of administrative modernization, it is necessary to implement an information system that can support all administrative activities in an institution, institution or company. At the Beringin Helvetia District sub-district office, there is still a conventional letter archive management method where archive recording is still done using books and stationery. This often causes many problems, such as lost documents, damage or unrecorded documents. In this research, the authors try to develop an application that can record all archives in the agency. Then it will be stored in the database and can be accessed anytime and anywhere. As a result, many benefits are provided to agencies, such as more structured and neat archival data collection. The management system created in this paper is Web-based using PHP. The abstract is a short summary of the paper to help readers quickly determine the main research problem, solutions to problems encountered, research objectives and interim research results which can be in the form of numbers/percentages according to research needs.

INTRODUCTION

Along with the development of science and technology, information is currently developing quite fast. Increasingly motivated to use advanced technology as a tool or medium to maintain its existence in society. An agency needs a system archiving information because the archiving information system is a system that processing data to produce an agency will produce information that appropriate. This information in an agency will produce fast information and accurate. Fast means producing information in a timely and accurate manner The resulting archiving information can reduce errors.

There are various types of archives stored, including incoming and outgoing letters such as assignments, requests and others. Records of incoming and outgoing letters are carried out by manually recording incoming and outgoing activities in an archive notebook.

Currently processing letters at the Beringin Helvetia Angkola CAMAT Office is still ongoing using a manual system. The letter is still stored in the form of an archive stored in a book and irregular, so it requires high accuracy and it takes quite a long time to find the letter you want and get causing the loss of archives that have been saved. From these activities the process The process for archiving letters is still slow and takes a very long time.

With this information technology, it aims to increase efficiency and accuracy and security of archived documents. It is hoped that with this archiving technology can make it easier to archive letters from staff at the CAMAT Office. More letter archiving efficient and effective.

Based on the problem above, a solution is needed that can help people staff in processing incoming and outgoing mail data. With this, the author provides an overview of the existence of a computer-based technology system. It is hoped that it can provide a solution to solve the problem, which the author sets out in this research. The information system used is in the form of a database created using using Web-based PHP.

In research conducted by Sari, IP, et al (2022) regarding System Design Information on Web-Based Digital Archives Management to Manage the Archives System at Vocational School Tri This work, research is a web-based archival information system created using MySQL database with PHP connection and Codeigniter framework and web support browser as a medium for displaying content.

Other research was also conducted by Susanti and Epa (2015) regarding analysis and Design of an Information System for Management of Incoming and Outgoing Letters at SMP Negeri 1 Pangkal Pinang Using an Object Oriented Methodology that aims to build an incoming and outgoing mail application that can later produce results data on incoming and outgoing mail accurately, effectively and efficiently in accordance with Current developments in information technology start from data entry to report creation.

According to the general understanding, a letter is to convey intentions in writing. In everyday terms, letters are generally only known as a tool for convey news in writing. This understanding is an understanding in meaning narrow, as a result of the assumption that letters are only a tool to convey news, even though Letters contain a much broader aspect including written information. As for the meaning of written information here is information in the form of news or news, for example offers, orders, calls and requests. Letters can also be used as information written news records, for example letters of evidence, identity cards, deeds and contracts.

So from the description above it can be concluded that basically a letter is information sincere which can be used as a written communication tool made with certain special requirements that apply to correspondence. Conveying meaning through a letter from one party to another party can be in the name of an individual (private) and can also be in the name of a position or an organization. Activities are sent to each other by individuals (individuals) or by organizations is called correspondence and correspondence the perpetrators are called correspondents. (Meliana, 2008:13)

PHP is a web-based programming language that has the ability to processing dynamic data. PHP is said to be a server-side embedded script language means the syntax and commands we give will be fully executed by the server but included on a regular HTML page. Applications built by PHP will generally produce results in a web browser, but the process is simple the whole thing is run on the server (Sari, IP, & Batubara, IH, 2022).

SITUATION ANALYSIS

Context Diagram

A context diagram is a diagram that describes a design system in outline where there is an explanation of input output and also the process detailed but this diagram aims to explain what contexts there are and also what features will be used in the system.

Headings at the second level are written in ***boldface italics*** using uppercase and lowercase letters. Headings are written aligned left.

Data Flow Diagram

Data flow diagrams are visual models that can explain processes in detail between input, process, output, and data storage processes in the database are explained in detail. In the data flow diagram, the process at each level will be explained in detail.

Entity Relationship Diagram (ERD)

ERD is a diagram model that explains the relationships between entity relationships involved in the system. This diagram will explain how the base management process works data.

IMPLEMENTATION METHOD

Preparations for designing the incoming and outgoing mail website have begun from observations of data collection on letter archives at the Beringin Helvetia CAMAT Office. This observation was carried out with the aim of obtaining an overview of the situation relating to filing letters at the Beringin Helvetia CAMAT Office.

