Design of Health Department E-Archive

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Article Info :	ABSTRACT
Article History : Received : 06-01-2023 Revised : 15-07-2023 Accepted : 02-08-2023 Available Online : 13-08-2023 **Keyword :** **Information System, Health Office, Archiving**	*Currently, one of the problems that occurs at the Indramayu District Health Office is that the process of searching for data stored in folders is taking too long because you have to go through one sheet at a time. The data sought is also not always complete or even lost. This is because the data has not been stored in a computerized database. The purpose of this research is to create a filing information system for the Indramayu District Health Office, which will change the filing process that was previously still manual to be computerized. The formulation of the research problem is how to design a filing information system for the Indramayu District Health Office and create an appropriate application program. At the implementation stage, this system will use the PHP programming language and MySQL as the database. Based on these objectives,*

1.   INTRODUCTION

The rapid development of information technology requires a more effective and efficient information management system. Information is an important factor in management in the health sector. The Health Office is one of the regional government work units in the government environment that is responsible for health development and health services. Document archive storage can be developed into an information system that allows several related people to access the information. It aims to facilitate management in completing complex and detailed tasks. Currently, the Indramayu District Health Office is still using a manual data filing system, which causes problems such as taking a long time to search for data in folders and having to go through sheet by sheet to find it. incomplete data, and missing data. This is because the data has not been stored in a computerized database.

2.   LITERATURE REVIEW

2.1 Basic Literacy

a. System Definition

According to Abdurahman, (2018) the system can be interpreted as a collection of elements that are interconnected and work together to achieve a common goal. Another definition of the system according to Webster's Unbriged are elements that are interrelated and form a single unit or organization.

b. Definition of Information Systems

According to Ahmad & Hasti, (2018) an information system is a system consisting of data that is collected, grouped, and processed in such a way that it becomes information that is related and supports one another, or in other words an information system is a collection of elements that are interrelated and form a single unit to integrate, process, store, and distribute information.

c. Filing

According to Farrell, et al (2018) an archive is a place for storing important documents that must be kept for a certain period of time. According to this definition, not all letters can be categorized as archives, only documents that are considered important and need to be kept for a specified period of time.

d. Public Health Office

The Health Office (DINKES) is a regional government work unit responsible for health development. The Health Office is a technical institution that has the main task of carrying out some of the authority of the local government and assisting in carrying out operational technical tasks in the health sector, including developing and fostering health services (Esabella, et al. 2019).

e. Database

The database system is a computerized system that aims to store data that has been processed or information that is available when needed. The essence of the database is a medium for storing data easily and quickly so that it can be accessed quickly (Ramadhani, et al. 2019).

f. MySQL

MySQL (My Structure Query Language) is a Data Base Management System (DBMS) that is used to process databases using the SQL language. MySQL is an open source DBMS which can be used for free. PHP programming also supports the use of the MySQL database. MYSQL is one of many other DBMSs such as Oracle, MS SQL, PostgreSQL, and others (Novendri, 2019).

g. PHP

PHP is an open source server-side web programming language. PHP is a script that integrates with HTML and multiple servers and is used to create dynamic web pages. In other words, the displayed web page is created when the page is requested by the client, so that the information the client receives is always the latest. All PHP scripts run on the server where the script is run (Irawan & Simargolang, 2019). PHP stands for PHP: Hpertext Preprocessor.

h. DFD

Data Flow Diagram (DFD) is a diagram that uses notation or symbols to describe a system or network of interrelated functions through data flow and storage. DFD consists of context diagrams and detailed diagrams (level diagrams). According to (Kusumadiarti & Ripandi, 2019) the DFD that was first drawn was a context diagram at the top level. From this context diagram, it will then be drawn in more detail, which is called an overview diagram (level 0). Each process in the overview diagram will be Drawn in even more detail and called level 1. Each process in level 1 will then be Redrawn in even more detail and called level 2, and so on until each process cannot be Drawn in more detail.

