

Archive Information System for Incoming and Outgoing Letters at the Wampu Besitang Irrigation Management Unit

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ABSTRACT

Incoming mail is a letter received by a company or agency originating from another party, be it individuals or companies/agencies. While outgoing letter is a letter made/issued by a company or agency to be given to other parties, both to individuals and companies/agencies.. At the Wampu Besitang Irrigation Management Unit, there are difficulties in managing the archiving of incoming and outgoing letters where the administrative section is the part that concerns a lot of data or correspondence. In the process of data collection of incoming and outgoing letters, letters are archived into bundles of incoming and outgoing mail files, this makes paper scattered and the required letters are difficult to obtain, therefore a solution is given by building an Archive Information System for Incoming and Outgoing Letters at the Wampu Besitang Irrigation Management Unit which aims to facilitate the management and processing of incoming and outgoing letters.

Keyword: Information System, Archives, Incoming Mail, Outgoing Mail.

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1. INTRODUCTION

Government agencies in Indonesia are now starting to adapt to using technology. Every agency definitely needs technology to complete the work, one of which is archiving incoming and outgoing letters. Incoming mail is all letters received by a company or organization originating from other parties, both individuals and companies/organizations. While outgoing letters are all letters made/issued by a company or organization to be given to other parties, both to individuals and companies/organizations.

The Wampu Besitang Irrigation Management Unit was established in 2014 and has several sections, namely the administration section, river section, irrigation section and swamp under the auspices of the Head of Wampu Besitang Irrigation Management UPT which is located at Jl. Veteran No. 2 Binjai. As the UPT for Irrigation Management, Wampu Besitang is expected to assist the community in building river, irrigation and swamp infrastructure.

At the Wampu Besitang Irrigation Management Unit, there are difficulties in managing the archiving of incoming and outgoing letters where the administrative section is the part that concerns a lot of data or correspondence. In the process of data collection incoming and outgoing letters have not been stored (recorded) properly, where in the process, letters are archived into bundles of incoming and outgoing mail files, this makes paper scattered and the required letters are difficult to obtain. The current system is still less efficient and effective because incoming and outgoing mail often goes into inappropriate bundles because the filing is still manual.

2. RESEARCH METHOD

2.1. MySQL

according to (Verawati, Liksha, 2018)MySQL is a relational database software (Relation Database Management System/RDMS) such as Oracle, PostgreSQL, Microsoft SQL. MySQL should not be

interpreted the same as SQL (Structure Query Language) which is defined as the syntax of certain commands in the language (program) used to manage a database.

MySQL Advantages:

1. *MySQL* Is a database that is capable of storing data with a very large capacity up to gigabytes in size though.
2. *MySQL* supported by an ODBC server, meaning that the MySQL database can be accessed to build any application, including visual JavaNeatbeans.
3. MySQL is a database can use password encryption
4. *MySQL* is a multi-user database server, meaning that this database can be used by many people.
5. *MySQL* can create more than 16 keys per table and one key allows dozens of fields.

Meanwhile, according to (Rozaq et al., 2018)MySQL is a database management system software (Database Management System – DBMS) which is very popular among web programmers, especially in the Linux environment using PHP and Perl scripts. This database software is now also available on the Windows operating system platform (98/ME or NT). /2000/XP). And according to(Sukisno & Wuni, 2017) MySQL is a database containing one or a number of tables.

2.2. Internet

according to (Santoso, 2016)The internet comes from the word interconnection network which means the relationship between various computers and various types of computers that form a network system that covers the whole world (global network) with telecommunications lines such as telephone, satellite, infrared, wireless and others. Furthermore, the definition of the internet according to other experts is a computer network. Like a highway, the internet can be passed by various means of transportation, such as buses, cars and motorbikes that have their respective uses(Prayitno & Safitri, 2015).

And another understanding of the internet, namely (short for inter connection networking) is literally a global system of all computer networks that are connected to each other using the standard Internet Protocol Suite (TCP / IP) to serve billions of users around the world. Internet (Interconnected Network) is a collection of interconnected networks where the network provides a global connection of information. In this case, the previously stand-alone computer can now communicate directly with hosts or other computers(Muslim & Dayana, 2016).

From the above understanding, it can be concluded that the internet is an internet network that covers the whole world with lines such as telephone, satellite, infrared, wireless and others.

