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Design And Development Of Population Service Administration System With Pieces Method In Kemiri Village Head Office Banten

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Abstract

The public service administration system at the government offices of the Kemiri village office in the Kemiri District currently does not have a computerized and integrated system. Because the system runs, residents who submit letters for administrative completeness, still use the Ms.Word / Ms.Excel application. of course has many weaknesses including human error, not neat in file storage, resulting in the lengthy process of searching and making a cover letter and required reports. The analytical method used in this study is to use PIECES (Performance, Informance, Economy, Control, Efficiency, Service) analysis, the design of the model uses UML (Unified Modeling Language). The results of this study are web-based letter information systems at the Office of the Village Chief of Kemiri that can accessed using a local computer browser. Thus the information letter needed by the Kemiri Village community and more effective and efficient in making the letter.

Keywords: Administrative System, Human error, Cover letter, Report

I. INTRODUCTION

Integrated Community Service is one part of the Office of the Village Chief of Kemiri which has the activity of serving letters of introduction used by the community as a condition for completing the administration of the population. Currently in the service of preparing a cover letter, officers still use the Microsoft Office Word application and generate reports that are written manually so that data input errors often occur and information cannot be known about many residents who submit completeness of administration every day.

Population Administration as a system, is expected to provide residents with the fulfillment of administrative rights of the population in public services and provide protection in connection with the issuance of Population Documents without any discriminatory treatment through the active role of the Government and regional government [1]. Service is the provision of services (serving) the needs of people or people who have an interest in the organization in accordance with the basic rules and procedures that have been determined. Referring to the opinion, the service

provided to the community is an embodiment of the duties and functions of the state apparatus as public servants who are obliged to provide maximum services to their people [2]

The function of the Letter is as a means of delivering messages in writing, the letter plays a role in achieving the goals of an agency or organization in establishing cooperation between organizations / agencies. As a notification, as a warrant, as a warning letter, as a request or request, as a letter of introduction, as a letter of agreement, as a letter of report, as a letter of decision, as a summons, as a follow-up letter [3]

The design of the system can be referred to as a stage of depiction, planning and sketching of a collection of system elements that become a unified whole and have a function and meaning [8].

II. METHODE

The method used in this study are :

Observation Method (Observation Research)

The author makes observations in the Government Section, to obtain information needed by the author.

a. Interview Method (Interview Research)
   Interviews were conducted to dig up information relating to the administrative services system of residents at the Kemiri Village Office in Tangerang District and interviews were conducted with related parties namely, the Section Head of Government and the Administrative Manager of the population at the Kemiri Village Office in Kemiri District.

b. Literature Study Method (Literature Study)
   In addition to observing the author also conducts data by means of literature study in this method the author seeks to complete the data obtained by reading and studying from books and relevant data [4]. At this stage the authors study the literature relating to information systems and information systems development

Data analysis methods

In this study, the analysis method is carried out by steps of observing and analyzing the current system, and determining UML (Unified Modeling Language) which includes use case diagrams, activity diagrams, sequence diagrams [5].

System analysis method

This is a research phase of an ongoing system aimed at designing a new system. System analysis is carried out using the PIECES Analysis method (Performance, Information, Economy, Control, Efficiency, and Service). The PIECES Analysis Method is:

1. Performance
   Performance is an analysis of the ability of the system to complete the task properly.
2. Information
   Information is the most important thing for an end user in a system in making decisions.
3. Economic
   Economics deals with the least amount of resources used so as to produce a profit.
4. Control
   Control in the system is needed, in order to improve system performance, prevent or detect misuse or system errors.
5. Efficiency
   Efficiency is related to how the available resources can be used as well as possible and as economically as possible with the minimum waste or cost.

6. Service
   Improvement of services provided by the system.

Based on the above definition, it can be concluded that the PIECES method is (Performance, information, Economy, Control, Effency, Service) that is identified and produces advantages and disadvantages of the current system, so it can be concluded for improvement [6].

Analysis of pieces

PIECES analysis is used to take photos of current systems. By using PIECES analysis, the advantages and disadvantages of the current system will be obtained, so it can be concluded for improvement [7].