2.2 Reference Library

In this reference library, the author tries to do research mapping related to E-archives. The following are the results of the mapping, among others:

Table 1. Related Journals

Author and Year	Title	Excess	Lack
Florentina, et al (2019)	Implementation of E-Archives for Document Storage Digital at PT BPD Central Java (Bank Jateng)	Facilitate employees in managing data digitally.	A notification feature needs to be added after saving, editing and deleting processes in the e-archive system
Vicky (2022)	Information System Based Population Administration Services Banaran Village Website	The system can assist in administrative services by sending back files in the form of letters to email address directly to the complainant	The system is not yet user friendly
Hendrawan & Nur (2021)	Administrative e-archives Student payments on Dayanu Ikhsanuddin University	Simplify storage and search return archives are flexible, effective and efficient.	Haven't implemented an android based system yet

3.   RESEARCH METHODS
3.1 Tools and materials

The research material used in this research process consisted of interviews with one of the Indramayu District Health Office employees, library studies in the form of journals, articles, and supporting books. The tools used in research that can influence the results and success of research are as follows:

a. Laptop / Computer with AMD A4-5000 APU with Radeon(TM) HD 1.5 GHz processor specifications.
b. Installed memory (RAM) 4.00 GB (3.45 GB usable)
c. System type 64-bit Operating System

The software used to implement the designs that have been made are:

a. Web Browsers
b. XAMPP version v3.02
c. PHP and MySQL
d. Google Chrome

3.2 Research procedure

To achieve the objectives of the research, the methods used in collecting data and knowledge to support the research process are:

a. Interview
    Question and answer directly to the staff of the Indramayu District Health Office.
b. Observation
    Observations made directly to obtain the necessary information.
c. Library Literature
    Data collection was obtained from books, materials and trusted sources as well as those related to research

d. Legacy System Analysis
    The flow of filing at the Indramayu District Health Office is as follows:

Figure 1. Legacy System Flow

Figure 1 shows a manual archive storage system that is still in use today. Archived letters that are made and received are put in a folder, which can result in data loss because they are prone to loss. This indicates that the current archive storage system still has weaknesses and may need to be repaired or changed.

4. DISCUSSION
4.1 New System Design

To analyze the required new system, it is first necessary to do a needs analysis that will be used by the system. This is important so that the system to be made is truly in accordance with existing needs and is able to fulfill the desired goals. In this case, the system needed is a Health Office data filing system that is able to manage and store Health Office data in an organized and structured manner.

Furthermore, after the needs are identified, it is necessary to analyze the system to be made. This analysis aims to determine the technical specifications required, as well as determine the architecture and layout of the system to be made. In addition, the analysis will also assist in determining the required resources, such as the required hardware and software. Thus, the system analysis carried out will assist in planning and developing a data archiving system that fits the existing needs.

Figure 2. New system design

Based on the presentation in Figure 2, the system to be built will have the following advantages:

a. Have multiple backups of mail: The system will create backup copies of each saved letter, so that data will not be lost if one copy is corrupted.
b. Acceleration in searching for letters: The system will store data of letters in digital form which can be accessed quickly through the application. This will simplify the process of finding the required letter.
c. Ease of managing financial reports: The system will store letter data and financial reports in an integrated manner, making it easier for the process of managing financial reports.

In Figure 2, the finance sub-division stores mail archives into the application by first scanning the physical archives. Furthermore, the letter archive is stored in a folder or cabinet. Thus, the system to be built will combine digital archive storage with physical archive storage.