2.3. Hypertext Preprocessor (PHP)

Understanding PHP (Hypertext Preprocessor) according to (Santoso, 2016)is a language that can only run on the server whose results can be displayed on the client. In executing PHP code on the server side (called the server side) it is different from the Java virtual machine which executes programs on the client side. The process of executing PHP code that is embedded in an HTML page. Furthermore, according to other experts, PHP is a server-side scripting language that integrates with HTML to create dynamic web pages(Sukisno & Wuni, 2017).

And another understanding of PHP is (Hypertext Preprocessor) is a web programming language in the form of scripts that can be integrated with HTML (Prayitno & Safitri, 2015). From the above understanding, it can be concluded that PHP is a programming language that integrates with HTML to create web pages.

2.4. Waterfall Method

according to(Jenih et al., 2019) *Waterfall / SDLC method*Waterfalls are often called linear sequential (linear sequential), or classical life cycle (classic life cycle). Provides a sequential or sequential software lifeflow approach starting from the analysis, design, coding, testing, and support stages.

Furthermore, according to other experts, the Waterfall model is an example of the planning process, where all process activities must be planned and scheduled before being carried out. The use of the waterfall model in system development is expected to facilitate the manufacture so that system development can be structured(Destiningrum & Adrian, 2017).

And understanding the waterfall method according to other experts, which is a systematic and sequential information system development model (Wiro Sasmito, 2017). From the above understanding, it can be concluded that the Waterfall Method is a method whose process starts from analyzing, designing, coding, testing and supporting stages.

2.5. Website

Definition of Website according to (Prayitno & Safitri, 2015)is the entire web page contained from a domain that contains information. Then the definition of a website according to other experts is a place that allows someone to express himself, his hobbies, knowledge, products he sells and anything that can

be accommodated by text, writing, images, videos, animations and other multimedia files.(Muslim & Dayana, 2016).

Furthermore, the definition of a website according to other experts is a software that serves to display documents on a web that allows users to access the internet through software that is connected to the internet. (Destiningrum & Adrian, 2017). From the above understanding, it can be concluded that the website is a page that contains information that can be accessed when it is connected to the internet.

2.6. HTML

Definition of HTML according to (Prayitno & Safitri, 2015)stands for Hypertext Markup Language and is useful for displaying web pages. And the understanding of Hypertext Markup Language (HTML) according to(Muslim & Dayana, 2016)is a page research language that creates hypertext or hypermedia documents. HTML inserts control codes in a document at various points that can be specified, which can create hyperlinks with other parts of the document or with other documents on the World Wide Web.

Furthermore, the understanding of Hypertext Mercup Language (HTML) according to (Fitri & Nia, 2018)is the standard language used to display web pages. What can be done with HTML is, Set the appearance of web pages and their contents, Create tables in web pages, Publish web pages online, Create forms that can be used to handle registrations and transactions via the web. From the above understanding, it can be concluded that HTML is a programming language that can display web pages.

3. RESULTS AND DISCUSSION

3.1 Context Diagram

The following context diagram illustrates the flow of the proposed incoming and outgoing mail data collection information system design flow.

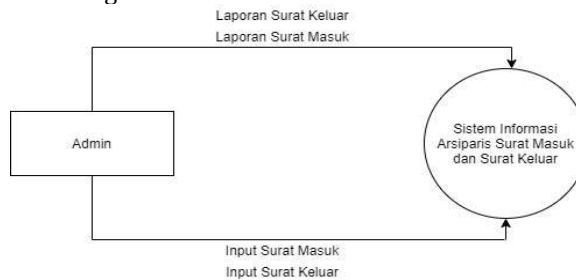


Figure 1 Context Diagram

3.1.1 Proposed Level 0 DFD

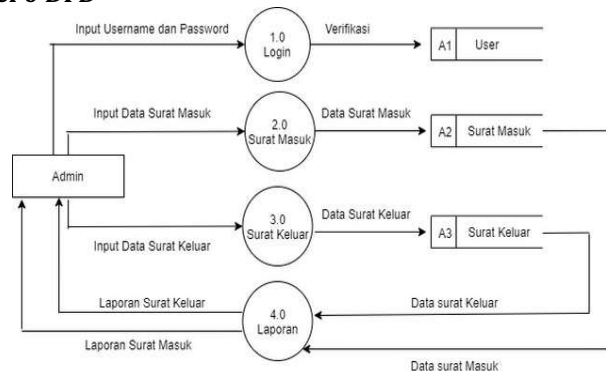


Figure 2 DFD Level 0

Information :