In the system analysis method, a table is presented to identify the current system, to see the whole system so that improvements can be proposed to the table as below:

		Previously	*Proposed*
1	*Performance*	*The previous system performance requires a lot of time searching for mail files, errors in population data input*	*In the proposed system all population data has been stored in a database so as to minimize input errors and loss of population data*
2	*Informance*	*In the previous system the information received was still inaccurate because of frequent recording errors during the process of making letters and also errors in making reports*	*In the proposed system the service staff can directly make a letter from the population data that has been inputted first in the resident master. Reports can be generated Up to date and real time.*
3	*Economy*	*In this system the related report data is still stored in printed form, so that it requires no small cost to provide paper, ink, storage and other stationery.*	*In the proposed system all related letter reports are stored in databases so that they can save costs in purchasing paper, ink, storage, and stationery.*
4	*Control*	*The old system is still anticipating data security, so anyone can access or change data.*	*The proposed system will facilitate control. so we can find out who accessed and changed the data*
5	*Efficiency*	*In the old system the staff had to write a letter registration number manually, and record it in the relevant letter report book*	*In the proposed system the number of registered letters with automatic numbering and make reports more accurate to the letters made*
6	*Service*	*In the old system the service to the population was still not optimal, there was still a delay in handling the preparation of letters from the applicant*	*In the proposed system the applicant can submit a letter to the service staff, the letter is printed more quickly and signed by the Village Head or secretariat*

III. RESULT AND DISCUSSION

Use Case Proposed Diagram

Use Case Diagrams are diagrams used to show a graphical display of the functionality provided by the system in terms of actors, destination actors, and matters related to existing use cases.

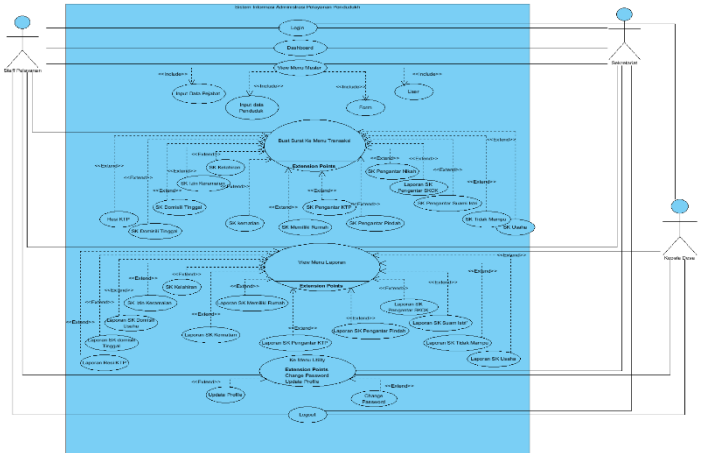

Figure I. Use Case Diagrams

Based on the use case diagram of the proposed diagram (Figure I) it is clear that there are 37 (thirty seven) use cases consisting of 7 (seven) main use cases namely login, board, transaction, master, report, utility, and logout. Use case login to connect with an actor user, staff pelayanan, sekretariat, dan Kepala desa. Use case Master has 4 (four) consisting of pejabat, penduduk, user, dan form, everything is connected to actor staff pelayanan Use case transactions have 14 (fourteen) consisting of resi ktp, sk domisili_tinggal, sk domisili_usaha, sk_izin keramaian, sk kelahiran, sk kematian, sk memiliki rumah, sk pengantar ktp, sk pengantar nikah, sk pengantar pindah, sk pengantar skck, sk suami istri, sk tidak mampu, sk usaha. everything is connected with the actor staff pelayanan. Use case report has 14 (fourteen) consisting of laporan resi ktp, laporan sk domisili_tinggal, laporan sk domisili_usaha, laporan sk_izin keramaian, laporan sk kelahiran, laporan sk kematian, laporan sk memiliki rumah, laporan sk pengantar ktp, laporan sk pengantar nikah, laporan sk pengantar pindah, laporan sk pengantar skck, laporan sk suami istri, laporan sk tidak mampu, laporan sk usaha everything is connected to staff pelayanan, sekretariat, and kepala Desa. Use case utility has 2 (two) consisting of profiles, and change passwords are all connected to staff pelayanan, sekretariat, dan kepala Desa.

Use diagram as a form of system design that will be created (Figure 3) is the design of the main display model which is oriented to the menu needs of the application prepared, in addition to the need for storing data information so that it can be used historically it is also illustrated in the form of class diagrams (Figure 2) complete with information fields and data types according to data storage needs.

