

Service Management Information System Web-Based Society on Siundol Jae Village Office

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Abstract

The community service system that is currently running in Siundol Jae village is still done manually, so that village services to the community are less effective and the community is also dissatisfied with village services. With the construction of a web-based community service management information system, it can make it easier for village officials to serve the community. The steps taken to design the system are data collection methods consisting of interviews, observations and literature studies. While the system development uses the waterfall method. From the results of this study, village officials can more easily provide services to the community and the community also does not have to wait long to get the letters they need.

Keywords

information systems; services; waterfall; web; MySQL



I. Introduction

The community service system is a form of obligation of the village government and village officials to the community, because with this system all community needs will be easily met by village officials. The services that are commonly used by village officials in serving the community are manual service systems and information system services. The manual public service system will slow down service to the community. Due to the many obstacles in service to the community that make the community less satisfied with the services of the village apparatus or village officials, both there are many queues and it is difficult to get the signature of the village head or other obstacles. While the service system with an information system makes the village government or village apparatus more effective and faster in service to the community. For example, if the community wants to submit a birth certificate, death certificate, transfer certificate, or other letter while the village head's signature is difficult to obtain, but with the village service management information system it will be more helpful for the community to get the letter and the community will also feel satisfied with the village service. According to (Setiani et al., 2021) with the existence of a web-based community service information system, village apparatus services to the community become more accurate. While according to (Yoris et al., 2021) the benefits of web-based information systems are to make it easier for rt and rw to provide services letters to residents.

Technology in current information systems facilitates the processing of the information needed so that the information disseminated can be easier, clearer, faster and more complete, affecting the field of population administration. Currently the use of technology is widely used as an information system, one of which is by using web technology, information can be accessed without any limitations of space and time as is the case in programming methods in building an application using a computer as a tool in completing work. The problem of population administration is a very important problem and must be handled properly, the population data obtained are based on religion, gender,

occupation, education, and others. This will later be useful to support the making of appropriate development policies. Development is a change towards improvement (Shah et al, 2020). Population data processing is the responsibility of the district/city government, where the implementation starts from the kelurahan. As an important role in population registration . Management is an activity that is needed in life. From individuals, related organizations, to organizations that require complex management, so that they are well organized and controlled. The functions of service, empowerment, development, regulation and protection carried out by the government include the fulfillment of all aspects of community needs, which then become government affairs. The service function is the essence of the government in its relationship to the community. as the New Public Service (NPS) theory proposed by Denhardt and Denhardt (2007:28) that "Role of government is serving (negotiating and brokering interests among citizens and community groups, creating shared values)"

In practice, government affairs are not fully managed by the central government. Some of the implementation of affairs will be better and more effective if carried out by local governments. This encourages the granting of regional autonomy to provincial and municipal governments which aim to bring service delivery closer to the community according to the characteristics of their respective regions. Globalization greatly affects the dynamics of state and social life, resulting in changes in all fields. Government, the development of information and communication technology (ICT) is very rapid. The development of ICT advances encourages the government to be able to run government in a transparent and accountable manner. So that people can easily find out government activities by looking through the latest information technology, namely the internet. With changes in the dynamics of people's lives, in essence, it is necessary to serve as efficiently as possible for the sake of implementing real, dynamic and responsible regional autonomy, the implementation of local government activities must always continue to develop through new innovations. as Law Number 23 of 2014 concerning Regional Government Article 386 mandates that in formulating regional government innovation policies, it is carried out with reference to the principles of efficiency, improvement of effectiveness, improvement of service quality, does not cause conflicts of interest, is oriented to the public interest, is carried out openly, meets the values of propriety, and the results can be accounted for and not for self-interest.

Siundol Jae is a village that is included in the Sosopan sub-district, Padang Lawas Regency. Siundol Jae Village has a population of approximately 1200 residents, most of whom earn from plantations and agriculture. Siundol Jae Village is a village that still uses community services manually. Siundol jae village often requires village services, such as submitting a domicile certificate, birth certificate, death certificate, immigrant certificate and moving certificate. So that with the diverse needs of the community, the village apparatus, the head of affairs (kaur) of the Siundol jae village, must be more active and more skilled in providing services to the community. So that with the many needs of the community, the village apparatus is less efficient in carrying out services. According to (Juliana et al., 2019) with an administrative service system in the form of letters, it can be resolved quickly and the public can monitor the course of handling services. One correct solution to solve. The problem is by creating a web-based public service management information system. So that with this system, it is hoped that it will make it easier for village officials to serve the community in Siundol Jae Village.

