

The design of information systems the village office of Silaberanti

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A B S T R A C T

On when searching for a letter that has been made before. The process of collecting data on incoming and outgoing letters from the village office is also still manual. So prone to errors and data loss. The Silaberanti Village Office requires a more secure and faster mail processing. Based on the existing background, the Silaberanti Wanting Village Office can handle these problems, such as processing letters so as to produce appropriate mail processing reports. So that it can accelerate the performance of the Village Office employees Silaberanti records incoming and outgoing letters.

I. Introduction

Silaberanti Village is one of 5 sub-districts in the Jakabaring sub-district, Palembang City. Silaberanti Village itself consists of 9 RW and 43 RT with a population of approximately 16 thousand. With this information, of course, it is necessary to process data, both residents and RT and RW very well so that it can provide accurate information. The management of correspondence in the Silaberanti Village is currently still using computer media where the making of letters is still using Microsoft Word and Excel applications and the data storage is still in the form of a filing cabinet so that there can be a buildup of letters and the difficulty in the process of finding letters that have been made before. The process of collecting data on incoming and outgoing letters from the sub-district office is also still manual.

The Silaberanti Sub-district Office requires a mail processing that is safer and also faster. Based on the existing background, the Silaberanti Menginginkan Village Office can handle these problems, such as processing letters so as to produce appropriate mail processing reports. So that it can speed up the performance of the Silaberanti Village Office employees to record incoming and outgoing letters.

II. Method

2.1. System Development Method

Waterfall method

Method Waterfall is method Oldest software development because of its natural nature. The sequence in the Waterfall Method is serial, starting from the planning, analysis, design, and implementation processes on the system. This method is carried out with a systematic approach, starting from the system requirements stage then moving to the analysis, design stage. The steps that are passed must be completed one by one (cannot jump to the next stage) and run sequentially, therefore it is called a waterfall. (Sommerville, 2011) explains that there are five stages in the Waterfall Method, namely Requirements Analysis and Definition, System and Software Design, Implementation and Unit Testing, Integration and System Testing, and Operational.

1) Analysis

Before developing software, a developer must know and understand how the information needs of users for a software. This information collection method can be obtained in various ways including, discussion, observation, survey, interview, and so on. The information obtained is then processed and analyzed so

that complete data or information is obtained regarding the specifications of user needs for the software to be developed.

- 2) Design
Information regarding the requirements specification from the Requirements Analysis stage is then analyzed at this stage and then implemented in the development design. The design draft is done to help provide a complete picture of what has to be done. At this stage it will also help developers to prepare requirements hardware in making the software system architecture that will be made as a whole.
- 3) Implementation and Unit Testing
Stage implementation and unit testing is the programming stage. Software development is divided into small modules which will be combined in the next stage. In this phase, testing and checking of the functionality of the module that has been made is also carried out, whether it meets the desired criteria or not.
- 4) Integration and System Testing
After all units or modules have been developed tested in the next implementation stage and integrated into the system as a whole. After the integration process is complete, further inspection and testing of the system as a whole is carried out to identify possible system failures and errors.
- 5) Operation and Maintenance
In the last stage in the Waterfall Method, the finished software is operated by the user and carried out maintenance. Maintenance allows developers to make improvements to errors that were not detected in the earlier stages. Maintenance includes repairing errors, improving the implementation of the system unit, and upgrading and adjusting the system as needed.
- 6) Data Processing
According to (Sutarman, 2012) "Data processing is the process of calculating / transforming input data into information that is easy to understand or as desired". Data processing in a system must of course be considered properly so that the data is processed and informed correctly. The following is an overview of data processing on the Incoming and Outgoing Mail Information System using Document flow

2.2, UML Design

Use Case Incoming mail

In the picture below is a System Processing based on their respective roles/access to the Village Head Operators and employees as System users

