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Community Decision Support Service System Village Level Mandiri Based On An Interactive Website

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Abstrak

Setiap desa wajib memberikan pelayanan yang baik kepada masyarakat umum dalam hal penulisan surat, pendataan penduduk, dan kebutuhan lainnya yang berhubungan dengan pelayanan kantor desa. Proses tersebut tetap mengharuskan warga untuk datang dan mengikuti prosedur untuk mendapatkan surat tersebut. Dalam hal ini, surat tersebut tidak dapat diproses dalam satu hari karena sering kali kepala desa yang berwenang untuk menandatangani surat tidak berada di tempat karena sedang bertugas keluar daerah. Jadi tunggulah keesokan harinya atau tunggu konfirmasi via Wats app dari bagian administrasi desa Kadilangon untuk datang dan mengambil surat yang telah diproses. Proses ini membutuhkan waktu yang lebih lama untuk melakukan dan mendapatkan pelayanan serta dokumentasi surat yang diserahkan oleh warga desa Kadilangon. Proses pelayanan surat yang diserahkan secara online ini untuk memudahkan warga dalam hal proses pengajuan dan bagi pegawai sendiri agar mempermudah proses dokumentasi dan pelaporan surat. Penulis membuat sebuah sistem informasi pelayanan masyarakat di desa Kadilangon. Dalam sistem ini, warga dapat mengajukan surat perizinan secara online. Diharapkan dengan adanya sistem ini proses pengajuan surat menjadi lebih cepat dan mudah karena sistem dapat diakses dari mana saja. Dengan adanya sistem pengabdian masyarakat ini diharapkan dapat meningkatkan kualitas proses pelayanan kepada masyarakat Desa Kadilangon.

Kata Kunci: *Sistem Pakar, Layanan, Informasi, Sistem.*

Abstract

Each village requires residents to come and follow the procedure to get correspondence. the letter cannot be processed in one day because the village head who is authorized to sign the letter is not there because he is on duty out of town, so the next day or waiting for confirmation via WhatsApp from the village administration to come and pick up the letter that has been processed. This process takes longer to get service and documentation of letters submitted by the Kadilangon village apparatus. The process of serving letters submitted online is to make it easier for residents in terms of the submission process and for employees themselves to facilitate documentation and reporting of letters. The author developed a public service information system in the village of Kadilangoon, Klaten. with this system, the community can apply for permits online. It is hoped that with this public service system, the process of submitting letters will be faster and easier because the system can be accessed from anywhere. this public service system is expected to improve the quality of the service process to the people of Kadilangoon village, Klaten.

Keyword*: Expert Systems, Services, Information, Systems.*

Introduction

The rapid development of the world has a tremendous impact on people's lifestyles. Information technology makes people's lives dynamic and fast. With the conveniences provided, it encourages people to utilize information and communication technology to help with their daily activities. Meanwhile, the technology for disseminating information that is currently developing rapidly is the internet. The internet comes from interconnection networking which linguistically means interconnected networks, so called because the internet is a network of computers throughout the world that are interconnected with the help of telecommunications lines.

Research by Irawan, A., (2018), entitled E-Government-Based Public Service System. The research discusses the lack of human resources in terms of quality and quantity, infrastructure that is constrained by geographical areas, lack of socialization to the public, and the mindset of the public who feel more comfortable with manual systems than electronic-based ones.

Research by Prasetya, O.D., (2014) entitled Incoming and Outgoing Mail Data Archiving Information System at the Semarang Police. This research produces an application that is used for archiving incoming and outgoing mail at the Semarang Police.

Research by Melinda, M. et al., (2017), entitled of Web-Based Public Information System. The research discusses Making it easier for the public information they need so that they

can improve services to the public.

RESEARCH METHODS

The research method used is descriptive and verification method. (Matthews & Ross, 2010 in Goertzen, 2017). Descriptive research is a statistic that studied through sample or population data as it is, without intending to make conclusions that apply to the public or generalization (Sugiyono, 2021).

Object of research is an trait or value of a person, object or activity that has certain variations determined by the research to be studied and then conclusions drawn (Sugiyono, 2021). In this study, the research object involved was Kadilanggon Village, Klaten, Central Java.

Information

According to Davis., (2019), information is data that has been processed or processed into a form that is very meaningful to the recipient and is a real value or understood in actions or decisions.