Login, this process is a process carried out by the admin by inputting the username and password so that the admin can manage the application. Then there are incoming mail, this process is a data collection process carried out by the admin on data from incoming mail by being archived for certain purposes. Then the outgoing mail, this process is the data collection process carried out by the admin on the data from the outgoing letter archived for certain purposes. And reports, this process is the process of printing data carried out by the admin on incoming mail data and outgoing mail data that have been inputted as reports for certain purposes.

3.2 Database Design

The following table of dispositions, where this table is useful for inputting the disposition of letters:

Table 1 Table of Disposition

Field Name	Data Type	Size	Description
id_disposition	Integer	10	Id Disposition
aim	Varchar	250	Aim
content_disposition	mediumtext		Contents of Disposition
Nature	Varchar	100	Nature
deadline	Date		Deadline
notes	Varchar	250	Notes
id_letter	Integer	10	Mail ID
id_user	tinyint	2	

The following table of incoming mail, where this table is useful for inputting incoming mail:

Table 2 Incoming Mail Table

Field Name	Data Type	Size	Description
id_letter	Integer	10	Mail ID
no_agenda	Integer	10	No Agenda
aim	Varchar	250	Aim
no_mail	Varchar	50	Letter No
contents	mediumtext		Contents
code	Varchar	30	Code
date_mail	Date		Letter Date
date_note	Date		Date Note
files	Varchar	250	File
description	Varchar	250	Information
id_user	Tinyint	2	User ID

The following is the outgoing mail table, where this table is useful for inputting outgoing mail:

Table 3.3 Outgoing Mail Table

Field Name	Data Type	Size	Description
id_letter	Integer	10	Mail ID
no_agenda	Integer	10	No Agenda
aim	Varchar	250	Aim
no_mail	Varchar	50	Letter No
contents	mediumtext		Contents
code	Varchar	30	Code
date_mail	Date		Letter Date
date_note	Date		Date Note
files	Varchar	250	File
description	Varchar	250	Information
id_user	Tinyint	2	User ID

The following is a classification table, where this table is useful for inputting letter classification:

Table 3.4 Classification Table

Field Name	Data Type	Size	Description
id_classification	Integer	5	Classification ID
code	Varchar	30	Code
name	Varchar	250	Name
description	mediumtext		Description
id_user	Tinyint	2	User ID

The following is the agency table, where this table is useful for inputting the name of the agency:

Table 3.5 Agency Table

Field Name	Data Type	Size	Description
id_agency	Tinyint	1	Agency ID
institution	Varchar	150	Institution
name	Varchar	150	Name
status	Varchar	150	Status
address	Varchar	150	Address

k_upt	Varchar	50	Head of UPT
nip	Varchar	25	NIP
website	Varchar	50	Website
e-mail	Varchar	50	E-mail
logo	Varchar	250	Logo
id_user	Tinyint	2	User ID

The following table users, where this table is useful for inputting users:

Table 3.6 Table Users

Field Name	Data Type	Size	Description
id_user	Tinyint	2	User ID
username	Varchar	30	Username
password	Varchar	35	Password
name	Varchar	50	Name
nip	Varchar	25	NIP
admin	Tinyint	1	Admin

The following table settings, where this table is useful for updating data:

Table 3.7 Table Settings

Field Name	Data Type	Size	Description
id_sett	Tinyint	1	Id Sett
incoming mail	Tinyint	2	Incoming mail
outgoing mail	Tinyint	2	Outgoing mail
reference	Tinyint	2	Reference
id_user	Tinyint	2	User ID