IV. IMPLEMENTATION

Database Design

To be able to depict the form of a complete database, researchers use the Microsoft Access application as a form of basic description, and in the end the form of this database design can be adjusted using anything as needed.

a. Table Master: User

Primary Key	:	no_user
Foreign Key	:	-
table structure	:	{ no_user, user_login, name, password, access, profile }

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#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	no_user	int(3)			No	None		AUTO_INCREMENT
2	user_login	varchar(50)	latin1_swedish_ci		Yes	NULL		
3	nama	varchar(150)	latin1_swedish_ci		Yes	NULL		
4	password	varchar(50)	latin1_swedish_ci		Yes	NULL		
5	akses	varchar(50)	latin1_swedish_ci		Yes	NULL		
6	profile	varchar(150)	latin1_swedish_ci		Yes	NULL		

Table II. table User

b. Table Master: Pejabat
Primary Key : nip
Foreign Key : -
table structure : { nip, name, address, rt, rw, phone_number }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nip	varchar(16)	latin1_swedish_ci		No	None		
2	nama	varchar(50)	latin1_swedish_ci		No	None		
3	alamat	varchar(50)	latin1_swedish_ci		No	None		
4	rt	varchar(3)	latin1_swedish_ci		No	None		
5	rw	varchar(3)	latin1_swedish_ci		No	None		
6	no_telp	varchar(13)	latin1_swedish_ci		No	None		
7	jabatan	varchar(50)	latin1_swedish_ci		No	None		
8	status	varchar(20)	latin1_swedish_ci		No	None		

Table III. table Pejabat

c. Table Master: Penduduk
Primary Key : nik
Foreign Key : -
table structure : { nik, nama_lengkap, jenis_kelamin, tempat_lahir, tanggal_lahir, work, kp, rt , rw, desa, kec, kab, pekerjaan, agama, kewarganegaraan, gol_dar}

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nik	varchar(16)	latin1_swedish_ci		No	None		
2	nama_lengkap	char(50)	latin1_swedish_ci		Yes	NULL		
3	jenis_kelamin	char(10)	latin1_swedish_ci		Yes	NULL		
4	agama	varchar(50)	latin1_swedish_ci		No	None		
5	tempat_lahir	char(30)	latin1_swedish_ci		Yes	NULL		
6	tanggal_lahir	date			Yes	NULL		
7	kewarganegaraan	varchar(100)	latin1_swedish_ci		No	None		
8	gol_dar	varchar(5)	latin1_swedish_ci		No	None		
9	pekerjaan	varchar(50)	latin1_swedish_ci		Yes	NULL		
10	kp	varchar(50)	latin1_swedish_ci		Yes	NULL		
11	rt	varchar(3)	latin1_swedish_ci		Yes	NULL		
12	rw	varchar(3)	latin1_swedish_ci		Yes	NULL		
13	desa	char(30)	latin1_swedish_ci		No	None		
14	kec	char(30)	latin1_swedish_ci		No	None		
15	kab	char(30)	latin1_swedish_ci		No	None		

Tabel IV. table Penduduk

d. Tabel Transaction : Resi KTP
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure : { nomor_surat, nik, nomor_kk, tanggal_surat , berlaku_sampai, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	tanggal_surat	date			Yes	NULL		
3	nik	varchar(16)	latin1_swedish_ci		No	None		
4	nomor_kk	varchar(16)	latin1_swedish_ci		Yes	NULL		
5	berlaku_sampai	date			Yes	NULL		
6	nip	varchar(16)	latin1_swedish_ci		No	None		
7	user_create	varchar(50)	latin1_swedish_ci		No	None		
8	create_date	datetime			No	None		
9	user_update	varchar(50)	latin1_swedish_ci		No	None		
10	update_date	datetime			No	None		

Tabel V. table Resi KTP

e. Table Transaction : SK Domisili Tinggal
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure : {nomor_surat, tanggal_surat, nik, nomor_kk, berlaku_sampai, keperluan, nip, user_create, create_date, user_update , update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	keperluan_domisili	text	latin1_swedish_ci		Yes	NULL		
4	tanggal_surat	date			Yes	NULL		
5	berlaku_sampai	date			No	None		
6	nip	varchar(16)	latin1_swedish_ci		No	None		
7	user_create	varchar(50)	latin1_swedish_ci		No	None		
8	create_date	datetime			No	None		
9	user_update	varchar(50)	latin1_swedish_ci		No	None		
10	update_date	datetime			No	None		

Table VI. table SK Domisili Tinggal

f. Table Transaction : SK Domisili Usaha
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure : {nomor_surat, tanggal_surat, nik, nama, nomor_bapl, nama_perusahaan, jenis_perusahaan, notaris, no_akte, tgl_akte, alamat_perusahaan, stat_bangunan, luas_tanah, luas_bangunan, jml_kar, keterangan, nip, ,user_create, create_date, user_update, update_date}