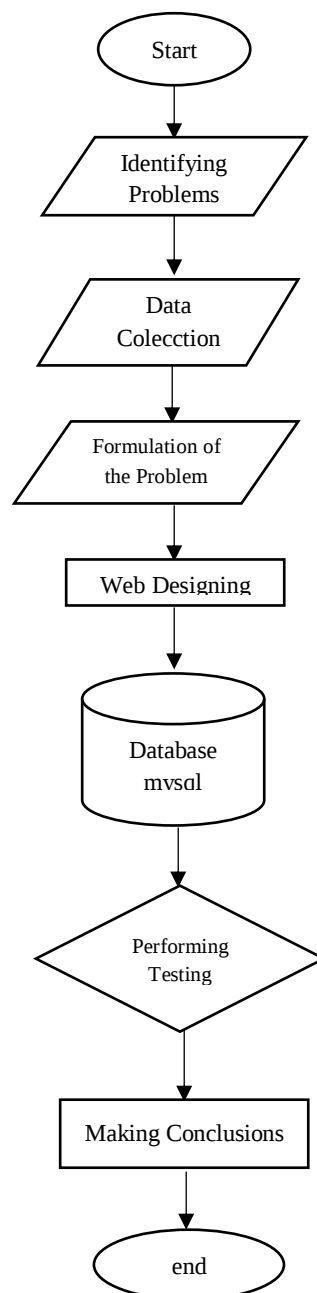


Figure 1. Flowchart of Implementation Stages

Based on the flowchart, the discussion of each can be explained stages in the research are:

1. Identifying the Problem: With the problem that has been explained, it is necessary a way out to solve problems so that you know how to design solution system.
2. Data Collection: This stage is carried out by observing the problem so that you can collect the necessary data.
3. Problem Formulation: This stage formulates the problem based on the data that has been obtained collected.
4. Web Design for Incoming and Outgoing Letters: This stage is an activity designing systems to increase performance effectiveness to meet requirements by utilizing available technology in solving problems.
 1. MySQL Database. This stage is the stage for the process of creating, editing, testing programs in accordance with system design.

2. Conduct program testing. This stage is carried out to find out successes and shortcomings of the system so that it is suitable for use.
3. Make conclusions. This stage is the stage of making conclusions all the steps taken in system design Good.

Database Management

Database management is the process of designing database tables that will implemented in the developed system. So the database table designed is:

1. Table of Incoming Letters

Table 1. Incoming Letter

No	Field Name	Type	Char	Information
1	No Agenda	Int	11	Incoming Letter Agenda Number
2	Varchar Letter	Number	255	Incoming Mail Number
3	Letter_Date	Date	-	Date of Incoming Letter
4	Received	Date	-	Letter Entry Date
5	Origin_Letter	Varchar	255	Origin of Incoming Letter
6	Regarding	Varchar	255	Regarding Mail Entry
7	Mail_File	Varchar	500	Mail Incoming File

2. Outgoing Letter Table

Table 2. Outgoing Letters

No	Field Name	Char	Type	Information
1	No Agenda	Int	11	Outgoing Letter Agenda Number
2	Letter_Date	Date	-	Letter Out Date
3	Letter_Destination	Varchar	255	Purpose of Outgoing Letter
4	Varchar Letter	Number	255	Outgoing Letter Number
5	Regarding	Varchar	255	Regarding Outgoing Letters
6	Mail_File	Varchar	500	Letter Out Date

RESULTS AND DISCUSSION

System testing is carried out to find errors in development and make improvements. In this testing process, the method used is Black Box method. System implementation is carried out by developing applications based on the design that has been carried out previously, then the results of the development are:

