Jurnal Mantik, 5 (3) (2021) 1625-1635

Published by:Institute of Computer Science (IOCS)

Jurnal Mantik

Journal homepage: www.iocscience.org/ejournal/index.php/mantik/index

Incoming And Outgoing Mail Filing Information System Using The View Controller Model At College Institutions

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ARTICLEINFO

Article history:

Received: August 29, 2021
Revised: September 27, 2021
Accepted: October 18, 2021

Keywords:

Information,
Filing,
Letters,
WebBase,
MVC

ABSTRACT

Research aims (1) to improve the filing system that is still manual and can facilitate workmanship in inputting mail data (2) as learning the creation of information systems in the form of Web Base using model view controller programming methods. This research was conducted at a college institution. The method used in this study is the collection of data by observing directly on the research object regarding the workings of college institutions in handling the filing of incoming and outgoing letters. Furthermore, the data that has been obtained will be equipped with interview data about existing archiving. From the results of research that has been carried out it can be concluded that with the information system filing incoming letters and exit letters can help, facilitate the work in filing at college institutions.

1. Introduction

The development of today, communication technology is developing so rapidly, many emerging telecommunication tools or sophisticated transportation, such as telephone, television, radio, and so forth. But there is still written communication that can not be forgotten its existence, even today it still remains firmly used as if irreplaceable by various sophisticated communication equipment, the written communication is a letter. But there are still many institutions, companies, or universities that make various mistakes in the process of managing letters or important data. As the discovery of data or letters scattered or damaged, so it can cause losses for the company or university. Based on observations made at college institutions, there needs to be an application system that can help in the process of handling letters, in this case the author conducted a study with the title: "Design Information System Archiving Incoming And Outgoing Letters using the Model View Controller at the college institution. Thus, there is a good archival system handling system and good data processing, the mail flow system and mail administration will be easier to search.

The formulation of the problem raised by the author based on the background description above, then taken the formulation of the problem as follows: How to manage the archiving information system using a web-based Model View Controller in a college institution. How to build an archiving system with a basic WEB Base with Model View Controller programming methods.The benefit of this research is to help both from the author's side and the object of research that will be carried out, among others: In order to improve the efficiency of time for document management and archiving and in order to speed up the archiving process and as a highly effective archive standard.

In order to obtain maximum research and focused in the design of archiving, there needs to be a limitation of research, namely: The letter data that will be included in the archiving information system is Incoming Mail (Incomeing mail that enters in a college institution in the archive in general or in one general

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ledger), Outgoing Mail (Outgoing mailLetter that comes out of the institution of college in the archive into 3 Parts is Internal Letter, General Letter, External Mail)

Search for mail files based on the subject / contents of the letter, Input incoming mail data: (date , number,sender, about,type of letter, code). Input outgoing mail data: (date, number, receiver, date of out, about, type, code). Creation of incoming mail application and outgoing mail using PHP, database creation of incoming mail application system and outgoing mail using MySQL, user program must be connected to the internet network**.**

2. Method

2.1 Research Methodology

The data collection techniques that the author conducted in this study are Observation, Interview, Literature Study, Laboratory Research, as follows:

2.2 Observation

The creation of a scientific paper is required to collect data materials by reading books, reports, archives and so on. In this case the author looks for data and information about the basic components to be used in designing the subject (tool) in question as well as other things that may be able to help.

2.3 Interview

The authors interview authorities at college institutions for explanations and data on filings.

2.4 Literature Review

The literature method is a method used by authors to obtain data by reading and researching with a number of books, journals, articles, magazines that are related and support research, interviews and also references from the internet.

2.5 Laboratory Research

The author conducts a test of the program for the filing information system in college in order to work according to the planning of the purpose of the system. The author conducts a test of the program for the filing information system in college in order to work according to the planning of the purpose of the system.

3. Results and Analysis

3.1 Research Target

With the program of information system author-made at the college institution, it will be very helpful in filing and speed up in the filing process.

