AJRI

P-ISSN : 2685-9016
E-ISSN : 2686-0384

ADI JOURNAL
ON RECENT INNOVATION

The 1st Edition Vol 1. No 1. September 2019

Indexed by :

LIPI LEMBAGA ILMU PENGETAHUAN INDONESIA · Google Scholar · doi Crossref · RELAWAN JURNAL INDONESIA · neliti · Academia.edu · INDEX COPERNICUS

Supported By : · Organized By : ADI PUBLISHER · raharja

Scan Me :

CONTACT US: +62 821-3805-3306 publishing@adi-journal.org https://adi-journal.org

AJRI is a reputable Scientific Publication Media aim to foster research findings that concentrates towards recent innovation and creativity to support advancement in global civilization and humanity. AJRI Journal published two times a year (March & September) by Asosiasi Dosen Indonesia (ADI) Publisher. AJRI Journal invites all manuscripts on Multidisciplinary topics.

Publisher's & Editor's Address:
Universitas Raharja, Jl. Jenderal Sudirman No. 40, Cikokol, Kec. Tangerang, Kota Tangerang, Banten 15117, Indonesia.
Website : https://adi-journal.org/
Email : publishing@adi-journal.org

bit.ly/EditorialBoardAJRIV1N12019

FOREWORD FROM CHAIRMAN OF ADI

By saying thanksgiving, Alhamdulillahirabbil ‘Alamin,

It is a reputable Scientific Publication Media aim to foster research finding that concentrate on recent innovation and creativity to support advancement in global civilization and humanity, Adi Journal On Recent Innovation (AJRI) is continuously published by referring to the principles of journal writing. AJRI is a scientific journal published by Asosiasi Dosen Indonesia (ADI), to facilitate and accommodate the results of scientific journals of qualified academics in the field of Multidisciplinary.

According to the vision and mission of the AJRI Journal, In 2022, ADI Journal On Recent Innovation (AJRI) becomes a journal publisher who succeeds in accommodating information on the development of Multidisciplinary throughout the world, contributing to researchers in promoting information on Multidisciplinary in the world. Therefore, AJRI always supports the Ministry of Research, Technology and Higher Education, Revised Implementing Rules And Regulations (RIRR) to prepare as early as possible the generation of the nation to face the education revolution era, one of which is through the quality ADI Journal On Recent Innovation (AJRI) journal, digitally packaged and based on Open Journal System (OJS).

AJRI is published 2 (two) times a year, in March and September. Insya Allah, the quality improvement will be achieved by registering AJRI in the journal indexation with the national reputation Science and Technology Index (SINTA) and the international level indexation of Scopus.

It is expected that through this journal AJRI, the downstream of education in the field of Multidisciplinary science can be realized better so that it can be beneficial for the entire academic community in ADI in particular and the global community in general in order to increase knowledge of Multidisciplinary science.

Indonesia, September 2019

Dr. Dino Patti Djalal
Chairman Of ADI

bit.ly/ForewordFromChairmanofADIV1N1

FOREWORD FROM HEAD EDITORIAL

Bismillahirrahmanirrahim praise and gratitude we pray over the presence of the Allah SWT who has given grace and guidance so that it can be finished publishing the AJRI Volume 1 Number 1 September 2019. Where the publication of this journal can be defined as media documentation and scientific information if can help lecturers, students and researchers in publishing research results, opinions and scientific studies to a wide scientific community. Publication of the AJRI Volume 1 Number 1 contains 10 papers, which evolves in the field of Multidisciplinary. Expected to be beneficial to a wide scientific community.

