

ANALYSIS OF THE INFORMATION SYSTEM FOR THE DATA COLLECTION OF RESIDENTS TOWNSMAN ASSOCIATION LEVEL

Amesanggeng P¹, Susanto Hariyanto², Riki³, Angelina Lasut⁴

^{1,2}Department of Informatics, Buddhi Dharma University, Tangerang, Banten

^{3,4}Department of Information System, Buddhi Dharma University, Tangerang, Banten

^{1,2,3}Jl. Imam Bonjol No. 41 Karawaci Ilir 15115, Tangerang, Banten, Indonesia

Corresponding Author: riki@ubd.ac.id

Abstract

It starts with the development of technology over time. The population continues to increase in each area, encouraging urban villages and community organizations to continue to innovate to reach convenience and use existing technology. Technologies that can comprehensively collect data and reach every citizen will resolve changes in data over time. The survey that the author conducted was in the village of Cimone Jaya. The survey found that the work on the Family Card was done manually, in which the role of urban civic associations is very vital. Old / new residents who will report must obtain approval from the local city to apply for a family card by submitting the required documents; then, it will be processed to the district stage. the district will print the family card. Through the proposed program, each head of household can register his family card online. Of course, residents can update the data, and the updated data will be approved by the local city association if the data entered is valid. This program is also able to provide invitations to every citizen and news related to the local area. This program may still have many shortcomings and still needs a lot of improvement, but this will make it easier for residents and municipal community associations to go to the sub-district.

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1. INTRODUCTION

In line with Information Technology development, people are increasingly motivated to obtain information and continue to be updated by existing information. Of course, obtaining information is getting easier and doesn't have to be difficult and even costs a lot of money. With the internet, information reception will continue to grow. Of course, the internet will make it easier for people to receive information and function as a network link in other countries [1]. The internet is also widely used in people's lives to meet social, business, banking, and military and political needs. Nowadays, technology is a common thing used in organizations, both private and domestic. The technology needed also continues to be developed and refined in line with the times and the needs that continue to increase for every human being. The main objective is to facilitate/lighten existing work [2].

In human life, of course, a society's population has groups that have members and the need for a head to lead according to applicable rules. Such is the case in residents townsman association as a reflection of Indonesian society that prioritizes cooperation and togetherness. It is necessary to know that every citizen registered in a community certainly has data where the data will be archived

and stored. Of course, we know that the data continues to change continuously and will never stop considering the development of the era that continues to develop, population, and birth rate. And the death of every citizen. Given a group of people, Of course, the closest group that we can meet in everyday life as citizens is community groups that are systematically recorded in each region, covering the number of residents and the area within a certain range and recognized by the government.

However, the problem that is often faced is that data collection must be updated continuously. Besides, the number that is increasing every year will certainly make it more difficult. When viewed from a certain point of view, data collection techniques are important and needed in every organization. Valid data collection is certainly important in structuring a country, and data collection must start from the smallest group in the population. The community's role is also vital; this is based on the fact that every community has a certain order that governs each of its duties and responsibilities. This is, of course, regulated and determined by government organizations. However, with the rapid development of technology, this problem is certainly easy to overcome by filling in data that can be done at any

time. With internet technology, it can connect data and store personal data safely and ready to be continuously updated by reducing errors that occur. Occurs as a result of human error. Aim Citizens can fill in their own personal data online. Data changes can be made anywhere and anytime without queuing or meeting appointments with the resident's townsman association head. Updating data can be done quickly and easily [3]. Mean to make it easier for data loggers to update the latest data. So that the data collection is more neat and systematic. Synchronization of data held by residents townsman association is the same as that held by residents townsman association level.

II. LITERATURE

Definition of Citizen

According to (UUD 1945 article 26 and Law No. 12 of 2006): a citizen is a legally a member of a country or a person who is recognized by law as a citizen. According to citizens, it is defined as a collection of humans united by unity and inhabit a certain area.

Citizens are also defined as part of a population and who are elements of a country. The term citizen is more suitable for his position as an independent person than the term servant or servant of the state because citizen means a participant, member, or citizen of a country, a participant in an alliance established with common power. For that, every citizen has rights, privacy, and responsibility”.