4.2 Application Interface Design

The application interface for the Health Office filing information system is designed using the PHP programming language and MySQL database. This means that this application will be built using PHP as the main programming language, and MySQL as the database that will be used to store and manage the information needed by the application. PHP and MySQL are technologies commonly used in web application development, so the use of these two technologies can facilitate the development and maintenance of archiving information system applications. Some of the required forms of design are as follows:
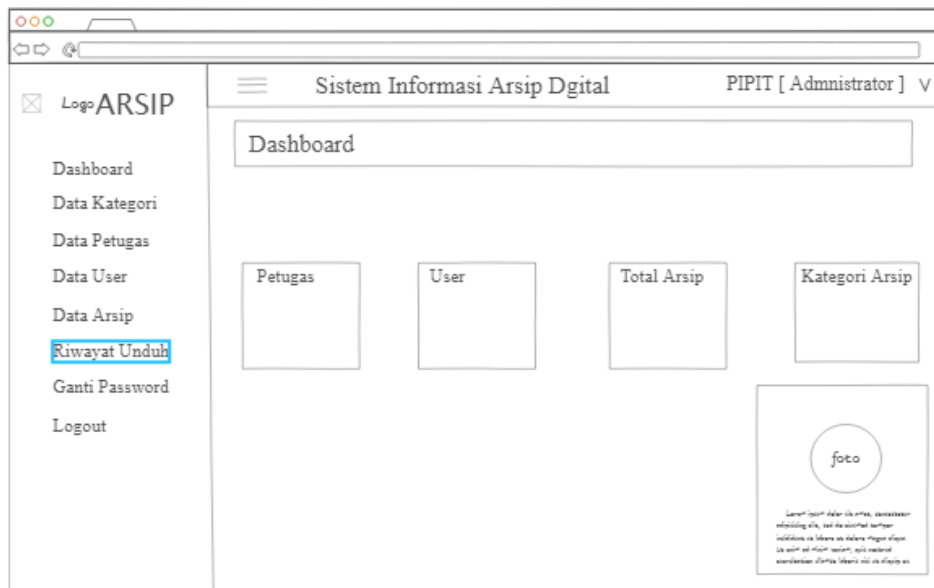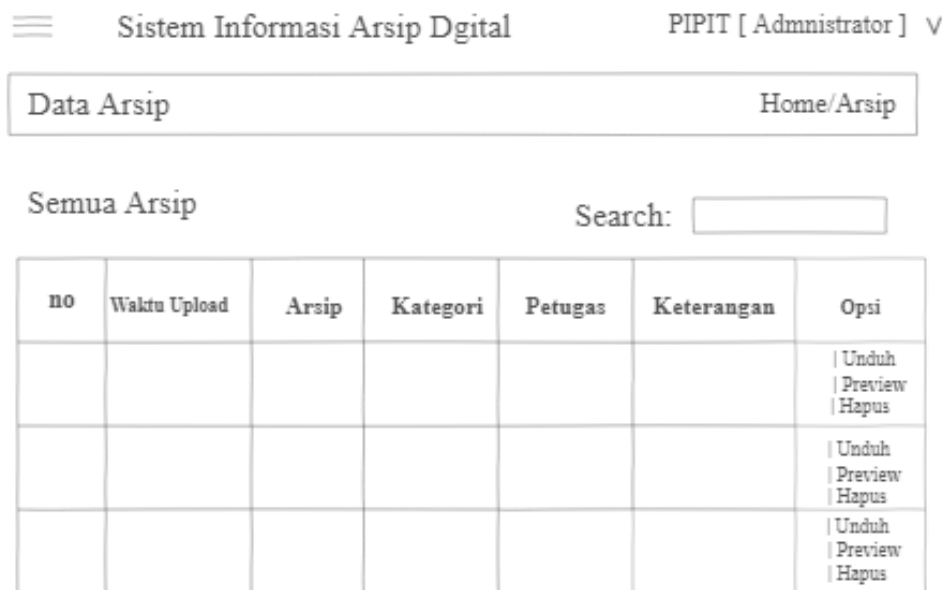