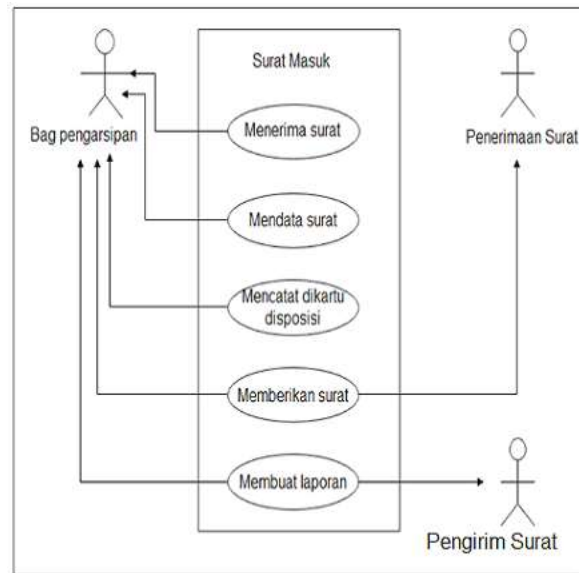


Figure 1. Use Case Incoming mail

Use Case Outgoing mail

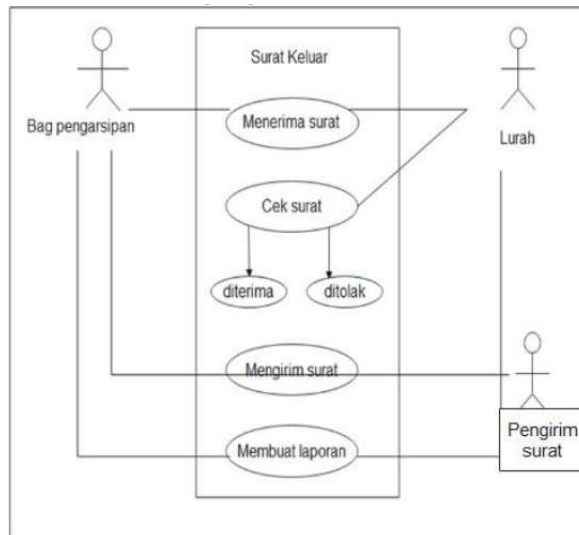


Figure 2. Use Case Outgoing mail

class Diagram

According to Karnadi, (2016) is a form of diagram that is more directed to object-oriented programmers to explain the objects owned by the system and the relationship between class objects, the purpose of this class is to facilitate the process of developing software systems.

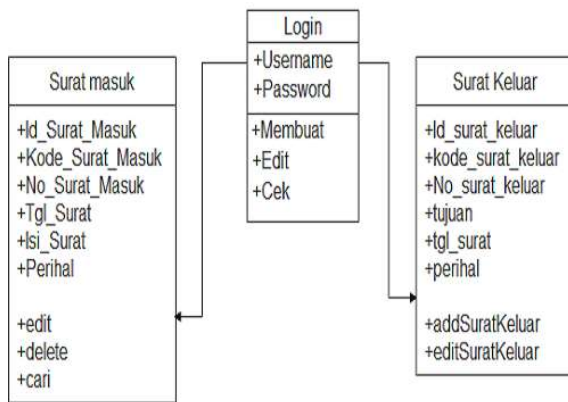


Figure 3. Class Diagram of Incoming Letters and Letters Outgoing

ActivityDiagram

Activity Diagram according to (Salahuddin,2014) activity diagram or activity diagram is to describe the flow of work or activity from a system or business process or menu that is in the software. Activity diagrams depict system activities not what actors do.

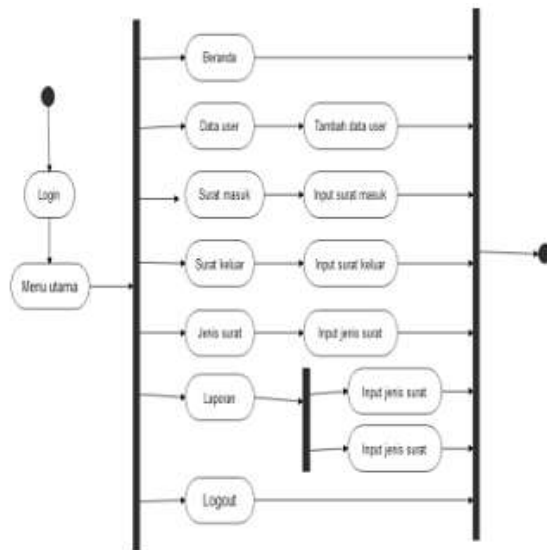


Figure 4. Activity Diagram

III. Results and Discussion

Below is the design of the Incoming and Outgoing Mail Information System Design at the Silaberanti Village Office and it will be explained how to use this work later.