As for 10 (ten) journal published in this edition are:

1.	Aris Suryadi Purwandita Tulus Asmoro Ahmad Solihin	Hybrid Electric Power Point Using Wind Turbine Savonius Helix And Solar Cell As An Alternative Power Source In The Lightning Tower At Flashing Light
2.	Sardjana Atmadja Gulan Gumilar	Fortran Program Forcecasting On Material Mortality In Type C Hospital In East Java Based On Predominant Variables
3.	Febrian Wahyu Ramadhan Husni Teja Sukmana Luh Kesuma Wardani Kyung Oh Lee	Analysis Of Comments On It Services In Mandiri Bank Using K-nearest Neighbor (K-nn) Algorithm Based On Itsm Criteria
4.	Bob Subhan Riza Edy Victor Haryanto S M. Y.Moshor	Application Of Rsa And Lsb In Security Of Message On Imagery
5.	Rosdiana Padeli Revi Sajidah Sri Handayani Rifky Alfian	Design And Development Of Population Service Administration System With Pieces Method In Kemiri Village Head Office Banten
6.	Kholil Kahar Sulistyadi Subagja Arlan	Strategies Of Food Safety Program Improvement To Prevent Food Poisioning Outbreak At Oil & Gas
7.	Amirsyah Tambunan	Islam Wasathiyah To Build A Dignified Indonesia
8.	James Leonard Dian Maharani Damanik Oktika Gita Amirkhasanah	Application Of Information Session Information System As Media Submission Of Final Results Comprehensive Session
9.	Nur Azizah Nike Nur Anisa Yosa Auzadina	Design And Implementation Of Licensing Information Systems In The Outside Of Employees At Pt.Sintech Berkah Abadi
10.	Rosmawati Dwi Siti Wulandari Dewi Nur Khasanah	Web-based Logistic Demand Information System Design At Raharja University

On this occasion, we invite researchers to submit a manuscript to our editorial summary. Finally do not forget we say many thanks to all those who have helped the publication of this journal, in particular to participate send articles to our editors. May be useful for all of us.

Indonesia, September 2019

Professor. Jalel Ben-Othman
Editor in Chief

bit.ly/ForewordFromHeadEditorialAJRI

AJRI Volume 1 Nomor 1 September 2019

Table Of Contents AJRI

http://bit.ly/TableOfContentV1N1

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Hybrid Electric Power Plant Using Wind Turbine Savonius Helix and Solar Cell as an Alternative Power Source in the Lightning Tower at Flashing Lights

Aris Suryadi[1], Purwandito Tulus Asmoro[2], Ahmad Solihin[3]
Indorama Engineering Polytechnic[1,2,3]
e-mail: aris.suryadi@pei.ac.id or, purwandito@pei.ac.id, ahmadlhan200@gmail.com

Author Notification
27 August 2019
Final Revised
28 August 2019
Published
03 September 2019

To cite this document :
Suryadi, A., Asmoro, P., & Ahmad, S. (2019). Hybrid Electric Power Plant Using Wind Turbine Savonius Helix and Solar Cell as an Alternative Power Source in the Lightning Tower at Flashing Lights. ADI Journal on Recent Innovation (AJRI), 1(1), 1-6.

DOI :
https://doi.org/https:/doi.org/10.34306/ajri.v1i1.93

Abstract

Electrical Energy is a very important need, but the electrical energy we use today still comes from conventional power plants that have negative threats such as pollution and fossil fuel reserves that are decreasing. To overcome this, by utilizing alternative energy that is environmentally friendly, one of them is wind energy and solar energy. Hybrid power plants use savonius helix wind turbines and solar cells are made to minimize the use of conventional energy. This tool utilizes wind and solar energy as the main media of electricity generation. The wind turbine which is made is a type of helix savonius vertical turbine that has a large torque, can rotate with low wind speed with a turbine size 80 cm high, diameter 25 cm which is connected to the generator and mounted on mechanical construction with a height of 200 cm and mounted control panel and solar cell with a capacity of 20 WP. This study aims to develop the potential of alternative energy as a power generation medium and be used as a source of flashing lights in the Indorama Engineering Polytechnic lightning tower tower. Savonius helix wind turbines that are designed require a minimum wind speed of 2.45 m / s for the start of the turbine rotation. Generating from the generator produces a maximum voltage of 18.64 V with a generator rotation of 304 rpm when not loaded and when loaded produces a maximum spin voltage of 281.3 rpm, 11.73 V voltage and 0.038 W power with a wind speed of 5 m/s. From the results of testing this hybrid power plant can be used for flashing lights on the lightning rod tower of the Indorama Polytechnic Engineering campus with a duration of 12 hours per day.