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	tanggal_surat	date			Yes	NULL		
3	nik	varchar(16)	latin1_swedish_ci		No	None		
4	nomor_bapl	varchar(30)	latin1_swedish_ci		Yes	NULL		
5	nama_perusahaan	varchar(150)	latin1_swedish_ci		Yes	NULL		
6	jenis_perusahaan	varchar(150)	latin1_swedish_ci		Yes	NULL		
7	notaris	varchar(100)	latin1_swedish_ci		No	None		
8	no_akte	varchar(20)	latin1_swedish_ci		No	None		
9	tgl_akte	date			No	None		
10	alamat_perusahaan	varchar(500)	latin1_swedish_ci		No	None		
11	stat_bangunan	varchar(50)	latin1_swedish_ci		No	None		
12	luas_tanah	varchar(10)	latin1_swedish_ci		No	None		
13	luas_bangunan	varchar(10)	latin1_swedish_ci		No	None		
14	jml_kar	varchar(6)	latin1_swedish_ci		No	None		
15	keterangan	text	latin1_swedish_ci		No	None		
16	nip	varchar(16)	latin1_swedish_ci		No	None		
17	user_create	varchar(50)	latin1_swedish_ci		No	None		
18	create_date	datetime			No	None		
19	user_update	varchar(50)	latin1_swedish_ci		No	None		
20	update_date	datetime			No	None		

Tabel VII. table SK Domisili Usaha

g. Table Transaction: SK Izin Keramaian
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure : {nomor_surat, tanggal_surat, nik, tanggal_mulai, tanggal_selesai, kegiatan_keramaian, hiburan, keterangan, nip, user_create, create_date, user_update, update_date}

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	tanggal_mulai	date			Yes	NULL		
4	tanggal_selesai	date			Yes	NULL		
5	kegiatan_keramaian	text	latin1_swedish_ci		Yes	NULL		
6	hiburan	text	latin1_swedish_ci		Yes	NULL		
7	tanggal_surat	date			Yes	NULL		
8	keterangan	text	latin1_swedish_ci		No	None		
9	nip	varchar(16)	latin1_swedish_ci		No	None		
10	user_create	varchar(50)	latin1_swedish_ci		No	None		
11	create_date	datetime			No	None		
12	user_update	varchar(50)	latin1_swedish_ci		No	None		
13	update_date	datetime			No	None		

Tabel VII. table SK Izin Keramaian

h. Table Transaction: SK Kematian
Primary Key : nomor_surat
Foreign Key : nik, nip

table structure :{nomor_surat, tanggal_surat, nik, tanggal_kematian, nama_pelapor, hubungan, sebab_kematian, keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	tanggal_kematian	date			Yes	NULL		
4	nama_pelapor	varchar(30)	latin1_swedish_ci		Yes	NULL		
5	hubungan	text	latin1_swedish_ci		Yes	NULL		
6	tanggal_surat	date			Yes	NULL		
7	keterangan	text	latin1_swedish_ci		No	None		
8	sebab_kematian	varchar(100)	latin1_swedish_ci		No	None		
9	nip	varchar(16)	latin1_swedish_ci		No	None		
10	user_create	varchar(50)	latin1_swedish_ci		No	None		
11	create_date	datetime			No	None		
12	user_update	varchar(50)	latin1_swedish_ci		No	None		
13	update_date	datetime			No	None		

table IX. Tabel SK Kematian

i. Table Transaction: SK Kelahiran
Primary Key : nomor_surat
Foreign Key : nik, nip

table structure :{nomor_surat, tanggal_surat, nik, nama_lahir, jk_lahir, tanggal_lahir, tempat_lahir, no_kk, nama_ibu, nama_ayah, keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	tanggal_surat	date			No	None		
3	nik	varchar(16)	latin1_swedish_ci		No	None		
4	tanggal_lahir	date			Yes	NULL		
5	tempat_lahir	varchar(30)	latin1_swedish_ci		Yes	NULL		
6	nama_lahir	varchar(30)	latin1_swedish_ci		Yes	NULL		
7	jk_lahir	varchar(10)	latin1_swedish_ci		No	None		
8	no_kk	varchar(16)	latin1_swedish_ci		Yes	NULL		
9	nama_ibu	varchar(30)	latin1_swedish_ci		Yes	NULL		
10	nama_ayah	varchar(30)	latin1_swedish_ci		Yes	NULL		
11	keterangan	text	latin1_swedish_ci		Yes	NULL		
12	nip	varchar(16)	latin1_swedish_ci		No	None		
13	user_create	varchar(50)	latin1_swedish_ci		No	None		
14	create_date	datetime			No	None		
15	user_update	varchar(50)	latin1_swedish_ci		No	None		
16	update_date	datetime			No	None		