- a) Login Page

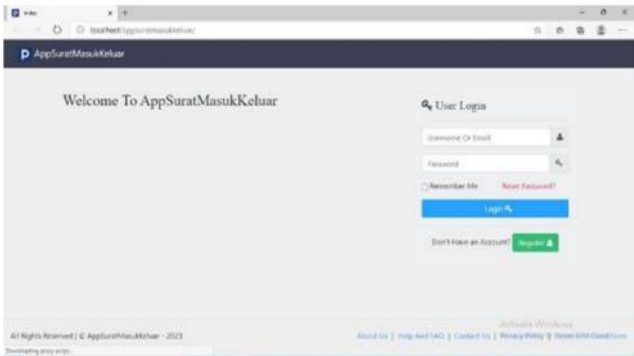


Figure 2. Login Page

b) Home Page

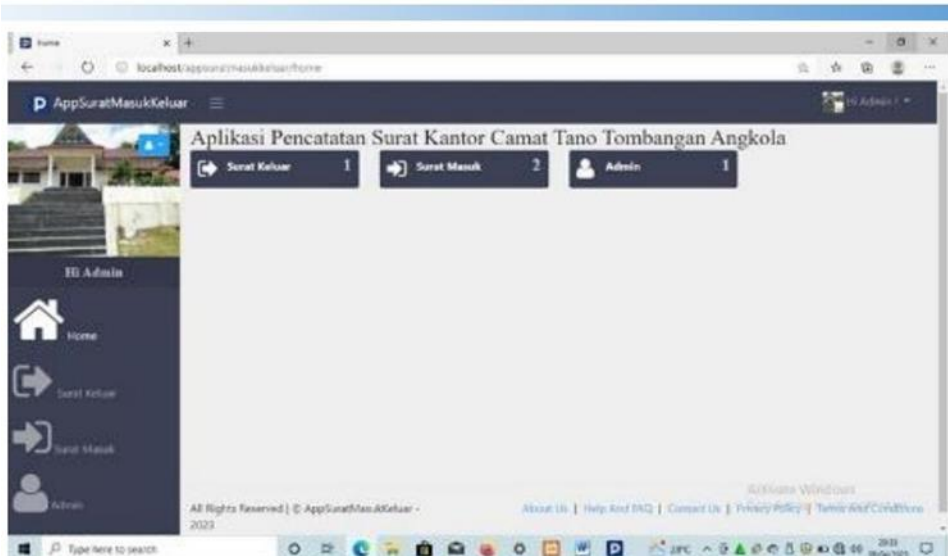


Figure 3. Home Page

c) Incoming and Outgoing Mail List Page

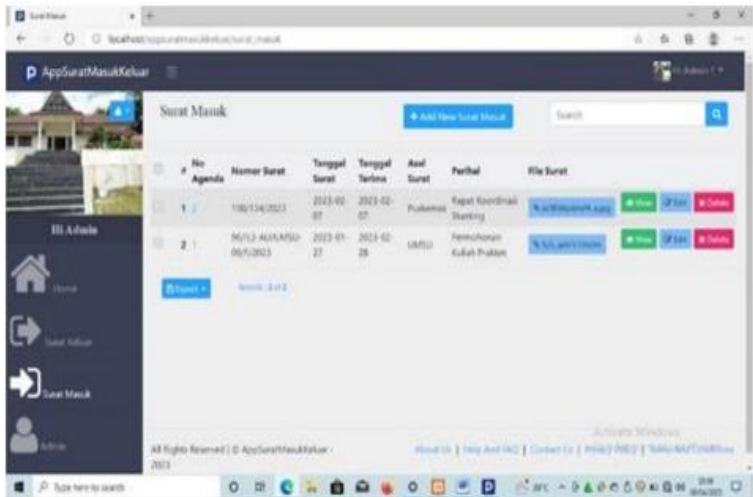


Figure 4. List of Incoming Letters

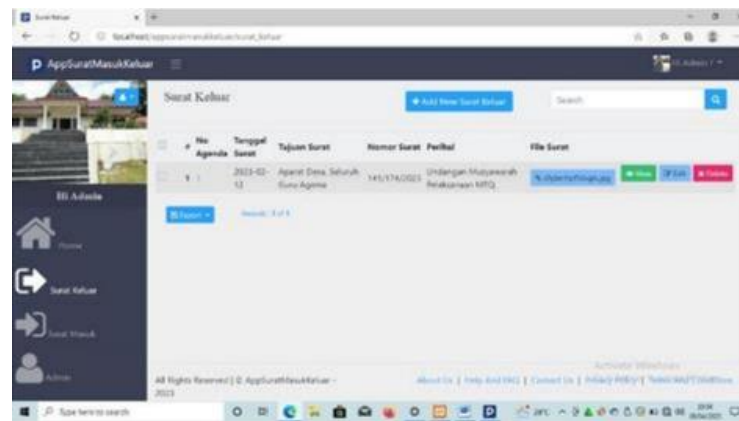


Figure 5. List of Outgoing Letters

d) Add Incoming and Outgoing Letters page



Figure 6. Add Incoming Letter Page

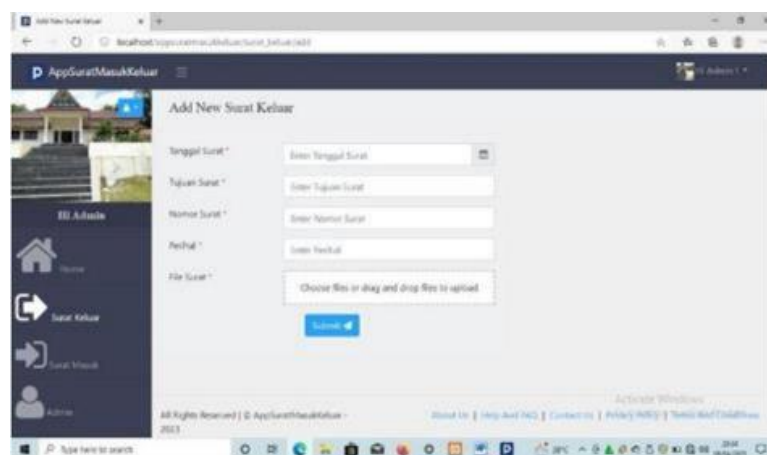


Figure 7. Add Outgoing Letter Page

CONCLUSIONS AND RECOMMENDATIONS

Developing a letter data collection application, carried out by designing uses the PHP programming language, which uses diagrams Context, DFD and ERD which describe how the system works overall. So it can be implemented in the form of an application. Application It will record incoming and outgoing letters, which is where the data is collected This is done by utilizing a database as data storage. This application will be effective in that it can help with the data collection process digital so it can be accessed at any time, so the process of archiving letters becomes easier easy.

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