According to Miyanto., (2019), information is data that is processedd into a form that is more useful and more meaningful to the recipient.

Based on the definition above, can be processed to be processed together so that it has a role in the relationship of interrelationship with the information to be conveyed.

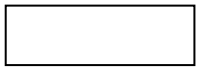
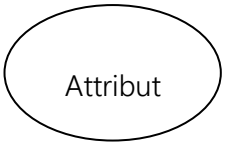
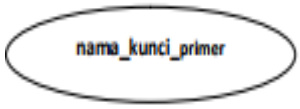
Website

According to Simarmata., J., (2019), a website is a stateless communication protocol based on TCP which was originally used to retrieve HTML files from a server.

According to Abdulloh., (2020), a website is a collection of pages containing digital data information in the form of text, images, animations, sound and video or a combination of all of them provided via an internet connection so that it can be accessed and viewed by everyone around the world.

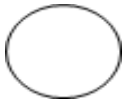
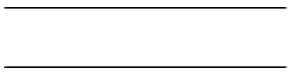
Entity Relationship Diagram (ERD

Entity Relationship Diagram (ERD) is an initial database modeling that will be developed based on set theory in mathematics for relational database modeling (Sukamto, R. A. and Shalahudin, M., 2020). Some notation streams such as Chen notation (developed by Peter Chen). Some symbols in ERD can be seen in table 1.

No.	Symbol	Description
1.		The core entity to be stored, the object that has the data stored to be accessed by the computer application, the naming of the entity is usually more of a noun and is not yet a table name.
2.		Relationships connecting entities begin with verbs.
3.		Fields or columns of data stored in an entity.
4.	 Atribut Key Primer	Fields or data columns stored in an entity are used as access keys to the desired record in the form of IDs, primary keys.
5.	Asosiasi/association 	The link between the relationship and the entities at both ends has a maximum multiplicity of connection between one entity and another entity, known as cardinality.

Data Flow Diagram (DFD

According to Sukamto, R. A. and Shalahudin, M., (2018), Data Flow Diagram (DFD) is a graphical representation that describes the flow of information and information transformation applied as data that regulates input and output. DFD is not suitable for modeling systems that use object-oriented programming diagrams that use notations to describe the flow of system data logically. Some of the symbols used in DFD are in table 2.

No.	Symbol	Description
1		External entities, inputs, outputs and data flow software of the modeled system.
2.		Data sent from storage to process, or from process to input output.
3.		The process of modeling software that will be implemented with programming.
4.		Files or databases in software modeling are implemented by programming.

RESULTS AND DISCUSSION

In this Information System using MySQL data storage media. In the database will be determined the tables contained in the system. The following is the database information that will be used in the system.

Table used to store all data on the population of Kadilanggon village

Field Name	TYPE	Key	Description
nik	Varchar(50)	Primary Key	Kunci Tabel
nama	Varchar(100)		
tmpt_lahir	Varchar(50)		
tgl_lahir	Date		
gender	Enum('Laki-laki', 'Perempuan')		
dusun	Varchar(50)		
rt	Varchar(10)		
rw	Varchar(10)		
desa	Text		
kecamatan	Varchar(50)		

kabupaten	Varchar(20)	
agama	Enum ('Islam','Kristen', 'Hindu', 'Budha')	
status	Varchar(20)	
pekerjaan	Varchar(20)	
gol_darah	Varchar(10)	
kontak	Varchar(50)	
password	Varchar(50)	
Group_id	Int(11)	Foreign Key

This section contains the stages in conducting research. The research stages are depicted in diagram form. Figure 1 shows a diagram of the research stages as below:

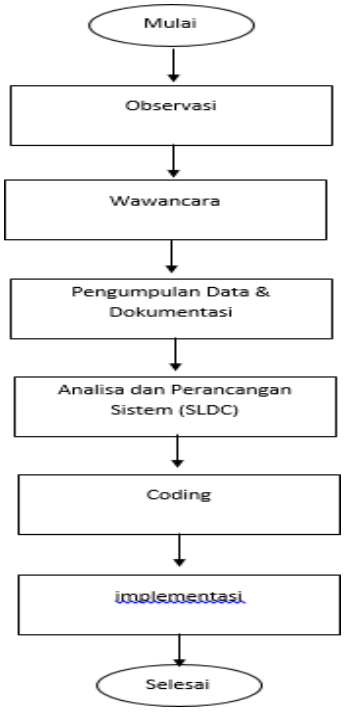


Figure. 1. Flowchart of Research Stages.