table X. table SK Kelahiran

j. Table Transaction: SK Memiliki Rumah
Primary Key : nomor_surat
Foreign Key : nik, nip

table structure :{nomor_surat, tanggal_surat, nik, berlaku_sampai, keperluan_surat, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**nomor_surat**	varchar(30)	latin1_swedish_ci		No	*None*		
2	**nik**	varchar(16)	latin1_swedish_ci		No	*None*		
3	**tanggal_surat**	date			Yes	*NULL*		
4	**berlaku_sampai**	date			Yes	*NULL*		
5	**keperluan_surat**	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
6	**keterangan**	text	latin1_swedish_ci		Yes	*NULL*		
7	**nip**	varchar(16)	latin1_swedish_ci		No	*None*		
8	**user_create**	varchar(50)	latin1_swedish_ci		No	*None*		
9	**create_date**	datetime			No	*None*		
10	**user_update**	varchar(50)	latin1_swedish_ci		No	*None*		
11	**update_date**	datetime			No	*None*		

Table XI. table SK Memiliki Rumah

k. Table Transaction: SK Pengantar KTP
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik, berlaku_sampai, nomor_kk, permohonan_ktp, keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**nomor_surat**	varchar(30)	latin1_swedish_ci		No	*None*		
2	**nik**	varchar(16)	latin1_swedish_ci		No	*None*		
3	**nomor_kk**	varchar(16)	latin1_swedish_ci		No	*None*		
4	**tanggal_surat**	date			Yes	*NULL*		
5	**berlaku_sampai**	date			No	*None*		
6	**permohonan_ktp**	varchar(20)	latin1_swedish_ci		Yes	*NULL*		
7	**nip**	varchar(16)	latin1_swedish_ci		No	*None*		
8	**keterangan**	text	latin1_swedish_ci		No	*None*		
9	**user_create**	varchar(50)	latin1_swedish_ci		No	*None*		
10	**create_date**	datetime			No	*None*		
11	**user_update**	varchar(50)	latin1_swedish_ci		No	*None*		
12	**update_date**	datetime			No	*None*		

Table XII. table SK Pengantar KTP

l. Table Transaction: SK Pengantar Nikah
Primary Key : nomor_surat
Foreign Key : nik, nip
Structure Tabel :{nomor_surat, tanggal_surat, nik, berlaku_sampai, binti_bin, istri_suami_dahulu, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	**nomor_surat**	varchar(30)	latin1_swedish_ci		No	*None*		
2	**nik**	varchar(16)	latin1_swedish_ci		No	*None*		
3	**tanggal_surat**	date			Yes	*NULL*		
4	**berlaku_sampai**	date			No	*None*		
5	**binti_bin**	varchar(30)	latin1_swedish_ci		Yes	*NULL*		
6	**status_kawin**	varchar(50)	latin1_swedish_ci		No	*None*		
7	**istri_suami_dahulu**	varchar(100)	latin1_swedish_ci		No	*None*		
8	**keterangan**	text	latin1_swedish_ci		Yes	*NULL*		
9	**nip**	varchar(16)	latin1_swedish_ci		No	*None*		
10	**user_create**	varchar(50)	latin1_swedish_ci		No	*None*		
11	**create_date**	datetime			No	*None*		
12	**user_update**	varchar(50)	latin1_swedish_ci		No	*None*		
13	**update_date**	datetime			No	*None*		

Table XIII. table SK Pengantar Nikah

m. Table Transaction: SK Pengantar Pindah

Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik, nama_kepala_keluarga, nomor_kk, alamat_tujuan_pindah, jml_keluarga, alasan, keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	nama_kepala_keluarga	varchar(30)	latin1_swedish_ci		Yes	NULL		
4	nomor_kk	varchar(16)	latin1_swedish_ci		Yes	NULL		
5	alamat_tujuan_pindah	text	latin1_swedish_ci		Yes	NULL		
6	jml_keluarga	decimal(11,0)			Yes	NULL		
7	alasan	text	latin1_swedish_ci		Yes	NULL		
8	tanggal_surat	date			Yes	NULL		
9	berlaku_sampai	date			No	None		
10	keterangan	text	latin1_swedish_ci		No	None		
11	nip	varchar(16)	latin1_swedish_ci		No	None		
12	user_create	varchar(50)	latin1_swedish_ci		No	None		
13	create_date	datetime			No	None		
14	user_update	varchar(50)	latin1_swedish_ci		No	None		
15	update_date	datetime			No	None		