The formulation of the problem contained in the system to be built is how to implement a web-based community service management information system at the Siundol jae village office, Padang Lawas district and how to design and build a web-based

community service management information system at the Siundol Jae village office, Padang Lawas district with using php and mysql.

The limitation of the problem made by the author is that the system built is a web-based public service management information system, the system is built using php and mysql and the method used is waterfall. The flows contained in the system are: input consisting of username and password, population data input, birth data input, death data input, immigrant data input and moving data input. Meanwhile, the output section consists of printing a birth certificate, printing a death certificate, printing an immigrant certificate and printing a moving certificate.

The purpose of this report is to implement a web-based community service management information system at the Siundol Jae village office, Padang Lawas district and to design and build a web-based community service management information system at the Siundol Jae village office using PHP and MySQL.

II. Review of Literature

According to (Juliana et al., 2019) with an administrative service system in the form of letters, it can be resolved quickly and the public can monitor the course of handling services. While the research that will be made by the author will make it easier and faster for the community to submit letters without having to wait in line and submit to the village head. Another research on "The SIMADE application (village management information system) according to (Sihombing, 2018) in improving administrative services in Kepenghuluan Bakti Makmur, Bagan Sinembah Rokan Hilir Riau", with the construction of the system the kepenghuluan is easier to process population data and it is easier to read population growth charts so that the performance of village officials can be further improved. While the research that will be made by the author is to serve the community and further improve the performance of village officials. The research "Analysis of public satisfaction with public services based on the community satisfaction index at the Balitang sub-district office, East Oku district" (case study: community service) was carried out (Suandi, 2019). With the construction of these analysts, more attention will be paid to public services and the community will be more satisfied with public services at the Baitang District office. While the research made by the author is so that the performance of village officials can be further improved and services to the community will also be easier and faster so that the community will not feel disappointed with village services. According to (Mahmudah et al., 2019) with the existence of archiving incoming and outgoing mail based on a website, mail management will be more effective and report generation will be easier. While the research that will be made by the author is not only for mail services, but the personal data of each resident can also be stored in the system. Another research on "Designing a Web-based Service Information System at the Ranah Baru Village Office" (case study: community service) was carried out (Maria & Efendi, 2021) namely the function of the system built to serve village administration requests anytime and anywhere as long as it is connected to the network. While the research that will be made by the author is more focused on submitting letters and must go through the village administrator or village head so that people are not careless in taking the letters that the community needs.

2.1 Understanding Information Systems

Information system is a tool to present information in such a way that it is useful for the recipient. (Tanjung, 2017)

2.2 Management Information System

Management Information System is an information system that is able to provide sophisticated and fast information to all parts to manage an organization so that it continues to exist (Riswanda & Priandika, 2021)

2.3 Public Service

Based on Law No. 25 of 2009 concerning Public Services, namely: Public services are all forms of activities in the context of regulating, coaching, guiding, providing facilities, services and others carried out by government officials as an effort to meet the needs of the community in accordance with applicable regulations (Suandi, 2019) . The principle of public service is used to improve the quality of public service provision (Ibrahim & Maita, 2017) .

2.4 Understanding MySQL

MySQL is a SQL database management system software or DBMS that is multithreaded, multi-user, with about 6 million installations worldwide (Information et al., 2017).

2.5 Understanding PHP

PHP stands for Phypertext Preprocessor is a script-shaped language that is placed on a server that is sent to a browser user client (Asmara, 2019).

III. Research Method

The research method made by the author is qualitative research. Qualitative research is about the sentences or actions of the people being researched or interviewed. (Loilatu et al., 2020) .

3.1 Method of Collecting Data

a. Interview

Researchers interviewed village officials (kaur) directly to get accurate and complete data.

b. Observation

Researcher to do observation by direct activity community service in Siundol Jae Village. This method will provide an overview of the ongoing community service system in Siundol Jae Village. With the observation method, the ongoing mail management scheme will be seen. (Maheasy et al., 2019) .

c. Literature review

Researchers collect data and study from several journals to get the information needed. According to (Khaerunnisa et al., 2021) by conducting a literature study, one can utilize all relevant information and thoughts in research.