A flowchart is a document flow diagram that is used to describe the relationship between the entities involved in the form of existing document flows.

Context Diagram is a global description of a system, which explains in line the relationship between the entities in the proposed website system which can be seen in Figure 2.

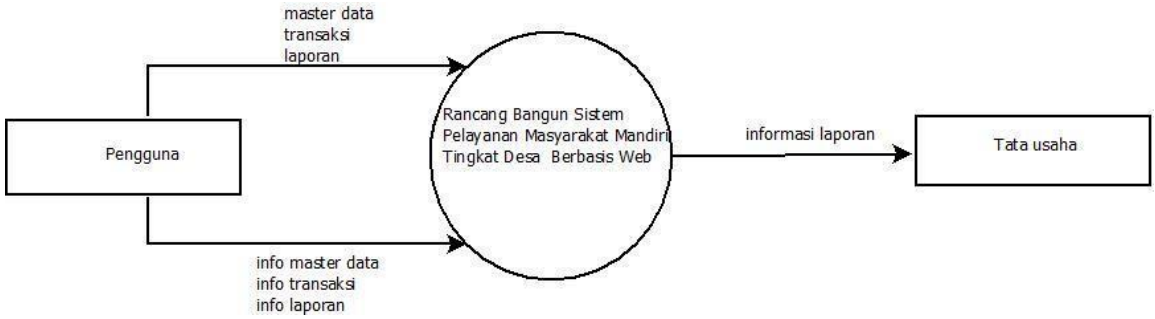


Figure. 2. Context Diagram.

A Tier Diagram is a design tool that can display all the processes contained in the system to be built, where in the Tier Diagram process there are several levels, namely level 0, level 1, and level 2. The system design depicted can be seen in Figure 3.

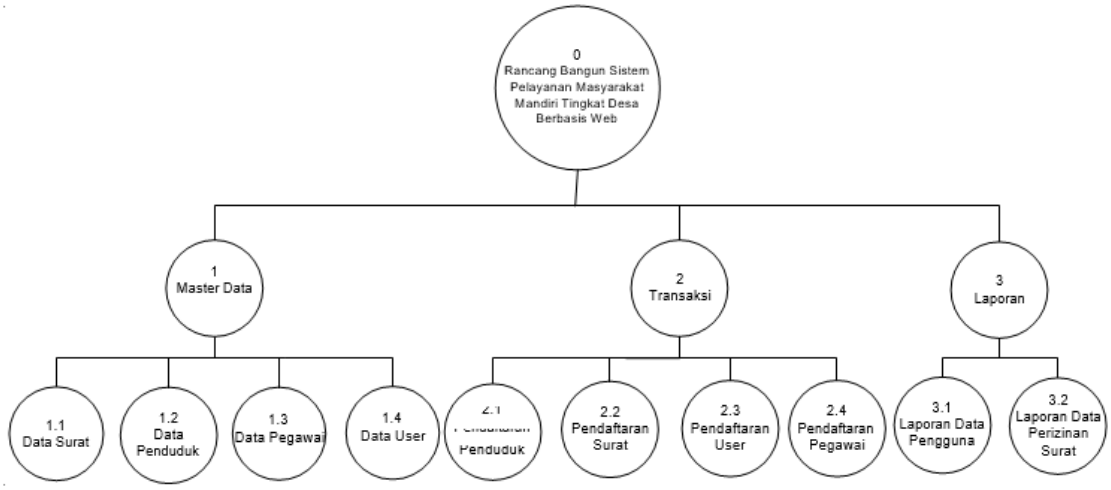


Figure. 3. Tier Diagram.

DFD Level 1 is a description of the sequence of processes in the system to be built, including master data processes, transaction processes and reports. DFD Level 1 describes where the data will go and produces the entities used in the database. At Level 1 DFD will be composed, each of which will become several processes, as presented in Figure 4.