Definition of Residents Neighbour Association Level

Residents neighbor association is a community organization formed through local community deliberations in the framework of government and community services established by the District and fostered by the Government [4].

Residents' neighbor association is led by a Chairperson and assisted by several administrators elected by the residents. The head of the resident's neighbor association has a vital role in the administration of governance and regional development because it directly faces the community and sees firsthand the real conditions in society. A resident's neighbor association consists of some family heads.

Residents' neighbor association task itself can be said to be tough. However, if the community and the components that choose it are willing to support all public welfare programs, then the task will be light. Some of the main tasks of the Residents neighbor association are:

1. Helping to carry out service duties to the community, which is the Government's responsibility.
2. Maintaining the harmony of life for residents.

3. Arranging plans and implementing development by developing genuine aspirations and community self-help”.

Definition of Residents Townsman Association

Residents townsman association is an organization within the government structure in the territory of the Unitary State of the Republic of Indonesia, which functions to coordinate the residents neighbor association management and manage the interests of the residents in its environment as well as function as an extension of the local, regional government [5]. There is no minimum number of residents neighbor association that can be coordinated by the resident's townsman association; as long as they can be coordinated and run effectively, and all residents agree on the boundaries of their management area, the existence of residents townsman association can be considered legitimate and recognized by the local government”.

III. RESEARCH METHODS

System analysis is "An activity carried out to study the system, both manual systems and computerized systems as a whole, starting from analyzing the system, analyzing problems, designing logic, and making decisions from the analysis." [6].

The waterfall model is "The Waterfall model takes the basic process activities of specification, development, validation, and evolution and represents these activities as separate phases such as requirements specification, software design, implementation, testing and so on" [7]. The following are the stages in this waterfall method as follows:

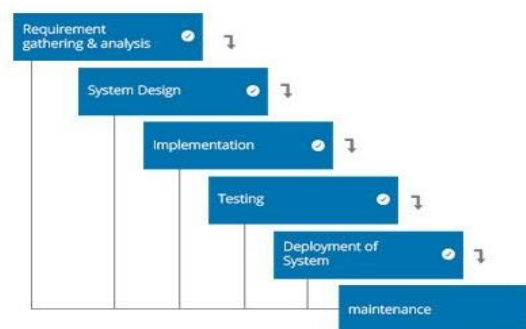


Fig 1. Waterfall

System design is "Designing is the development of a system from an existing system or a new system, where problems that have existed in the old system are expected to be fixed in the new system" [8].

Users who will make changes to the family card's data or apply for a new family card must attach the documents requested by the District but first need to attach a cover letter from the Residents

townsman association by submitting it to the Residents townsman association head. If the user proposes to make a replacement Family Card, the documents that must be attached are as follows:

1. Old family card
2. Identity card of all family members
3. Photocopy of birth certificate/diploma
4. A letter of loss from the police for the missing family card
5. Photocopy of marriage certificate for those who are married
6. residents townsman association cover letter

However, to apply for a new family card, the documents that need to be attached are:

1. Photocopy of the Identity card of all family members
2. Photocopy of birth certificate/last certificate
3. Letter of moving from the area of origin for newcomers
4. Letter of moving from the original District to move between wards within a sub-district
5. Letter of moving from the sub-district of origin to move between sub-districts within one city
6. Letter of transfer from the population and civil registration office of the city/regency of origin for transfers between cities/regencies
7. Photocopy of marriage certificate for those who are married
8. residents townsman association cover letter

After the requested documents are complete, the user can give them to the Cimone Jaya Village administration department. The administration department will input new data or replace it with the most recent data received. After the data received is inputted by the village administration, the data will be sent to the region's district. A new family card will be printed in the sub-district of each region.

Making a family card, both new and replacement family card ranges from 2-3 weeks x 24 working hours. For own expenses, there is no charge for making a Family Card, either a new family card.