Table XIV. table SK Pengantar Pindah

n. Table Transaction: SK Pengantar SKCK
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik, berlaku_sampai, keperluan_skck keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	tanggal_surat	date			Yes	NULL		
3	nik	varchar(16)	latin1_swedish_ci		No	None		
4	berlaku_sampai	date			No	None		
5	keperluan_skck	text	latin1_swedish_ci		Yes	NULL		
6	keterangan	text	latin1_swedish_ci		Yes	NULL		
7	nip	varchar(16)	latin1_swedish_ci		No	None		
8	user_create	varchar(50)	latin1_swedish_ci		No	None		
9	create_date	datetime			No	None		
10	user_update	varchar(50)	latin1_swedish_ci		No	None		
11	update_date	datetime			No	None		

Table XV. table SK Pengantar SKCK

o. Table Transaction: SK Suami Istri
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik_suami, nama_suami, nik_istri, nama_istri, erlaku_sampai, keperluan_skck keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	tanggal_surat	date			Yes	NULL		
3	nik_suami	varchar(16)	latin1_swedish_ci		No	None		
4	nama_suami	varchar(50)	latin1_swedish_ci		No	None		
5	nik_istri	varchar(16)	latin1_swedish_ci		No	None		
6	nama_istri	varchar(50)	latin1_swedish_ci		No	None		
7	keterangan	text	latin1_swedish_ci		No	None		
8	nip	varchar(16)	latin1_swedish_ci		No	None		
9	user_create	varchar(50)	latin1_swedish_ci		No	None		
10	create_date	datetime			No	None		
11	user_update	varchar(50)	latin1_swedish_ci		No	None		
12	update_date	datetime			No	None		

Table XVI. table SK Suami Istri

p. Table Transaction: SK Tidak Mampu
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik berlaku_sampai, keperluan_sktm keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	keperluan_sktm	varchar(200)	latin1_swedish_ci		Yes	NULL		
4	tanggal_surat	date			Yes	NULL		
5	berlaku_sampai	date			No	None		
6	keterangan	text	latin1_swedish_ci		Yes	NULL		
7	nip	varchar(16)	latin1_swedish_ci		No	None		
8	user_create	varchar(50)	latin1_swedish_ci		No	None		
9	create_date	datetime			No	None		
10	user_update	varchar(50)	latin1_swedish_ci		No	None		
11	update_date	datetime			No	None		

Table XVII. table SK Tidak Mampu

q. Table Transaction: SK Usaha
Primary Key : nomor_surat
Foreign Key : nik, nip
table structure :{nomor_surat, tanggal_surat, nik jenis_usaha, penghasilan_perbulan, alamat_tempat_usaha keterangan, nip, user_create, create_date, user_update, update_date }

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	nomor_surat	varchar(30)	latin1_swedish_ci		No	None		
2	nik	varchar(16)	latin1_swedish_ci		No	None		
3	jenis_usaha	varchar(100)	latin1_swedish_ci		Yes	NULL		
4	penghasilan_perbulan	decimal(10,0)			Yes	NULL		
5	alamat_tempat_usaha	text	latin1_swedish_ci		Yes	NULL		
6	tanggal_surat	date			Yes	NULL		
7	berlaku_sampai	date			No	None		
8	keterangan	text	latin1_swedish_ci		Yes	NULL		
9	nip	varchar(16)	latin1_swedish_ci		No	None		
10	user_create	varchar(50)	latin1_swedish_ci		No	None		
11	create_date	datetime			No	None		
12	user_update	varchar(50)	latin1_swedish_ci		No	None		
13	update_date	datetime			No	None		

Table XVIII. table SK Usaha

Display design

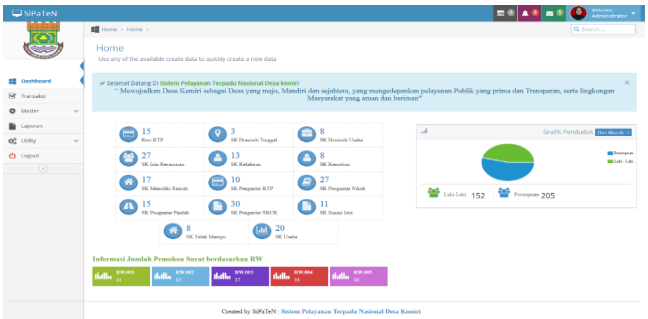


Figure.II Display the dashboard

Seen on the screen above (figure II) is the main screen that contains information about the population, the number of applicants based on RW, and the number of letters that have been made.