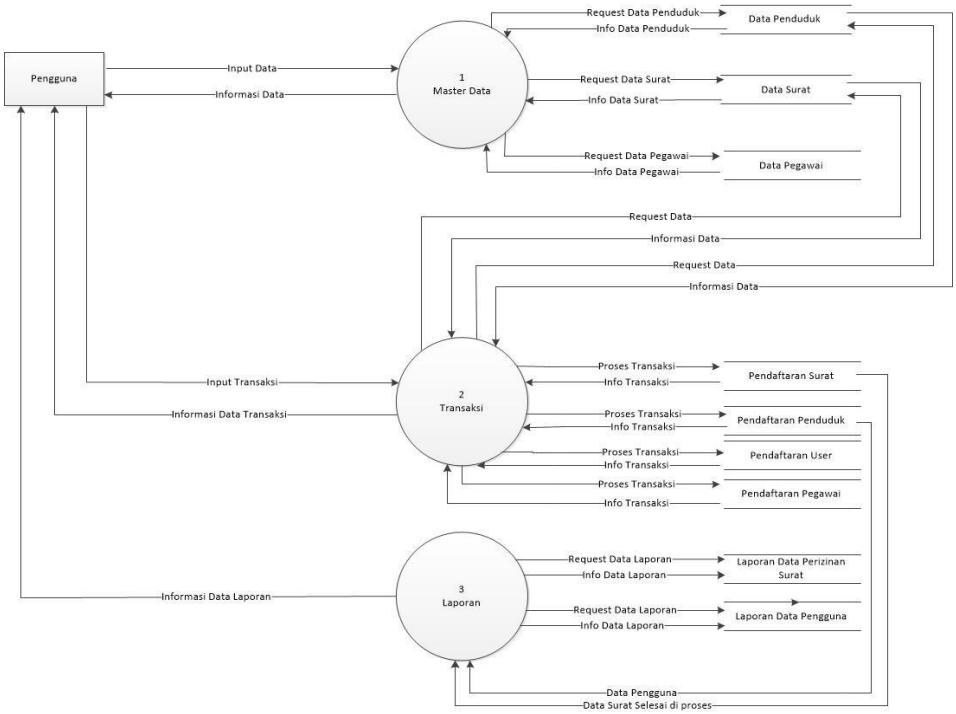


Figure. 4. DFD Level 1.

DFD Level 2 Process 1 is a development of DFD Level 1. This process explains the process of data collection for letters, residents and employees, data collection for letters is stored in the letter data file, population data collection is stored in the population data file and employee data collection is stored in the employee data file. The following is DFD Level 2 Process 1 which can be seen in Figure 5.

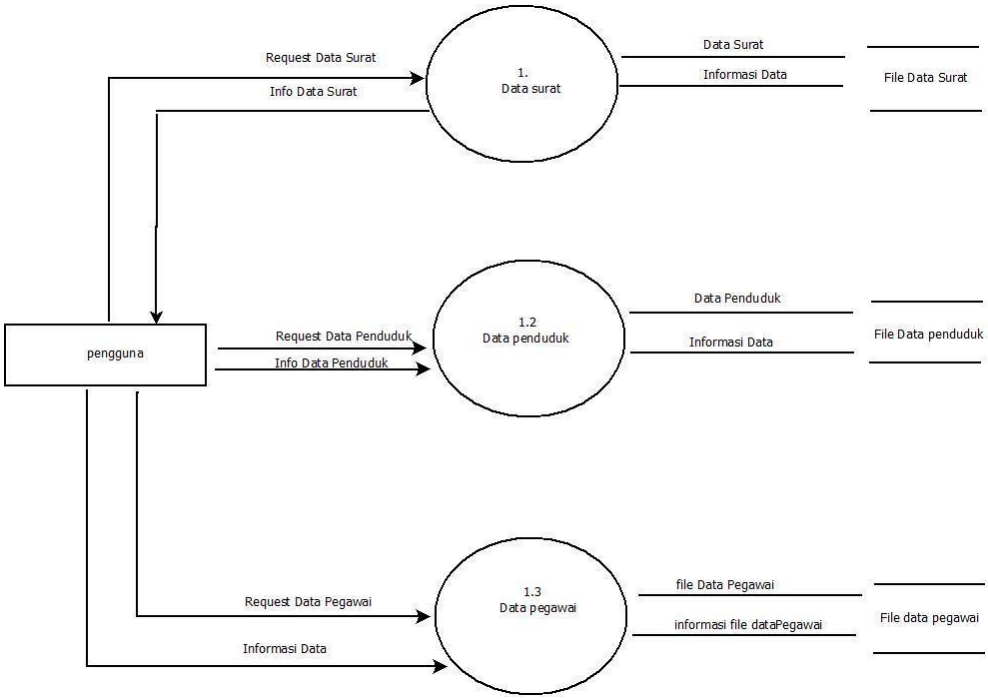


Figure. 5. Level 2 process 1.