3.2 Database Planning

This stage the author discusses the database system starting at the time of creating the database, tables and fields in the table that relate to the filing information system that the author created, and this stage is also explained about the tables in the database as follows: [6]

Table 1.
Admin Table

Field	Type	Collation	Null	Default	Extra
Id	Int(2)		No	None	Auto_increment
Username	Var(15)	Latin1_swedish_ci	No	None	
Password	Var(75)	Latin1_swedish_ci	No	None	
Nama	Var(15)	Latin1_swedish_ci	No	None	
Nip	Var(25)	Latin1_swedish_ci	No	None	
Level	Enum('super admin','admin')	Latin1_swedish_ci			

The admin table serves to input admin data, an example of an admin that will be created by more than one.

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Table 2.
Disposision Table

Field	Type	Collation	Null	Default	Extra
Id	Int(6)		No	*None*	Auto_increment
Id_surat	Int(6)		No	*None*	
Kpd_yth	Varchar(250)	Latin1_swedish_ci	No	*None*	
Isi_disposisi	Varchar(250)	Latin1_swedish_ci	No	*None*	
sifat	enum('Biasa','Segera','Perlu Perhatian Khusus','Perhatian Batas Waktu')	Latin1_swedish_ci	No	*None*	
Batas_waktu	Date	Latin1_swedish_ci	No	*None*	
catatan	Varchar(250)	Latin1_swedish_ci	No	*None*	

The disposition table serves to input incoming mail data and then given to the concerned and re-archived by the admin.

Table 3.
Outgoing Mail Table

Field	Type	Collation	Null	Default	Extra
Id	Int(6)		No	*None*	Auto_increment
Kode	Varchar(20)		No	*None*	
no_agenda	Varchar(100)		No	*None*	
Isi_ringkas	Mediumtext		No	*None*	
tujuan	Varchar(250)		No	*None*	
no_surat	Varchar(100)		No	*None*	
tgl_surat	Date		No	*None*	
tgl_catat	Date		No	*None*	
keterangan	Varchar(200)		No	*None*	
file	Varchar(200)		No	*None*	
pengolah	Int(11)		No	*None*	

Exit mail table to hold all outgoing mail data into the outgoing data input form. In the exit mail table there are 11 fields, namely: Id, Kode, No_Agenda, Tujuan, No_surat, Tgl_surat, Tgl_catatan, keterangan, *file*, pengolah.

Table 4.
Incoming Mail Table

Field	Type	Collation	Null	Default	Extra
Id	Int(6)		No	*None*	Auto_increment
Kode	Varchar(50)	Latin1_swedish_ci	No	*None*	
No_agenda	Varchar(7)	Latin1_swedish_ci	No	*None*	
Indek_berkas	Varchar(100)	Latin1_swedish_ci	No	*None*	
Isi_ringkas	Mediumtext	Latin1_swedish_ci	No	*None*	
Dari	Varchar(250)	Latin1_swedish_ci	No	*None*	
No_surat	Varchar(100)	Latin1_swedish_ci	No	*None*	
Tgl_surat	Date		No	*None*	
Tgl_terima	Date				
Keterangan	Varchar(200)	Latin1_swedish_ci			
File	Varchar(200)	Latin1_swedish_ci			
pengolah	Int(4)	Latin1_swedish_ci			

The incoming mail table serves to accommodate the incoming mail data and inputted in the incoming mail form and in the incoming mail table there are 11 files.: Id, Kode, No agenda, Indeks berkas, Isi ringkas, dari, No surat, Tanggal surat, Tanggal terima, Keterangan, *File*, Pengolah.

3.3 Apication Sistem design

Designing a filing information system using Web Based accessed via the internet connected to the website to be accessible using MySQL to accommodate data that has been inputted by admins.[7]

a. System Workflow

To start building a program in the form of a Web Based application regarding filing information systems at college institutions first the author designs the workflow based on user needs.