Login Form

When running the incoming and outgoing mail information system at the Silaberanti Village Office, the first time it will appear login form like Figure 5. User must

enter username, password and positions. Then the system will process usernames, passwords, and positions entered. If it is correct then it will go to the page home, if wrong then there will be an error message and will return to the login form.

Figure 5. Login Form

Home Menu Form

Figure 6 is an overview of the home menu display in this view with various features, namely incoming mail menu features, outgoing mail menus, reports, users, incoming mail tables, outgoing mail tables, and the overall table.

Figure 6. Home Menu Form

Incoming Mail Transaction Form

Figure 7 is an image of the incoming mail transaction page, the user fills in the data in the space provided, such as filling in the letter number, date of the letter, letter description, agency code, employee code then save and Figure 8 is an image of the incoming mail report. In the process of adding data, the user fills in the data in the space provided and then presses the Save button. If successful, the system will automatically display on the incoming mail report page.

PENGOLAHAN SURAT	
BERANDA SURAT MASUK SURAT KELUAR	
Master	SURAT MASUK
INSTANSI	Nomor Surat <input type="text"/>
	Tanggal <input type="text"/>
Laporan	Deskripsi Surat <input type="text"/>
	Kode Instansi <input type="text"/>
SURAT MASUK	Kode pegawai <input type="text"/>
SURAT KELUAR	
<input type="button" value="SIMPAN"/>	

Figure 7. Incoming Mail Transaction Form

PENGOLAHAN SURAT	
BERANDA SURAT MASUK SURAT KELUAR	
Master	Laporan Surat Masuk
INSTANSI	Cari ID Instansi <input type="text" value="PEMERINTAH"/> <input type="button" value="Cari"/>
Laporan	
SURAT MASUK	No ID Surat masuk Nama Pegawai Nama Instansi Tanggal Surat Masuk No Surat Masuk Deskripsi Surat
SURAT KELUAR	

Figure 8. Incoming Mail Report

Outgoing Transaction Form

Figure 9 is an image of the outgoing mail transaction page, the user fills in the data in the space provided, such as filling in the letter number, date of the letter, letter description, agency code, employee code then save and Figure 10 is an image of the outgoing letter report. In the process of adding data, the user fills in the data in the space provided then presses the Save button. If successful, the system will automatically display the outgoing mail report page.

PENGOLAHAN SURAT	
BERANDA SURAT MASUK SURAT KELUAR	
Master	SURAT KELUAR
INSTANSI	Nomor Surat <input type="text"/>
	Tanggal <input type="text"/>
Laporan	Deskripsi Surat <input type="text"/>
	Kode Instansi <input type="text"/>
SURAT MASUK	Kode pegawai <input type="text"/>
SURAT KELUAR	
<input type="button" value="SIMPAN"/>	

Figure 9. Outgoing Transaction Form

PENGOLAHAN SURAT	
BERANDA SURAT MASUK SURAT KELUAR	
Master	Laporan Surat Keluar
INSTANSI	Cari ID Instansi <input type="text" value="PEMERINTAH"/> <input type="button" value="Cari"/>
Laporan	
SURAT MASUK	No ID Surat keluar Nama Pegawai Nama Instansi Tanggal Surat Keluar No Surat Keluar Deskripsi Surat
SURAT KELUAR	

Figure 10. Outgoing Report

IV. Conclusion

From the results of the presentation that has been written in the previous chapter in conclusion:

1. The system developed for recording incoming letters and dispositions is made with the design and layout as well as the order of entering data that has been arranged in such a way so that operator in using the system is easy. Outgoing letter numbers with the applicable format at the Silaberanti Village Office have been created automatically after the user selects the letter classification so that users no longer need to look at the letter manual and agenda number.
2. The system created can generate a list of letter classifications, incoming and outgoing mail reports that can be made monthly, annually or for a certain period.

V. Suggestion

Based on the conclusions above, the expected suggestions are to develop an information system for processing incoming and outgoing mail at the Silaberanti Village Office including:

1. Adding data security facilities, such as data backup facilities.
2. The system interface that is built still looks simple, it can be developed more attractively. Adding help facilities to applications that are made to be more user friendly.

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