3.2.1 Database Design

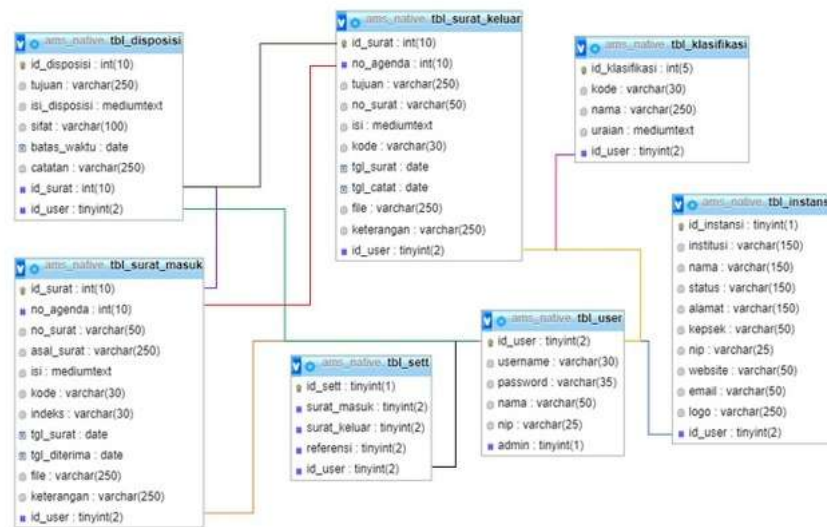


Figure 3 Database Design

3.3 Results

In Figure 4 is the login screen when entering the web application for the UPT Wampu Besitang Irrigation Management Application. In order to login, you must enter your Username and Password.

Figure 4 Login display

In Figure 5 is the main menu display after logging in. The main menu displays the number of incoming letters, the number of outgoing letters, the number of dispositions, the number of letter classifications and the number of users.

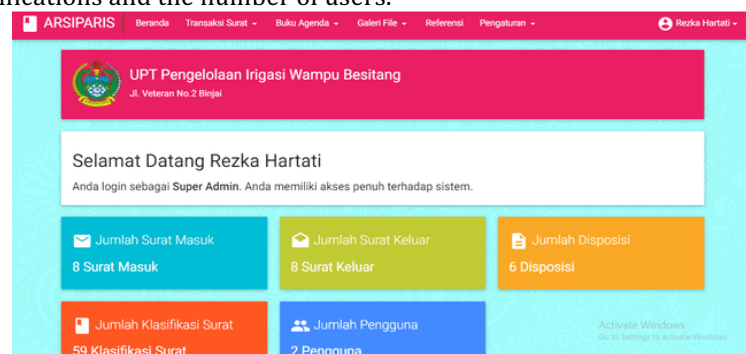


Figure 5 Main Menu Display

In Figure 6 is a display of incoming mail transactions. On this page, you can add incoming mail data and can see the results of the inputted data. The inputted data can be edited, disposed, printed, and deleted.

No. Agenda Kode	Isi Ringkas File	Asal Surat	No. Surat Tgl Surat	Tindakan
8 610	Angka Kebutuhan Nyata Pengelolaan Irigasi (AKNPI) File: 2374-GM AKNPI.jpeg	Dinas Sumber Daya Air, Cipta Karya dan Tata Ruang Provinsi Sumatera Utara	610/450/II/2021 06 Juli 2021	EDIT DISP PRINT DEL
7 800	Tindak lanjut hasil tim investigasi disiplin pegawai negeri sipil dan calon pegawai negeri sipil ditanggung Pempemprov File: 743-Surat Masuk 4.jpeg	Dinas Sumber Daya Air, Cipta Karya dan Tata Ruang Provinsi Sumatera Utara	800/050/I/2021 30 April 2021	EDIT DISP PRINT DEL
6 005	Undangan rapat paripurna DPRD Kab. Langkat File: 5400-Surat Masuk 2.jpeg	DPRD KABUPATEN LANGKAT	005-178/DPRD/2021 21 Juni 2021	EDIT DISP PRINT DEL

Figure 6 Display of Incoming Mail Transactions

In Figure 7 is a view of adding incoming mail data. In this form you can input the agenda number, origin of the letter, letter number, brief contents of the letter, classification code, file index, date of letter, description and file upload. After all inputted can save or can also cancel.