3.2 System Development Method

The system development method used is the Waterfall method. Where the working system method is carried out sequentially. If the previous stage has not been completed, the next stage cannot be continued. The stages in the method are requirements analysis, design stages, implementation, testing and maintenance. As in the image below:

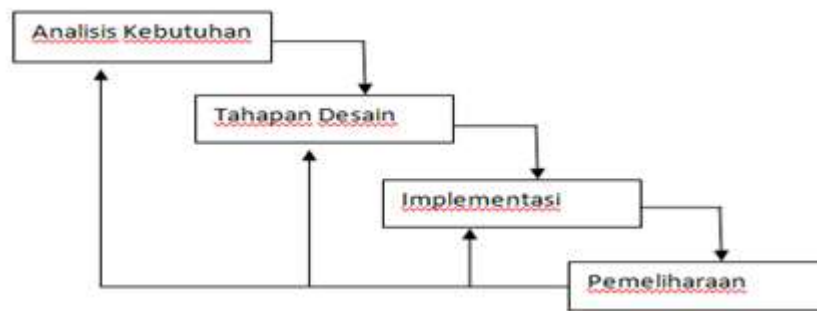


Figure 1. Diagram Waterfall

IV. Results and Discussion

4.1 Needs Analysis

The needs analysis provides an overview of the community service system that is currently running in Siundol Jae Village. The application that will be made is the result of the old system analysis.

4.2 Design Stage

This stage will explain the description of the system that will be made starting from the manufacturing process to the end of using the system. Because with the design stage, the user will more easily understand the system that will be created.

a. Use Case Diagrams

Use Case Diagrams explain the levels of system users. *Use case* diagrams explains each *user level* and actions that can be taken on the system (Sholihin, 2021). Admins can login, access and input data on the system as well as users (kaur) can login and access information and input data. Like the following picture:

b. Class Diagram

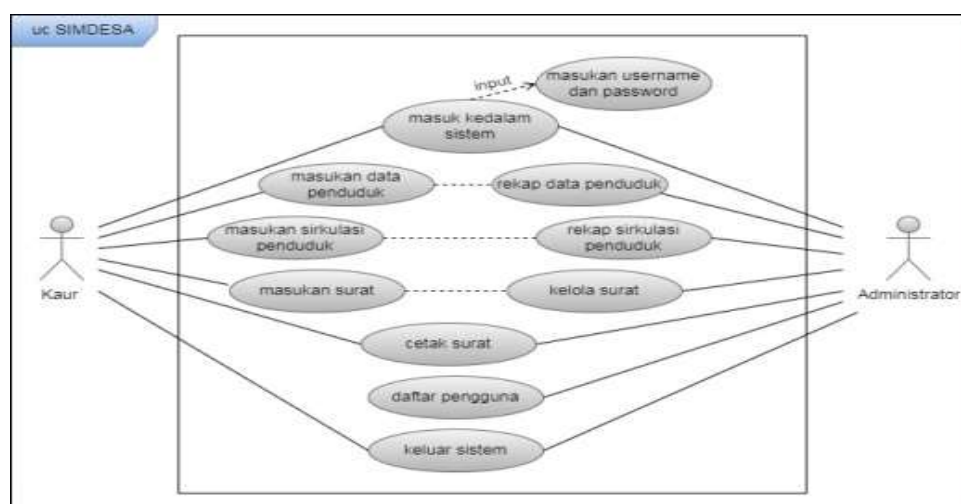


Figure 2. Usecase Diagrami

The following is a Class Diagram of a community service management information system:

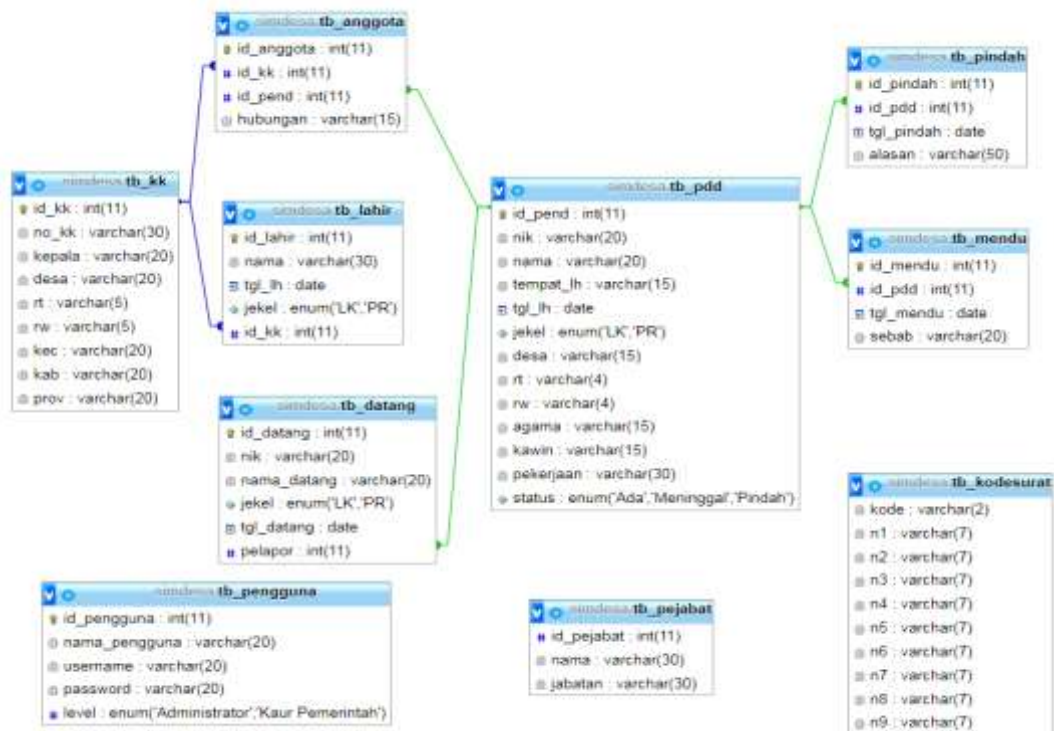


Figure 3. Class Diagram

4.3 Implementation

a. Login Page

As for what will be inputted on the login page, namely the username and password. As in the image below:

Figure 4. Login Page

b. Dashboard Page

After logging into the admin system, you go directly to the dashboard page. On the dashboard page the admin can choose a menu, as shown in the following image:



Figure 5. Dashboard page

c. Population Data Page

On the resident data page, admins and people can add or delete data on the system. The population data page displays as shown in the image below:

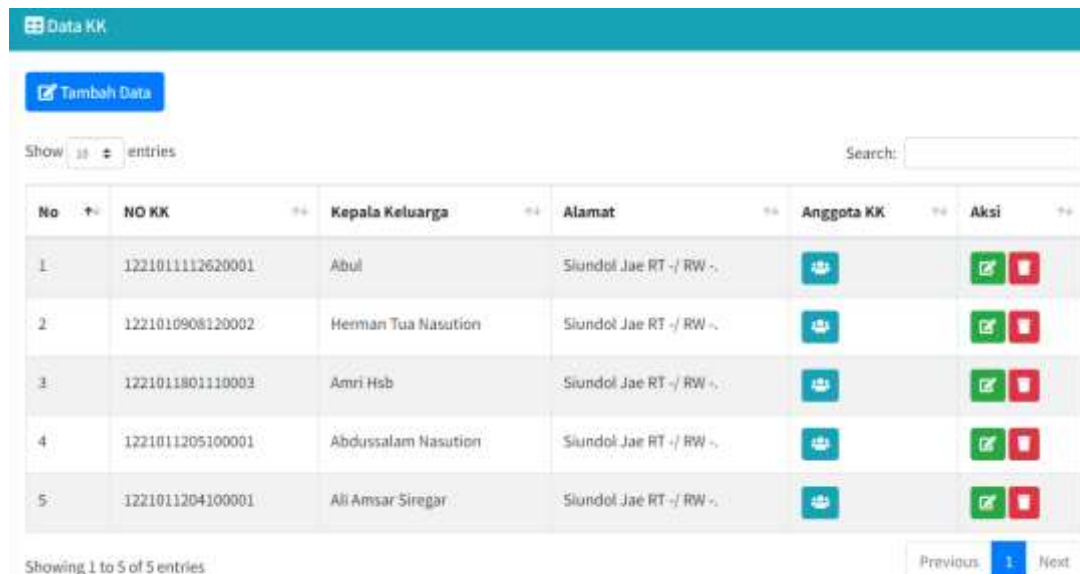
The 'Data Penduduk' (Population Data) page displays a table of residents. The table has columns for 'No', 'NIK', 'Nama', 'JK', 'Alamat', 'No KK', and 'Aksi'. There are four rows of data. The 'Aksi' column contains icons for adding, editing, and deleting data. The page also includes a 'Tambah Data' button, a 'Show 10 entries' dropdown, and a search bar.