DFD Level 2 Process 2 is a development of DFD Level 1. This process explains the letter licensing transaction and finished letter information, both transactions are saved to the transaction data file. The following is DFD Level 2 Process 2 which can be seen in Figure 6.

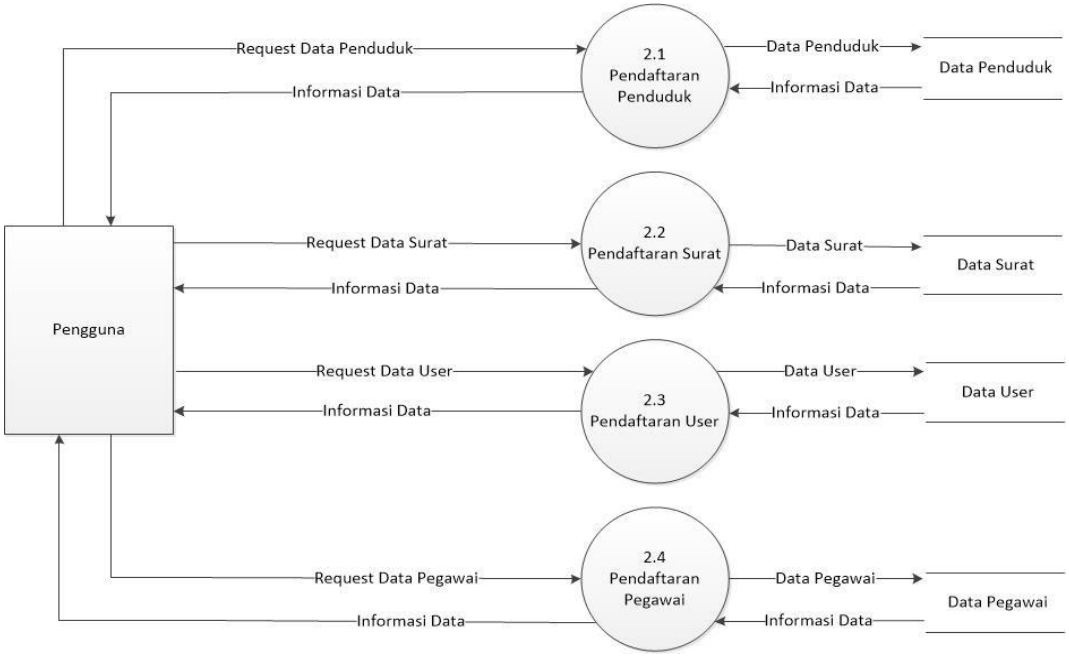


Figure. 6. DFD Level 2 process 2.

In DFD level 2, process 3 explains the report printing process, the head of administration carries out an order to display the report, the system will display the report according to the order given. Reports are stored in letter data files, member data files and transaction data files which can be seen in Figure7.