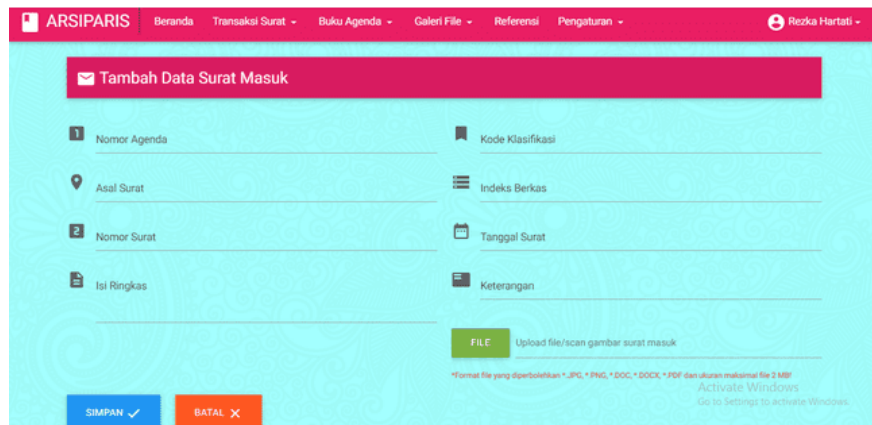


Figure 7 Display Add Incoming Mail Data

Figure 8 is a disposition display. On this page there are additional dispositions and can see the output of the inputted. The results that have been inputted can be edited and deleted.

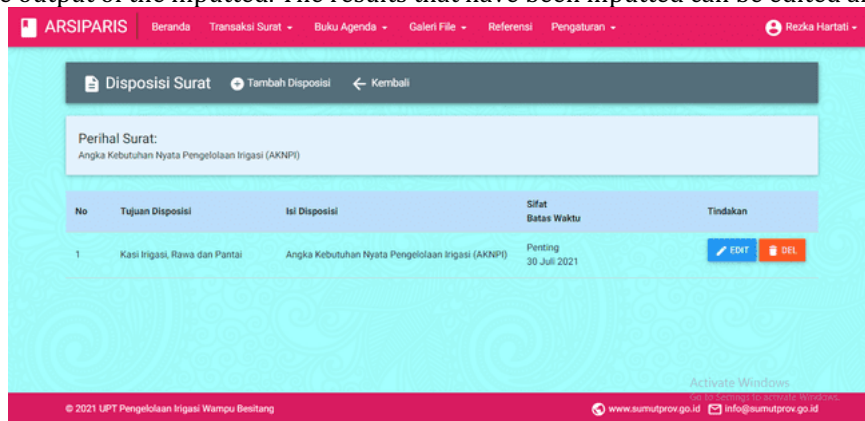


Figure 8 Display of Letter Disposition

In Figure 9 is an added display of the disposition of the letter. In the form added to the disposition of this letter, you can input the purpose of the disposition, the contents of the disposition, time limit, notes and choose the nature of the disposition. After that you can save it or cancel it.

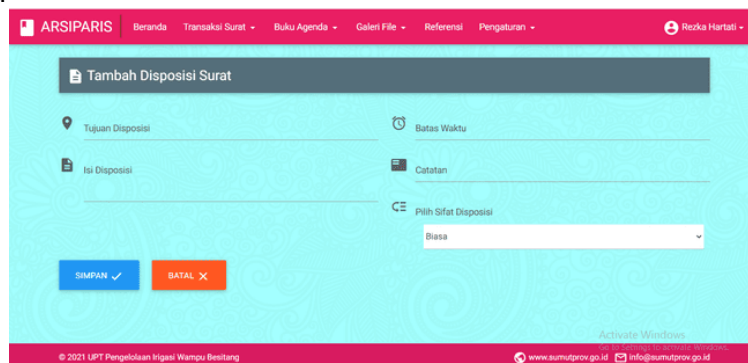


Figure 9 Display Add Disposition

In Figure 10 is a display of outgoing mail transactions. On this page, you can add outgoing mail data and can see the results of the input data. The inputted data can be edited and deleted.