Application of filing information system at this college institution is a process of collecting incoming mail archives, outgoing letters that are long processed. The design of a filing information system is an attempt to start a good system.

b. Data Flow Diagram

Fig 1. DFD Level 0

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Admin is in charge of storing incoming mail data, outgoing mail, inserting incoming mail, outgoing mail and checking incoming mail, outgoing mail if at any time needed incoming letter data or outgoing mail can be seen

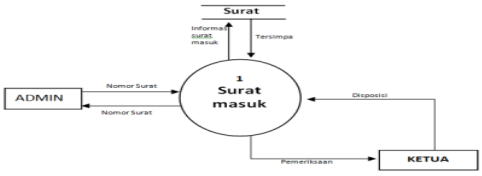

Fig 2. DFD Level 1 Incoming Mail

Admin is in charge of filling in the letter number, storing incoming mail data, and after the letter is checked the letter can be dispossessed.
And after being positioned the admin will store the mail in the filing information system program.

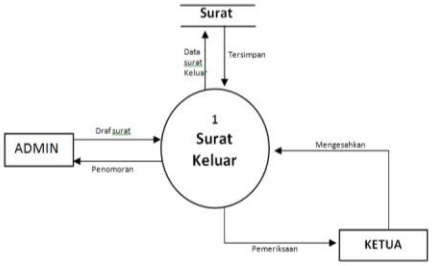

Fig 3. DFD Level 1 Outgoing Mail

Admin is in charge of making the concept of letters, numbering letters, storing outgoing letter data, and after being examined, the head of the institution authorizes the letter to be issued. After the head of the college institution authorizes the letter, the admin will be in charge of storing the exit letter data that will be done filing.

c. Table Relationship

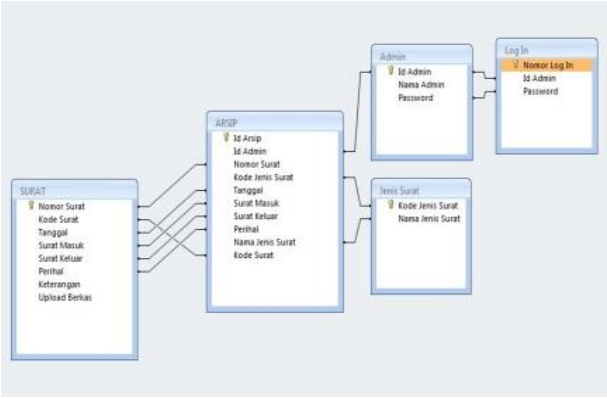

Fig 4. Join Data Table

In the figure above there are 5 entity tables, namely mail entities, archives, admins, mail types, log in. where each entity has a relationship with another entity, namel :

a. Nomor surat (*Primary Key*) mempunyai hubungan dengan Table Arsip dan menjadi *Foreign Key* di Table arsip.
b. Id Admin (*Primary Key*) mempunyai hubungan dengan Table Arsip dan menjadi *Foreign Key* di Table arsip.
c. Kode Jenis Surat (*Primary Key*) mempunyai hubungan dengan Table arsip dan menjadi *Foreign Key* di Table arsip.
d. Id Admin (Primary Key) has a relationship with the log-in table and becomes the Foreign Key in the log-in table.

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Next are the attributes of the mail entity, the type of letter to the archival entity and the admin entity that has the password attribute to the log in password [8].

d. Flowchart

Flowchart is an overview of the series of system activities that the author created from start to finish. And is an overview of a program that states the direction of the flow of the program..[1]

Another understanding that the author gets is a system formed in the form of flowcharts and algorithms in a program, and finally state the direction of the flow of the program. So that flowchart or flowchart is also called a method to describe the stages of problem solving along with data flow with standard symbols that are easy to understand.