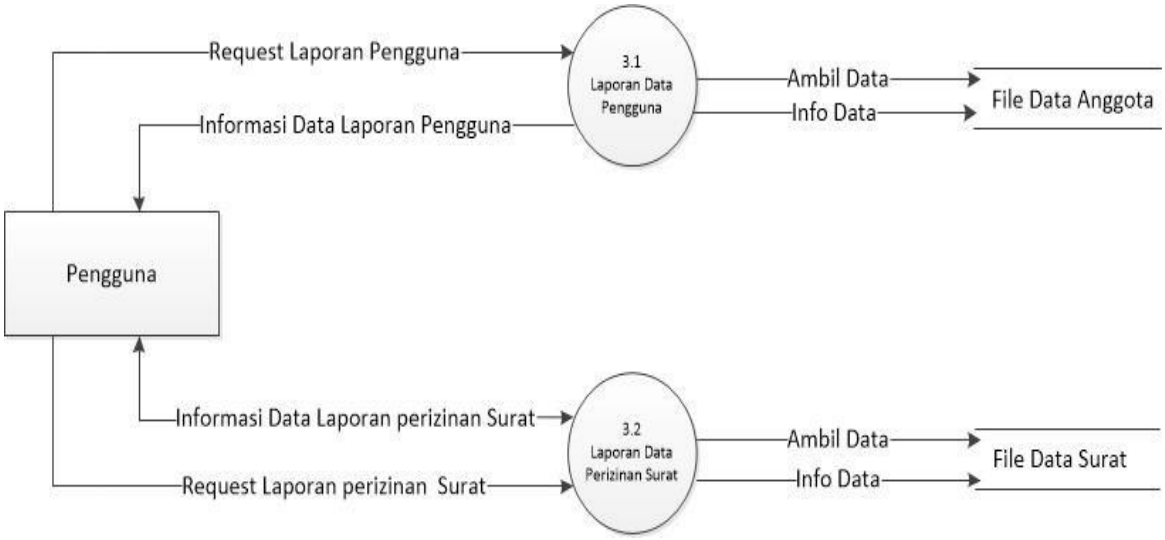


Figure. 7. DFD Level 2 process 3.

In the system design stage, several stages are required to demonstrate the system to be built. System development includes ERD design, determining table relationships, DFD design, and program display design. Seen in figure 8.

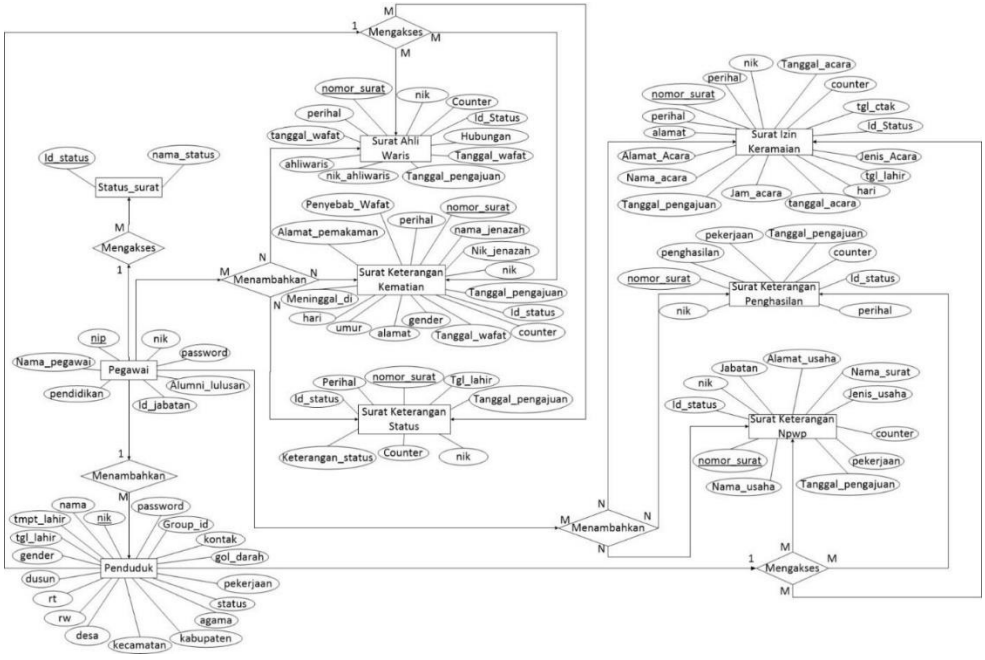


Figure.8. Entity Relationship Diagram

Relationships Between Tables

Each database file is arranged, each connected or related based on the connecting field key in each database, the relationship between each table can be seen in Figure 9.