Legal Basis:

1. Law no. 32 of 2004 concerning local government
2. Law no. 25 of 2009 concerning public services
3. Law no. 23 of 2006 concerning population administration
4. Law no. 3 of 1993 concerning the Establishment of the City Level Region. II Tangerang
5. Government regulations no. 73 of 2005 regarding the village
6. Candy pot no. Per / 21 / M. Pan / 11/2008 concerning Guidelines for the Preparation of SOPs for governance

7. Tangerang City Regulation No. 7 of 2008 concerning the implementation of sub-districts and villages
8. Tangerang City Regulation No. 5 of 2011 concerning retribution for printing ID cards and civil registration deeds
9. Tangerang Mayor Regulation No. 50 of 2008 concerning the organization and work procedures of the district.

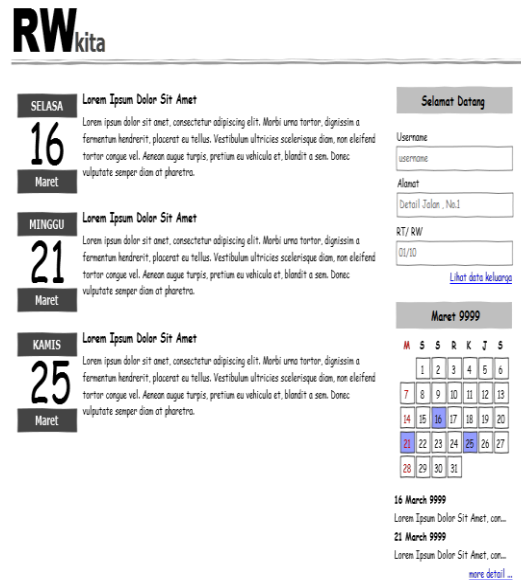


Fig 2. Design of a Citizen Data Collection System.

IV. RESULTS

Residents townsman association will create a login ID for each registered citizen, both new residents and old residents.

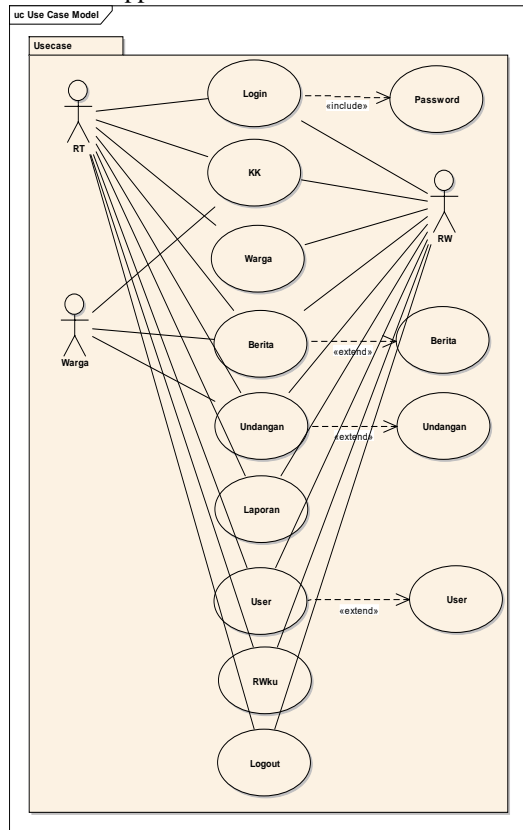
Residents who have already got logged in must immediately enter their Family card into the application provided. After that, residents must complete the data for each family member according to the Family card contents. So that each resident belonging to the Residents neighbor association area is recorded as a resident in the Residents neighbor association area in the application, of course, every citizen who registers can see the detailed data of the resident inside.

The advantage of this application is that the Residents townsman association can reach all residents in the area because, as is known, the internet and computers are available in almost all residents' homes. For example, the Residents townsman association can make announcements informed to residents through the citizen's website and only need to be online at their respective homes to see the announcements.

Apart from that, the site's function is that the Residents townsman association can invoke invitations that residents can respond to. So, residents who were unable to attend the invitation

to be invited know the subject matter of the discussion or can even answer because residents can provide comments on the website.

Residents' neighbor association certainly has special access that can view reports on the distribution of education, age, gender-based on the data in the application.



File Specifications

To simplify understanding of file specifications with reference to data flow diagrams and input design, so a file specification can be made by forming and defining several fields as the record key. The file specifications are as follows:

File name	member
Media	Hard drive
Contents	Citizen data
Organization	Sequential
Primary Key	en
Long Records	1006

Chapter table.1 member file specification.