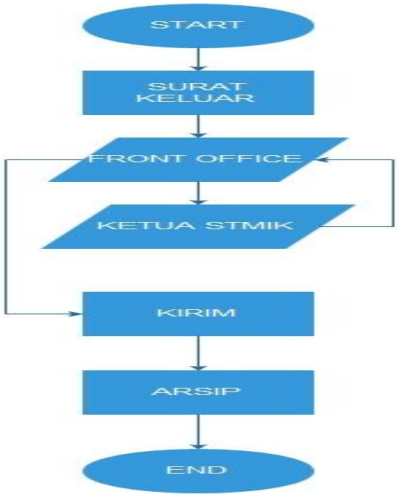

Fig 5. Flowchart of Incoming Mail

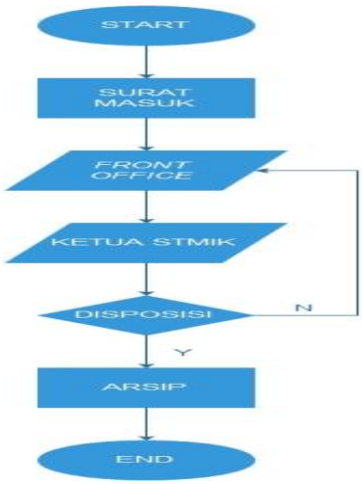

Fig 6. Flowchart of Outgoing Mail

e. Prototype Method

Fig 8. Prototype Planning Flow

a. Author and admin communication about filing information systems at college institutions.
b. Do planning and modeling quickly in the form of a quick design and then will start the construction of the prototype.
c. Prototype creation and conduct further evaluation after that program creation.
d. The creation of software in accordance with the prototype that has been evaluated.
e. If it has not met the needs of the college institution, it will return to the initial process until the needs of the institution are met. [9]

3.4 Interface design

a. Aplication design view interface

1) Login Interface

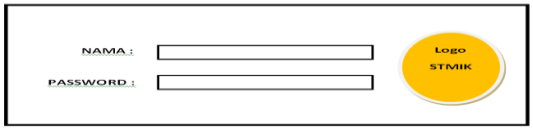

Fig 9. Login Interface

The image above is a interface design when the initial opening of the website link as the display above, for the login form, admin only enter the username and password. Main Menu View

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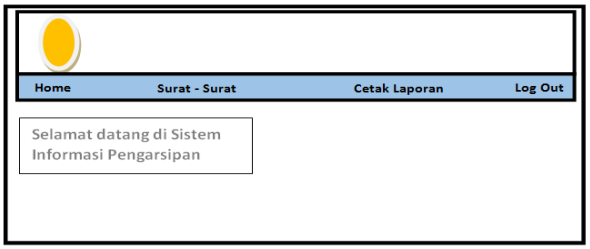

Fig 10. Main Menu Interface

The image above is a menu interface design website link as the display above, for admin only.

2) Letters Sub Menu Interface

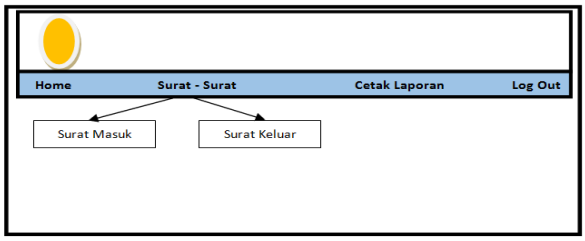

Fig 11. Letter Sub Menu Interface

The figure above is a display design of the letters, in the sub-letters there are incoming letters and exit letters, when the admin chooses one of the incoming letters and the letter is released there will be a form that must be inputted in the entry letter or exit letter.

3) Mail's Sub Menu Interface

Fig 12. Mail's Sub Menu Interface

The appearance of the archive search design, in the search of the archive the user will only input the archive data to be searched and click the search button, after which the data searched will come out according to the inputted data.

4) Reporting View

Fig 13. Print of Report

The printed view of the report above is to print the report, and the user can print the report according to the date the report to be printed.

5) Logout Interface

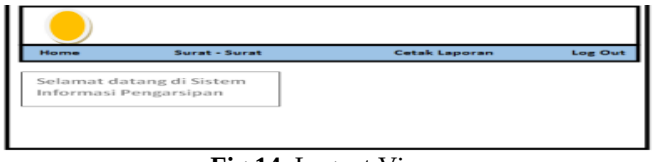

Fig 14. Logout View

3.5 Testing Implementation System

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b. Testing view interface system.

1) Testing View Login

Fig15. View Login

Figure 15 is the initial view when the admin has connected to internet access and goes to the link www.arsip.parnaraya.ac.id. In this login menu, the admin must enter a username and password.