Figure 3. Admin View Design

Figure 4. Archive Data Design

4.3 Application Interface Results

After the interface design is complete, the next step is testing to ensure that the design results can run as expected. This stage is important in application development, because through this test you can find out whether the application is functioning properly or there are problems that need to be fixed. The types of tests that can be carried out include functional testing, integrity testing, system testing, and acceptance testing. Through this test it can ensure that the application can run smoothly and according to user needs.
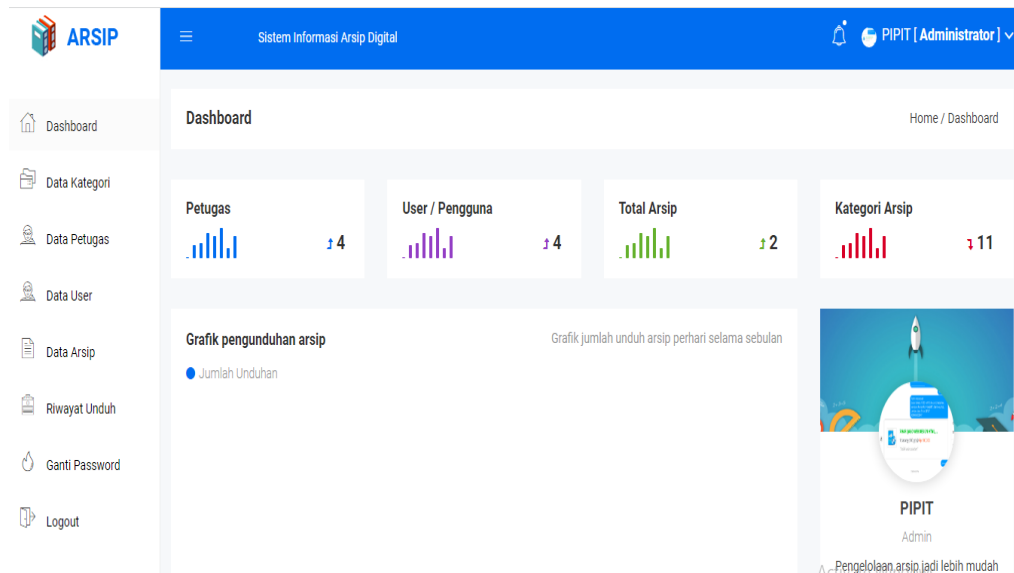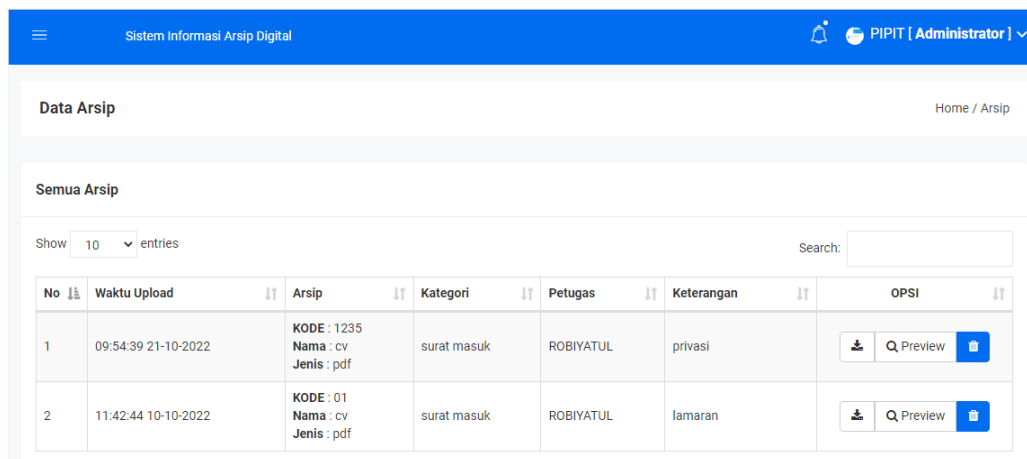

Figure 5. Admin dashboard display

Figure 6.Archive data display

5. CONCLUSION

Based on the results of the discussion, the writer can draw several conclusions as follows:
a. the use of the data archiving system can be extended to all Offices in Indramayu to increase efficiency and security
b. adding new features to simplify the data archiving process, such as a more detailed data search feature and a data backup feature.
c. Routine maintenance of data archiving system applications to ensure the continuity and stability of the system.

6. DECLARATION OF COMPETING INTEREST

We declare that we have no conflict of interest.

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