No. Agenda Kode	Isi Ringkas File	Tujuan	No. Surat Tgl Surat	Tindakan
8 800	Permohonan pindah titik GPS e-absensi An. Indra Sanjaya File : 5156-Surat Keluar 4.jpeg	Kasubag Umum dan Kepegawain Dinas Sumber Daya Air, Cipta Karya dan Tata Ruang Provinsi Sumatera Utara	800/591/PI-WB/2021 05 April 2021	EDIT DEL
7 028	Surat Pengantar Aset File : 1751-Surat Keluar 3.jpeg	Pt. Kepala Dinas Sumber Daya Air, Cipta Karya dan Tata Ruang Provinsi Sumatera Utara	028/1071/PI-WB/2021 21 Juni 2021	EDIT DEL
6 800	Penempatan Tugas File : 793-Surat Keluar 2.jpeg	Sdr. Kasi Irigasi, Rawa dan Pantai	800/990/PI-WB/2021 08 Juni 2021	EDIT DEL
5 800	Kinerja Pegawai File : 397-Surat Keluar 1.jpeg	1. Sdr. Kasi Irigasi, Rawa dan Pantai, 2. Sdr. PPK OP jaringan irigasi SKPD-TP	800/1294/PI-WB/2021 26 Juli 2021	EDIT DEL
4	Surat undangan rapat dinas koordinasi ujian		042/067 / SM-AH/1/2016	

Figure 10 Display of Outgoing Mail Transactions

In Figure 11 is a view of adding outgoing mail data. In this form you can input the agenda number, purpose of the letter, letter number, brief contents of the letter, classification code, date of letter, description and file upload. After all inputted can save or can also cancel.

Figure 11 Display Add Outgoing Mail Data

In Figure 12 is the view of the incoming mail agenda book. On this page to display the agenda for incoming mail, you must input from what date the letter was received and until what date is the deadline.

Figure 12 Display of Incoming Mail Agenda Book

In Figure 13 is the display when it displays the incoming mail agenda that is sought. On this page there are the results you are looking for and you can print them.



Figure 13 Display of Incoming Mail Agenda Book Results

In Figure 14 is a view of the outgoing mail agenda book. On this page, to display the agenda for outgoing letters, you must input from what date the letter was issued and until what date is the deadline.

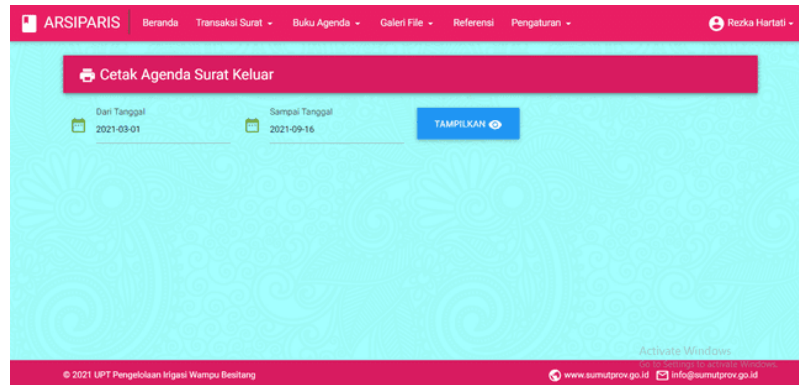


Figure 14 Display of Outgoing Mail Agenda Book

In Figure 15 is the display when it displays the outgoing mail agenda that is sought. On this page there are the results you are looking for and you can print them.



Figure 15 Display of Incoming Mail Agenda Book Results

In Figure 16 is a gallery view of incoming mail files. On this page to display the gallery of incoming mail files, you must enter from what date the letter was received and until what date the deadline.

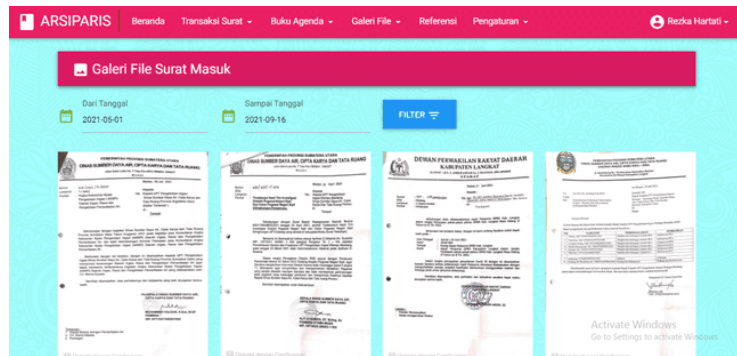


Figure 16 Incoming Mail File Gallery View

In Figure 17 is the display when you have filtered the incoming mail file gallery that you are looking for. On this page there are the results you are looking for and you can reset them.