2) Testing View Main Menu

The display above is the display after the admin has successfully logged in. And to input data for incoming and outgoing mail, it is in the sub menu above.

a) Testing interface view the input letter

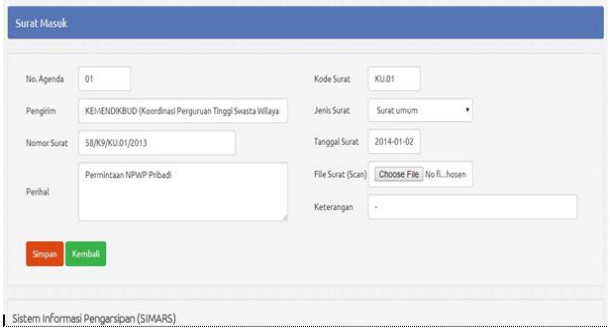

Fig 16. Testing interface view the input letter

Fig 17. Testing this saving data.

If there is an incoming letter, the admin must input the letter data first before saving it, the data in the archiving information system program and after all forms are inputted click save.

b) Testing view input the out letter (Internal)

Fig 18. Testing view input outletter (Internal)

Display input data for internal outgoing mail, in this form the admin must input complete data..

c) Testing input the letter out (eXsternal)

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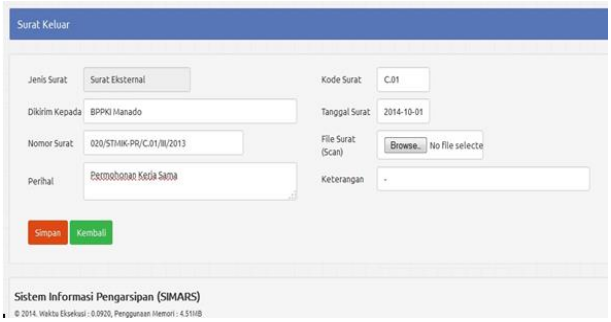

Fig 19. Testing input the out letter (exsternal)

d) Testing view input the out letter. (letter General)

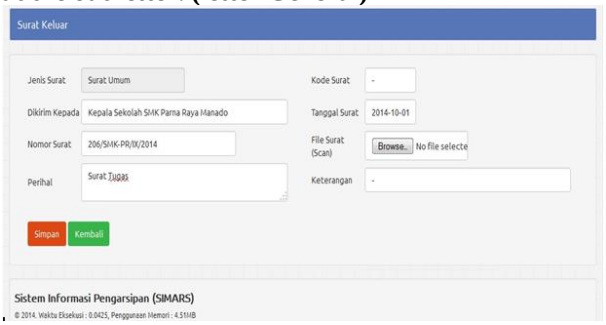

Fig 20. Testing view input the out letter (letter General)

3) Testing view control data

a) Testing the letter incomming

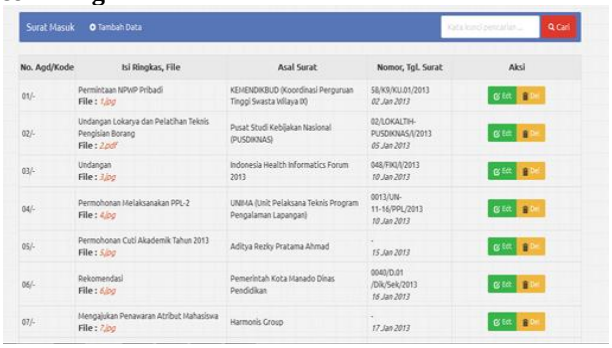

Figure 21. Testing the letter incomming

Incoming mail data display, after the data is inputted, it will be stored in the archiving information system database, if there is an incorrect input, the admin just changes the mail data by selecting (action) Edt. And after changing the wrong data will save the data and will look like the picture above. And to delete mail data that the admin doesn't need, just delete the data by selecting (action) Del, to delete unused data.

b) Testing view the letter out

Fig 22. Tampilan surat keluar

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After inputting outgoing mail data, the data will be stored in the archiving information system database, as shown in the display above. When there is incorrect inputting of outgoing mail data, the admin just chooses (action) Edt to change the wrong data. If there is unused outgoing mail data, the admin will choose Del (action) to delete the unused data.

c) Testing view report the letter out (Internal, eksternal, publik)