No	NIK	Nama	JK	Alamat	No KK	Aksi
1.	1221014708720001	Erma Sry Yantiy	PR	Siundol Jae RT -/ RW	1221011112620001- Abul	[Add] [Edit] [Delete]
2.	1221011710960001	Abdul Aziz Nasution	LK	Siundol Jae RT -/ RW	1221011112620001- Abul	[Add] [Edit] [Delete]
3.	1221084505900001	Nur Fitri Gabena Dau	PR	Siundol Jae RT -/ RW	1221010908120002- Herman Tua Nasution	[Add] [Edit] [Delete]
4.	1221015911110001	Dzul Hafizah Nasutio	PR	Siundol Jae RT -/ RW	1221010908120002- Herman Tua Nasution	[Add] [Edit] [Delete]

Figure 6. Population Data Display

d. KK Data Page

On the KK data page, the admin can add or delete population and KK member data. The view of the KK data page is as follows:

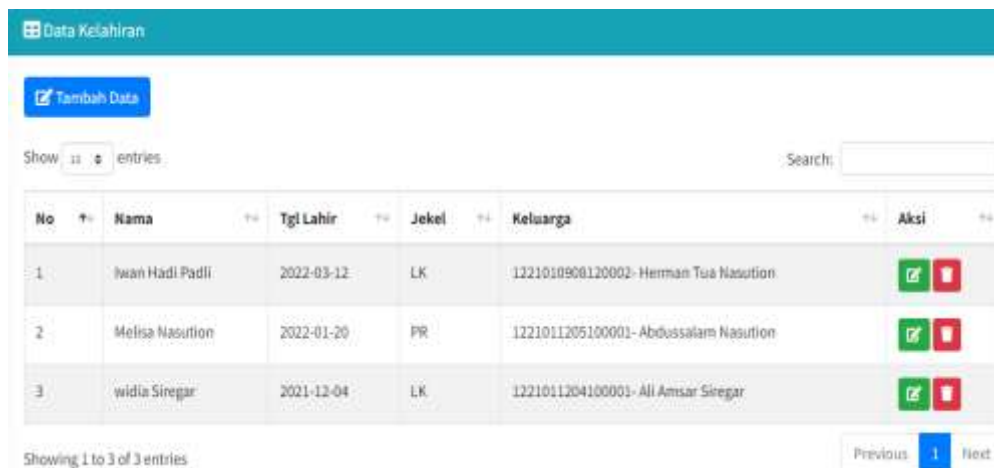


No	NO KK	Kepala Keluarga	Alamat	Anggota KK	Aksi
1	1221011112620001	Abul	Siundol Jae RT -/ RW -.		
2	1221010908120002	Herman Tua Nasution	Siundol Jae RT -/ RW -.		
3	1221011801110003	Amri Hsb	Siundol Jae RT -/ RW -.		
4	1221011205100001	Abdussalam Nasution	Siundol Jae RT -/ RW -.		
5	1221011204100001	Ali Amsar Siregar	Siundol Jae RT -/ RW -.		

Figure 7. KK Data Implementation

e. Biran Data Page

On the birth data page, the admin can add and delete newborn baby data. The appearance of the birth data page is as follows:



No	Nama	Tgl Lahir	Jekel	Keluarga	Aksi
1	Iwan Hadi Padli	2022-03-12	LK	1221010908120002- Herman Tua Nasution	
2	Melisa Nasution	2022-01-20	PR	1221011205100001- Abdussalam Nasution	
3	widia Siregar	2021-12-04	LK	1221011204100001- Ali Amsar Siregar	

Figure 8. Implementation of Birth Data

f. Death Data Page

On the death data page the admin can add and delete death data. The display of the death data page is as follows:

No	NIK	Nama	Tanggal	Sebab	Aksi
1	1221011112620001	ABUL	2008-12-11	demam	 
2	1221011304500001	Amri Hsb	2013-08-12	Sakit Lambung	 

Figure 9. Implementation of Death Data

g. Visitor Data Page

On the entry data page, the admin can add and delete entry data. The appearance of the entry data page is as follows:

No	NIK	Nama	Jekel	Tanggal	Pelapor	Aksi
No data available in table						

Figure 10. Implementation of Immigrant Data

h. Data Page Move

On the moving data page, the admin can add and delete data on moving residents. The display data page moves are as follows:

No	NIK	Nama	Tanggal	Alasan	Aksi
No data available in table					

Figure 11. Implementation of Moving Data

i. Manage Mail

On the manage mail page, the admin only needs to input or select the nick for which the letter will be generated. The display of the mail management page is as follows:

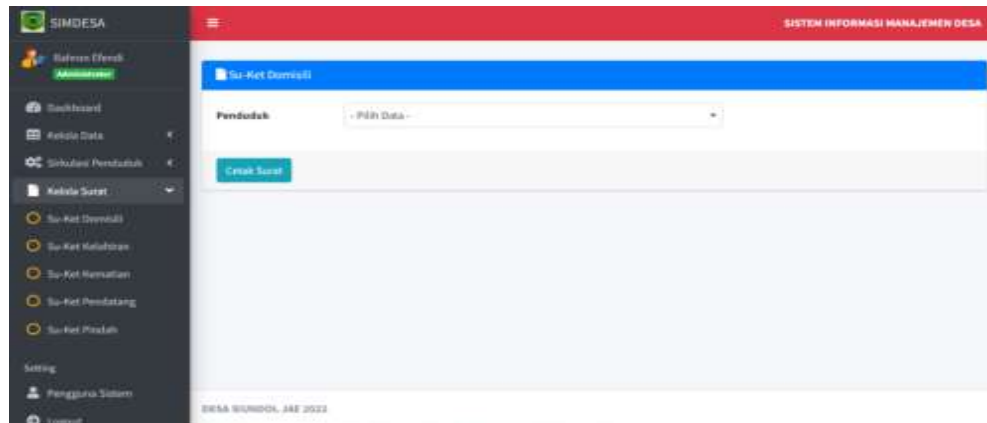


Figure 12. Mail management display

j. User data

On the user data page the admin can add or delete users (kaur). The appearance is as follows:

The screenshot shows the 'Data User' management interface. It includes a 'Tambah Data' button, a 'Show 4 entries' indicator, and a search bar. The main part is a table with columns: No, Nama User, Username, Level, and Aksi. It lists four users: Bahron Erendi (Administrator), Alhuddin Hasibuan (Kaur Pemerintah), Pudun Davlay (Kaur Pemerintah), and Ahmad Pardi (Kaur Pemerintah). Each user has a green 'On' status icon and a red 'Off' status icon in the Aksi column. At the bottom, it says 'Showing 1 to 4 of 4 entries' and has 'Previous', '1', and 'Next' navigation buttons.









No	Nama User	Username	Level	Aksi
1	Bahron Erendi	admin	Administrator	 
2	Alhuddin Hasibuan	admin2	Kaur Pemerintah	 
3	Pudun Davlay	admin3	Kaur Pemerintah	 
4	Ahmad Pardi	admin4	Kaur Pemerintah	 

Figure 13. User Data

k. Sample Letter

The output of the sample letter is as follows:

The output of the sample letter is as follows:

0400002 04/01/2022 12/04/2022

PEMERINTAH KABUPATEN PADANG LAWAS
KECAMATAN SOSOPAN
DESA SEINDOR JAE

SERAT KETARANGAN DOMISILI

No Surat : /SKet.Domisili/ 05/22

Yang berkedudukan dibawah ini Kepala Desa Seindor Jae, Kecamatan Sosopan, Kabupaten Padang Lawas:
bertanggung jawab bahwa :

Nama : Abdul Aziz Numanon
NIK : 32101170900004
Jekel : LK
TTL : Seindor Jae/ 1996-12-10

Adalah benar benar warga Desa Seindor Jae, Kecamatan Sosopan, Kabupaten Padang Lawas dan telah terdaftar dalam Buku Induk Penduduk Desa Seindor Jae, Kecamatan Sosopan, Kabupaten Padang Lawas.

Demikian Surat Keterangan ini dibuat, agar dapat digunakan sebagai surat domisili.

Seindor Jae, 22/05/22
Kepala Desa Seindor Jae

(PEDUNG ABADI HARAHAP)

Figure 14. Sample Letter

4.4 Maintenance

According to (Mahcepat et al., 2019) software maintenance and development that are not detected during the testing phase are maintenance. So that with this maintenance the author will find it easier to find errors that occur in the system.

V. Conclusion

The use of a community service management information system that is still manual makes village officials less effective in serving the community so that the creation of a web-based community service management information system will make it easier for village officials to provide services and the community will also be more satisfied with village services. And population data storage will also be safer and easier with the system built.

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