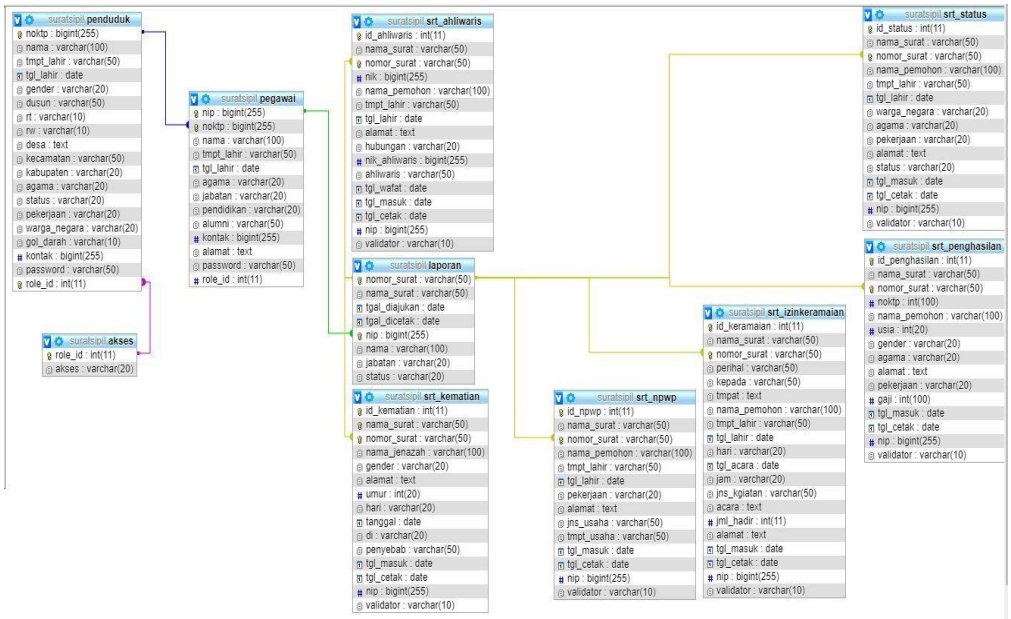


Figure .9 Database Relations

Programming Code

The web-based village-level independent community service system implementation system that has been created is a system built using Sublime Text as an interface with the programming languages HTML, PHP and PhpMyadmin as the database. The resulting program is in accordance with the design described in the previous chapter, both in terms of interface, data flow, database and menu display.

The login page contains a form that is used to log in to the system. The login page display can be seen in Figure 10.

Figure .10 Home Web View

The login page contains a form that is used to log in to the system. The script display and login page can be seen in Figure 11.

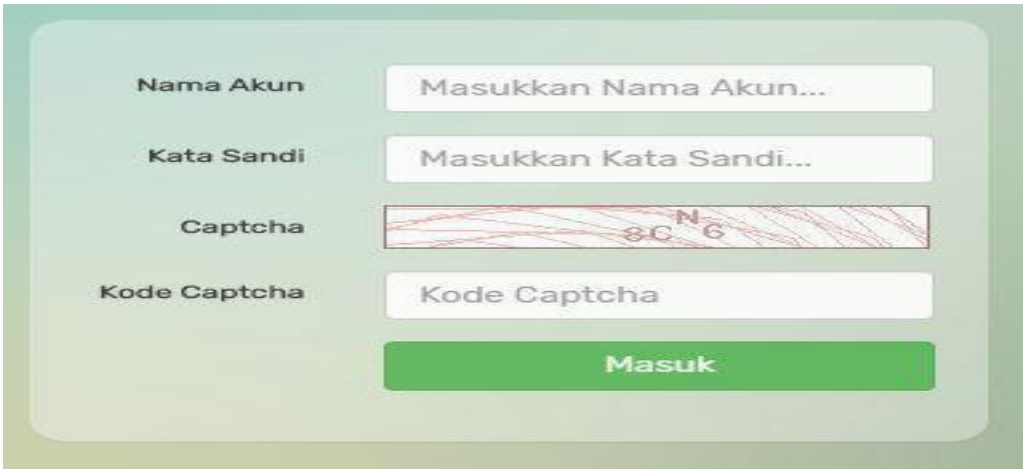


Figure .11 Login Page Display

Source Code for home display:

```
        public function add()
        $data = array(
        'akun'    =>              **$this->input->post**
('add_account'),
        ** 'password'    =>          enkrip($this->input-
>post('add_password** ')), 'pengguna'      =>
$this** ->input** ->post('add_username'),
        'email'    =>    $this->input->post('add_email'),
'system_group_id'            =>            $this->input-
>post('add_group'),
        );
        } public function edit** ()
```

The Admin Dashboard page is the main page for the Administrator Civil Registry Administration System. On this page there are sub menus, namely Master Data, Transactions, Reports, Settings, Log out and the page display is as in Figure 12.