Figure 17 Display of Incoming Mail File Gallery Results

In Figure 18 is a gallery view of outgoing mail files. On this page to display the outgoing mail file gallery, you must input from what date the letter was issued and until what date the deadline.

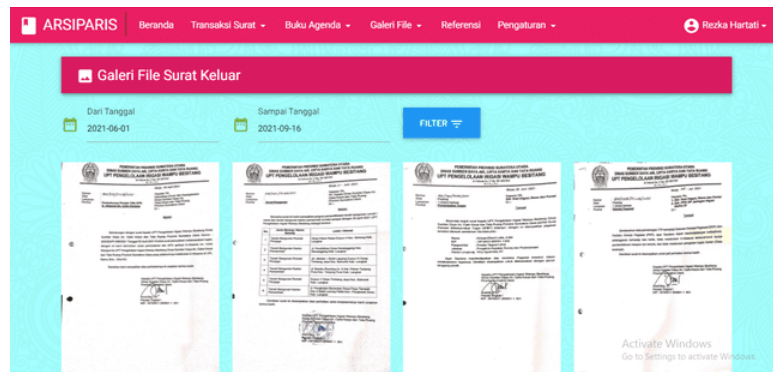


Figure 18 Outgoing Mail File Gallery Display

In Figure 19 is a view when you have filtered the outgoing mail file gallery that you are looking for. On this page there are the results you are looking for and you can reset them.



Figure 19 Display of Outgoing Mail File Gallery Results

In Figure 20 is a display of reference/classification of letters. On this page there are added data, import data and the results of the input. The output of the input can be edited and deleted.

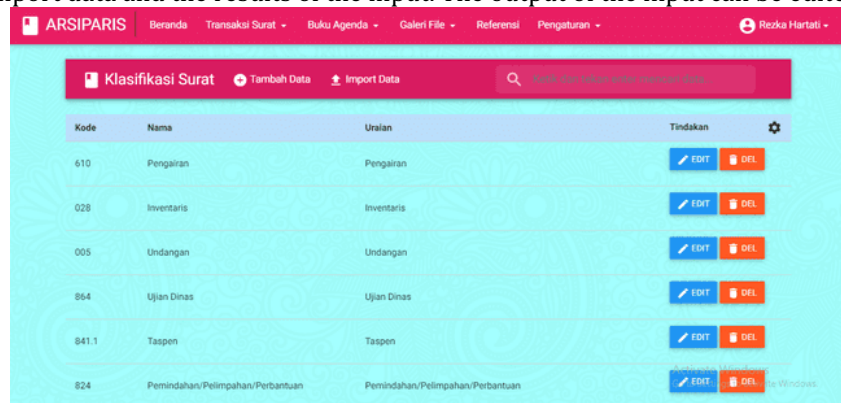


Figure 20 Reference Display/Letter Classification

In Figure 21 is an added view of the letter classification. In this form, you must enter the code, name and description. Once inputted can save it and cancel it.

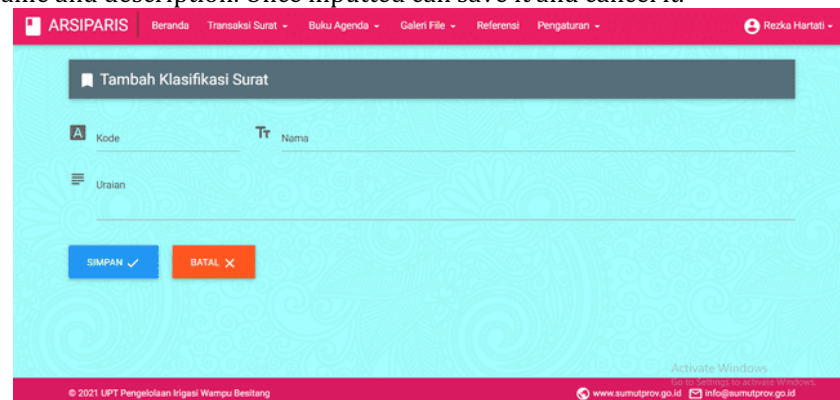


Figure 21 Display Add Letter Classification

In Figure 22 is a display of import reference/classification of letters. The file you want to import must be an excel file.