There are also several menu options such as Transaction, Master, Laporan, Utility and Logout home menu, master menu, transaction report menu menu, utility menu and logout.

Figure.III Display Introductory RT Validation on Transaction Menu

Seen in the display screen above (figure III) is a display for the user to validate the cover letter RT. So that the user can access the transaction then validate the introductory RT first.

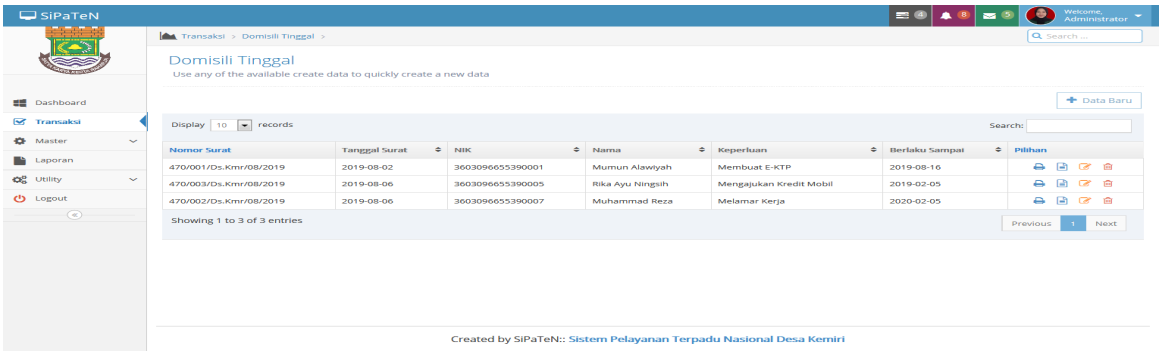
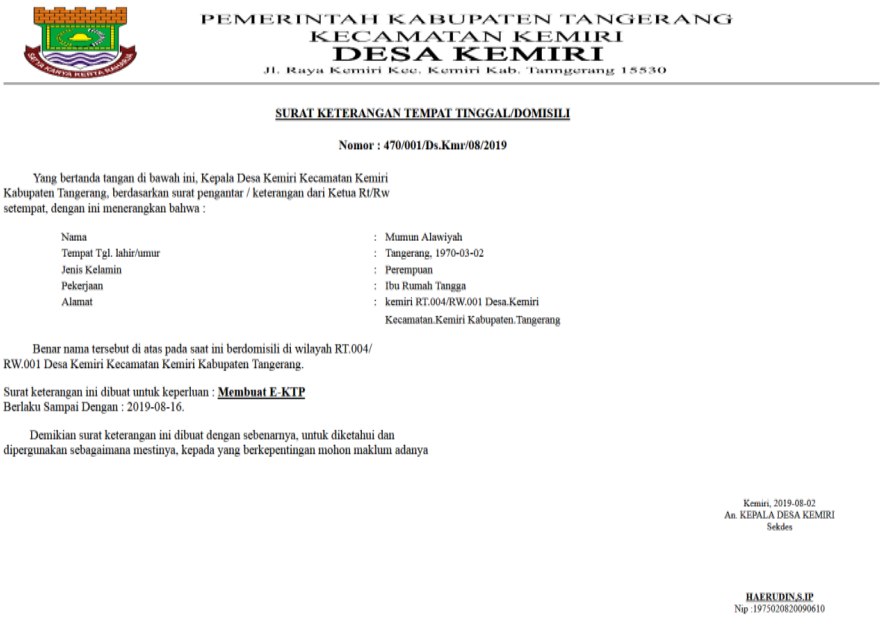


Figure.IV Display Menu Data letter that has been inputted

Seen on the screen above (figure IV) can display the data - letter data that has been inputted and can be printed, edited, deleted letter data



PEMERINTAH KABUPATEN TANGERANG
KECAMATAN KEMIRI
DESA KEMIRI
Jl. Raya Kemiri Kec. Kemiri Kab. Tanngerang 15530

SURAT KETERANGAN TEMPAT TINGGAL/DOMISILI

Nomor : 470/001/Ds.Kmr/08/2019

Yang bertanda tangan di bawah ini, Kepala Desa Kemiri Kecamatan Kemiri Kabupaten Tangerang, berdasarkan surat pengantar / keterangan dari Ketua Rt/Rw setempat, dengan ini menerangkan bahwa :

Nama	:	Mumun Alawiyah
Tempat Tgl. lahir/umur	:	Tangerang, 1970-03-02
Jenis Kelamin	:	Perempuan
Pekerjaan	:	Ibu Rumah Tangga
Alamat	:	kemiri RT.004/RW.001 Desa.Kemiri Kecamatan.Kemiri Kabupaten.Tangerang

Benar nama tersebut di atas pada saat ini berdomisili di wilayah RT.004/ RW.001 Desa Kemiri Kecamatan Kemiri Kabupaten Tangerang.