Fig 23. Testing view report the letter out (Internal, eksternal, publik**)**

Figure 27 display for printing internal, external, general outgoing mail report agenda. And there is also an option if the admin only needs to print one internal, external or general letter if the admin will print all mail reports admin chooses "all types of letters" to print all outgoing mail agendas according to the date that will be needed to print the mail report agenda.

d) Testing view rport the letter out

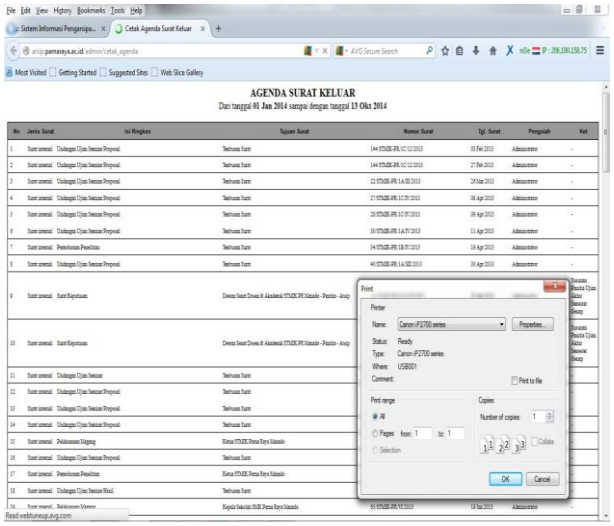

Fig 24. Tampilan cetak laporan surat keluar

e) Tesing view the letter incoming

Fig 24. Tesing view the letter incoming

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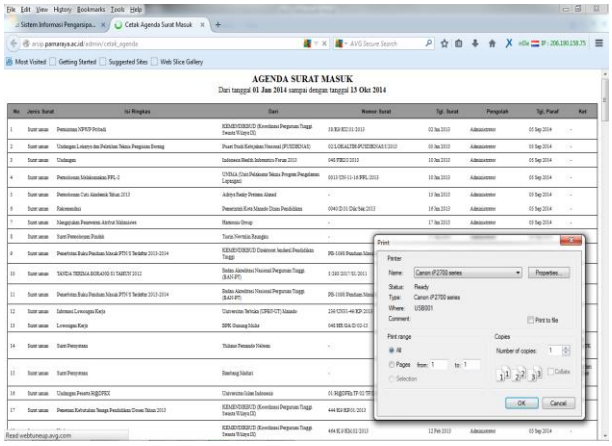

Fig 25. . Tesing view notes the letter incoming

Incoming mail report print view, the view is the priView view before printing. If you want to print the OK option on the Print form will print the incoming mail report.Settings view (User instance) admin can change the existing view in the filing information system.Users of this filing information system can be more than one person, and the above display is to create ID for users other than admin.

f) Testing change password

Display testing change user password

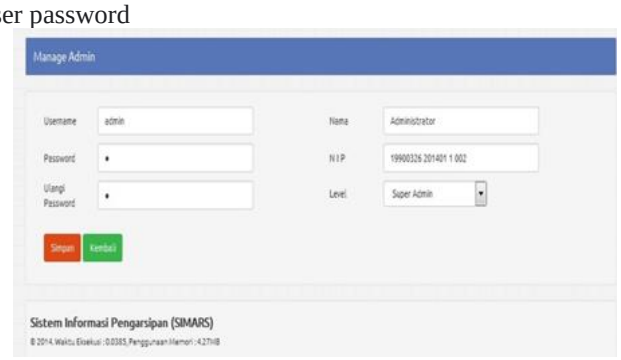

Fig 25. Display testing change user password

Fig 26. Display end save change user password.

This display is for changing the user's password, if the user no longer wants to use the old password, the user only inputs the data in the image above..

4. Conclusion

This archiving information system aims to simplify and speed up the existing archiving in academic institutions. The inputted data will be stored in the archiving information system database. So that the stored

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data is not damaged (hit by a virus or the computer is damaged) then the authors store the data in the institution's WEB. This application is specifically used in academic institutions. The archiving information system using the Model View Controller has several advantages, including:

1) Archiving is faster than ever that is still manual
2) Archived data is stored in the WEB. www.arsip.parnaraya.ac.id

By using Model View Controller programming, in the development of program applications, program updates will make it easier for users.

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