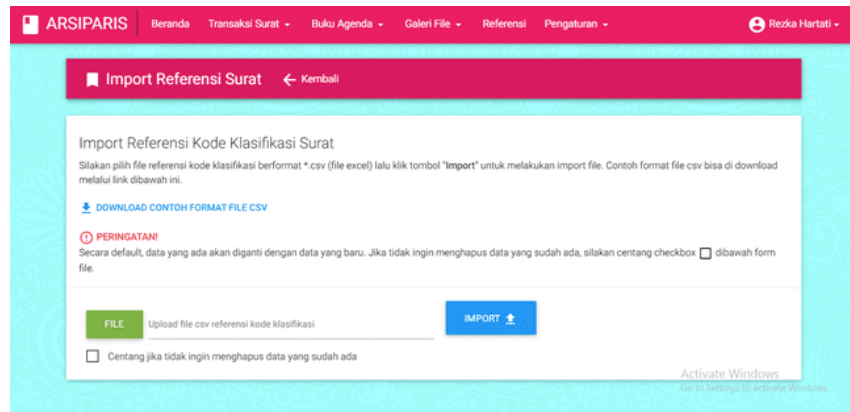


Figure 22 Display of Import Reference/Letter Classification

In Figure 23 is a display of agency management settings. On this page, you can input agency name, status, address, website, name of organizational unit, name of UPT head, agency email and upload logo file. If you have input you can click save or if not click cancel.

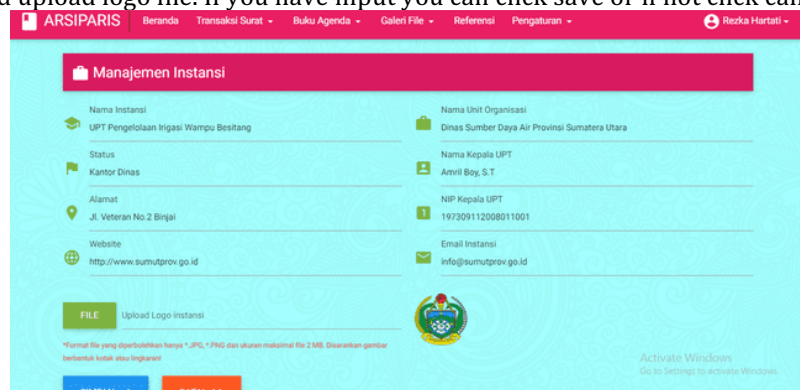


Figure 23 Display of Agency Management Settings

In Figure 24 is a display of user management settings. On this page can add users and see the results of the input.

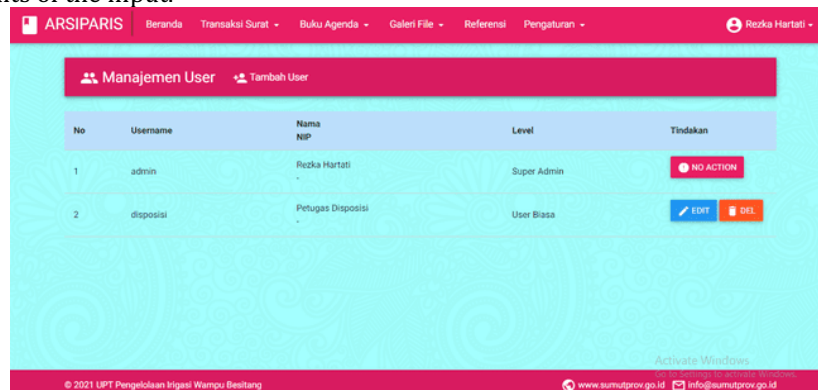


Figure 24 User Management Settings Display

Figure 25 shows the added user view. In this form you can input your username, password, name, NIP and select the type of user.

Figure 25 Display Add User

4. CONCLUSION

The data collection of incoming and outgoing mail has been computerized and well informed, and the archivist information system for incoming and outgoing mail is the best solution in facilitating the process of collecting incoming and outgoing mail. So that the management of incoming and outgoing mail using this system has been stored properly. The archivist information system for incoming and outgoing mail is designed according to the needs of system users so as to improve system performance. Moreover, the archivist information system for incoming and outgoing letters can be developed by adding all incoming and outgoing mail management contained in the Wampu Besitang Irrigation Management Unit. It is hoped that further development of the system is by building an easier system so that it can be used for all groups.

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