1.	en	Int	ID number
2.	id KK	Varchar	16 KK number
3.	No.	Int	
4.	Name	Varchar	128
5.	NIK	Varchar	16
6.	Gender	Varchar	2
7.	Place of birth	Varchar	128
8.	Date of birth	Date	
9.	Religion	Varchar	64
10.	Education	Varchar	64
11.	Profession	Varchar	64

12.	Marital status	Varchar	64
13.	Family status	Varchar	64
14.	Citizen	Varchar	64
15.	Passport No	Varchar	16
16.	No kitas	Varchar	16
17.	Father's name	Varchar	128
18.	Mother's name	Varchar	128
19.	url photo	Varchar	128
20.	Register Date	Date	
21.	Edit id	Int	

File name kk
 Media Hard drive
 Contents List of regions
 Organization Sequential
 Primary Key en
 Long Records 1181

Chapter table.2 Family Card file specifications

1.	en	Int	ID number
2.	no	Varchar	16
3.	Member id	Varchar	16
4.	Address	Varchar	256
5.	RT	Varchar	2
6.	RW	Varchar	2
7.	Kelurahan	Varchar	128
8.	sub-district	Varchar	128
9.	district	Varchar	128
10.	Postal code	Varchar	8
11.	Province	Varchar	128
12.	Place make	Varchar	128
13.	Create Date	Date	
14.	Apply	Date	
15.	Name Camat	Varchar	128
16.	Nip camat	Varchar	16
17.	Edit id	Int	
18.	Edit status	Int	
19.	Active date	Date	
20.	Inactive date	Date	
21.	Username	Varchar	64

File name	post
Media	Hard drive
Contents	List of posts
Organization	Sequential
Primary Key	news
Long Records	1181

Chapter table.3 post file specification

1.	en	Int	
2.	Title	Varchar	256
3.	Short News	Varchar	256
4.	News	Text	News content
5.	url image	Varchar	128
6.	Create Date	Date	
7.	Member id	Varchar	64
8.	Awal post	Date	
9.	End post	Date	
10.	RT involved	Varchar	256
11.	RW involved	Varchar	256
12.	User involved	Varchar	256

File name	respond_invitation
Media	Hard drive
Contents	citizen comments
Organization	Sequential
Primary Key	en
Long Records	358

Chapter table.4 Respond_invitation file specifications

1.	Id	Int	ID number
2.	Invitation_id	Int	
3.	Member_id	Varchar	64
4.	Be present	Varchar	16
5.	Comment	Varchar	256
6.	Response_date	Date	
7.	Read_Date	Date	

File name invitation
 Media Hard drive
 Contents event invitation
 Organization Sequential
 Primary Key en
 Long Records 843

Chapter table. 5 invitation file specifications

1.	Id	Int	
2.	title	Varchar	256
3.	Short fill	Varchar	256
4.	contents	Text	Fill out the invitation
5.	Event Date	Date	
6.	Create Date	Date	
7.	Member id	Varchar	64
8.	User involved	Varchar	256

File name user
 Media Hard drive
 Contents list of users
 Organization Sequential
 Primary Key en
 Long Records 410

Chapter table.6 user file specifications

1.	en	Int	11	Identity number
2.	username	Varchar	16	
3.	password	Varchar	16	
4.	No rmah	Varchar	16	
5.	Street name	Varchar	256	
6.	Status	Varchar	16	
7.	active	Int	11	
8.	Last_Login	Date		
9.	Member id	Varchar	64	
10.	RT	Varchar	2	
11.	RW	Varchar	2	

Code Structure

A code is a series that uses numbers or letters or a combination of numbers and letters to mark clarifications that have been previously made. Code is created with the aim of:

- a. Make it easy to record data and reduce data errors.
- b. Save memory in storage media

The design code contained in the proposed system, namely. Draft code for Family Card numbers: x - 16 - x

Information:

x Combination of citizen, citizen, date of birth of the citizen and serial number

16 For the number of codes

Design code for RT / RW id: x - 6 - x

x For the RT code and letters that indicate which RT in what area and what RW environment.