Surat keterangan ini dibuat untuk keperluan : **Membuat E-KTP**
Berlaku Sampai Dengan : 2019-08-16.

Demikian surat keterangan ini dibuat dengan sebenarnya, untuk diketahui dan dipergunakan sebagaimana mestinya, kepada yang berkepentingan mohon maklum adanya

Kemiri, 2019-08-02
An. KEPALA DESA KEMIRI
Sekdes

HAERUDIN,S.IP
Nip :197502082009061O

Figure.V Display Letter Print

Seen on the screen above (figure V) can display the letter that has been made and will be printed.

1.1 Query of Information Creation

Query function simpan_penduduk:

```
function simpan_penduduk()
{$sql="insert into tbl_penduduk
set
nik='".$this->nik."',
nama_lengkap='".$this->nama_lengkap."',
jenis_kelamin='".$this->jenis_kelamin."',
agama='".$this->agama."',
kewarganegaraan='".$this->kewarganegaraan."',
tempat_lahir='".$this->tempat_lahir."',
tanggal_lahir='".$this->tanggal_lahir."',
pekerjaan='".$this->pekerjaan."',
gol_dar='".$this->gol_dar."',
kp='".$this->kp."',
rt='".$this->rt."',
rw='".$this->rw."',
desa='".$this->desa."',
kec='".$this->kec."


kab='".$this->kab."'";
$query=$this->mysqli->query($sql) or die ($this->mysqli->error());
return true;
$this->mysqli->close();                    }
```

Query function List_penduduk:

```
function list_penduduk()
{                          $sql="select * from tbl_penduduk";
$this->sql=$sql;
$i=0;
     $query=$this->mysqli->query($sql) or die ($this->mysqli->error());
while ($result=$query->fetch_assoc())
{                              $this->nik[$i]=$result['nik'];
$this->nama_lengkap[$i]=$result['nama_lengkap'];
$this->jenis_kelamin[$i]=$result['jenis_kelamin'];
$this->agama[$i]=$result['agama'];
$this->kewarganegaraan[$i]=$result['kewarganegaraan'];
$this->tempat_lahir[$i]=$result['tempat_lahir'];
$this->tanggal_lahir[$i]=$result['tanggal_lahir'];
$this->pekerjaan[$i]=$result['pekerjaan'];
$this->gol_dar[$i]=$result['gol_dar'];
$this->kp[$i]=$result['kp'];
$this->rt[$i]=$result['rt'];
$this->rw[$i]=$result['rw'];
$this->desa[$i]=$result['desa'];
$this->kec[$i]=$result['kec'];
$this->kab[$i]=$result['kab'];
     $i++;                                 }
return true;
$this->mysqli->close();                    }
```

Query function edit_penduduk:

```
function edit_penduduk(){$sql="update tbl_penduduk
```

```
set
nik='".$this->nik."',
     nama_lengkap='".$this->nama_lengkap."',
jenis_kelamin='".$this->jenis_kelamin."',
agama='".$this->agama."',
kewarganegaraan='".$this->kewarganegaraan."',
gol_dar='".$this->gol_dar."',
tempat_lahir='".$this->tempat_lahir."',
tanggal_lahir='".$this->tanggal_lahir."',
pekerjaan='".$this->pekerjaan."',
kp='".$this->kp."',
rt='".$this->rt."',
rw='".$this->rw."',
desa='".$this->desa."',
kec='".$this->kec."',
kab='".$this->kab."'
where nik='".$this->nik."'";
$query=$this->mysqli->query($sql) or die ($this->mysqli->error());
return true;
$this->mysqli->close();                    }
```

III. CONCLUSION

The letter making system that is running is still less effective and efficient, because there is no regularity in the files stored, so it takes a long time in the process of searching for letters and making letters. There is no accurate information to find out the number of residents applying for a letter. Because the data collection is still manual with different registers. The system is designed using object-oriented methods using UML (Unified Modeling Language) diagrams, such as Use Case Diagrams, Activity Diagrams, Sequence Diagrams and Class Diagrams. The programming language used to build this system is PHP with Bootstrap as its framework, MYSQL as a database server, XAMPP as a web server and text editor using Notepad ++. It is expected that the system can be developed and integrated with data or systems on an online-based government, so as to avoid errors in population data.

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