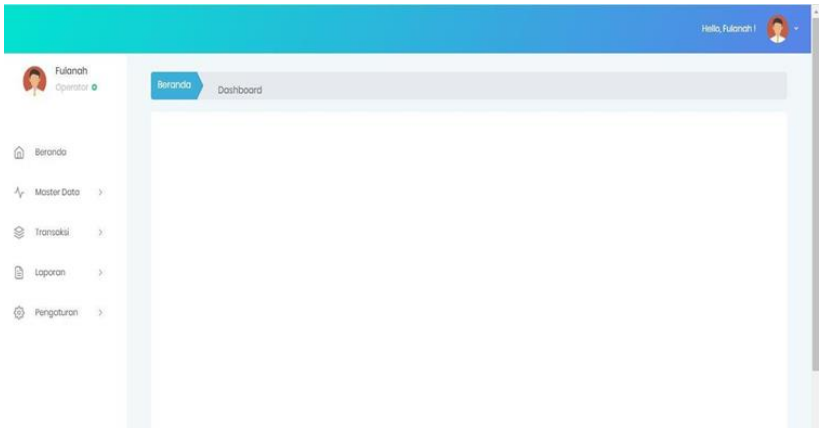


Figure .12 Dashboard Page View

Source Code for home display:

```
?php
**efined('BASEPATH') OR **exit('No** direct script access allowed**'); class Beranda extends CI_Controller {
public function** construct()
{
parent:: ** construct(); } public function
```

The Master Population Data page contains data from the residents of Kadilanggon village. In this form you can also select several actions, namely add data to add resident data along with accounts, detail to view detailed information from residents and the delete function to delete resident data.

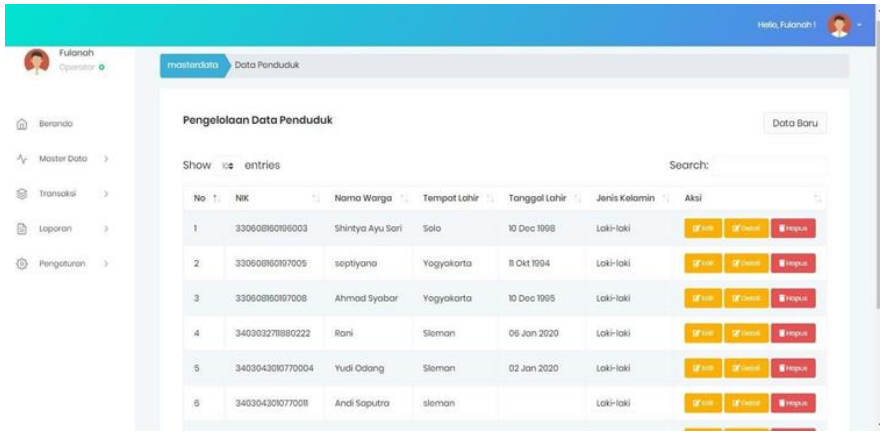


Figure .13 Population Data Master Page Display

Source Code for home display:

```
? <?php
**defined('BASEPATH**') OR exit('No direct script access allowed');

class** Penduduk extends CI_Controller {
public **$nama_table = "penduduk"; public $field_pk = "nik";
public $modul = "masterdata";
public $menu = "penduduk";
public $redirect = "masterdata/penduduk";
$cek = $this->m_login->cek_akses($this->redirect); if($cek==TRUE)
{
$this->load->view('themepack/default/container',$this->info("list"));
else{
redirect('','refresh');
```

CONCLUSION

Based on observations and research carried out by the author at the Kadilanggon Klaten Village office, several conclusions can be drawn as follows:

1. The community service administration system in Kadilanggon Village in the process of creating web-based online letters that has been designed can be implemented. This makes the process of making letters easier at the Kadilanggon Klaten Village office.
2. The online letter writing process can make it easier for residents to submit letters without visiting the Kadilanggon Klaten Village office first.
3. The system created has cut one process in order to shorten the process of submitting letters, management in terms of letter reports can display data on letter submission

reports, reports on completed printed letters, and reports on letters that have been taken by the applicant.

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