6 For the number of codes

Program View

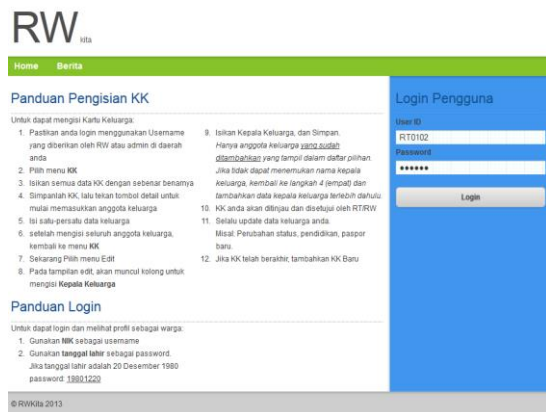


Fig 4. home screen before logging in

Figure 4. shows when the user will start using the program where a log-in view is provided for users who already have access or admin. Each user who logs in can receive information or change their information according to what is available.

Writers organize systematically and rational arguments about scientific information obtained in research, especially information relevant to the research problem. The discussion of the research results obtained can be presented in a theoretical description, both qualitatively and quantitatively. In practice, this section can compare the results of the research obtained in the current research on the results of the research reported by previous researchers referred to in this study. Scientifically, the research results obtained in the study may be new findings or improvements, affirmations, or rejection of a scientific phenomenon from previous researchers.

To clarify the presentation, the study results are carefully presented to be easily understood; for example, it can be shown in the form of tables, curves, graphics, drawings, photographs, or other forms as necessary complete and clear. It should endeavor that when reading the results of the study in that format, the reader does not need to seek related information from the description in the discussion. The end of this section contains information about the system's advantages and disadvantages, which are described in detail.

V. CONCLUSION

Through the program that has been created, the conclusions that can be drawn are: It is easier to collect data on residents at the Cimone Jaya sub-district level, Community outreach is wider, and each head of the family can participate in community activities, Archiving is easier and more systematic, besides preventing data loss in the event of a natural disaster or fire.

References

- [1] E. Hernawan, A. Kusnawan, Andy, Riki, and R. Lihardi, "Implementation of tax consultant monitoring information system to increase client satisfaction with E-CRM," *J. Adv. Res. Dyn. Control Syst.*, vol. 11, no. 8 Special Issue, pp. 2419–2428, 2019.
- [2] R. Riki, S. Widyarto, S. Kahar, and S. Hariyanto, "Smart City Comprehension in Community Development," in *Proceedings of the Proceedings of the Third Workshop on Multidisciplinary and Its Applications, WMA-3 2019, 11-14 December 2019, Medan, Indonesia, 2020*, no. 41, doi: 10.4108/eai.11-12-2019.2290864.
- [3] P. Publik and P. R. Indonesia, "UU Nomor 25 Tahun 2009 Tentang "Pelayanan Publik"," *UU Nomor 25 Tahun 2009 Tentang "Pelayanan Publik"*, 2009.
- [4] "Pengertian e-KTP dan Fungsinya." [Online]. Available: <https://www.artiini.com/2016/03/pengertian-e-ktp-dan-fungsinya.html>. [Accessed: 23-Nov-2020].
- [5] J. Tam and T. A. Model, "ACCEPTANCE OF WEB-BASED TECHNOLOGY AS A HARMONIOUS COMMUNITY OF CITIZEN WITH THE CONCEPT OF TECHNOLOGY MODEL ACCEPTANCE Email : riki@ubd.ac.id," vol. 10, pp. 8–11, 2019.
- [6] G. N. Society for Information Management (U.S.), D. L. University of Minnesota. Management Information Systems Research Center., G. B. Society for Management Information Systems (U.S.), and Association for Information Systems., *MIS quarterly: management information systems*. 1977.
- [7] E. H. Yossy, J. Pranata, T. Wijaya, H. Hermawan, and W. Budiharto, "Mango Fruit Sortation System using Neural Network and Computer Vision," in *Procedia Computer Science*, 2017, doi: 10.1016/j.procs.2017.10.013.
- [8] D. Hughey, "The Traditional Waterfall Approach," *University of Missouri*. 2017.