Keywords: hybrid power plant, savonius helix, solar cell, flashing lights.

I. INTRODUCTION

Electrical Energy is a very important requirement both now and in the future. The electrical energy we use today still comes from conventional power plants. Conventional generation for

now is not impossible that will pose many threats such as increasing pollution and decreasing fossil material reserves [1]. One way to develop plants that do not damage the environment is by utilizing alternative energy. The energy includes solar energy and wind energy. In 2014 the Central Statistics Agency of Purwakarta Regency (BPSKP) recorded the

Largest average wind speed in Purwakarta, namely 4.17 m/s and an average temperature of 25°C [2]. Wind turbine and solar cell technology are effective solutions to eliminate dependence on the use of conventional energy sources. Savonius type wind turbines are one of the Vertical Axis Wind Turbine wind turbines that are easy to spin in low wind speed conditions. Savonius wind turbines have good self starting so they are able to rotate the rotor even though the wind speed is low, besides that the torque produced is relatively high [3]. Solar cell is a component that can convert sunlight energy into electrical energy using the principle of photovoltaic effects. Where both are power plants that require alternative energy, so it is environmentally friendly. The two generators can be combined or commonly referred to as Hybrid power plants which are alternative energy that can be applied even in remote areas.

II. METHODE

This research in principle will try to develop a savonius type wind turbine design and combine it with a solar cell so that it becomes a hybrid for later use as a source of flashing lights in the Indorama Engineering Polytechnic campus tower lightning [9]. This research is focused on the utilization of *hybrid* power plants to be used as a source of flashing lights.

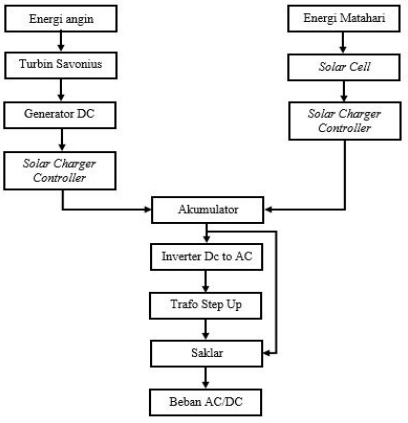


Figure 1. Diagram System

III. RESULT AND DISCUSSION

Tests carried out to determine the reliability of the results of manufacturing that has been done. Tests carried out include testing minimum wind speed, wind turbine generator output and field testing.

Testing for Minimum Wind Speed

This test is conducted to determine whether the turbine that has been made can be used or not. In addition, testing is also carried out to determine the minimum wind speed limit for rotating the start of the turbine.

Test	No Load	Load
	Wind Speed (m/s)	Wind Speed (m/s)
1	2,1	2,4
2	2,3	2,5
3	2,3	2,4
4	2,3	2,4
5	2,2	2,5
6	2,3	2,4
7	2,4	2,5
8	2,1	2,3
9	2,4	2,6
10	2,2	2,4
Avg	2,14	2,45

Table I. Minimal Graph of Wind Speed

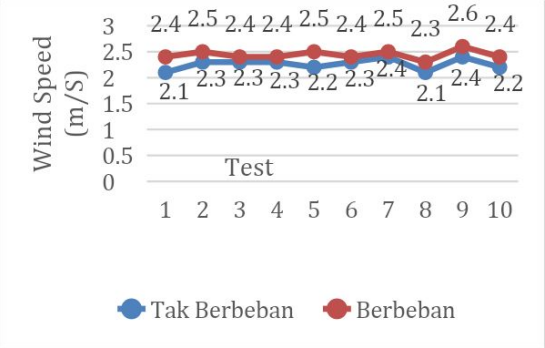


Figure 2. Minimal Graph of Wind Speed

Testing Turbine Generator Output

Testing the turbine generator output is done to find out how many revolutions, voltages, currents and electric power generated by the generator against wind speed.

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Wind Speed (m / s)	Voltage (V)	Current (mA)	Power (mW)
2,1	1.08	0.2	0.216
2.5	2.18	0.3	0.654
2,9	3.95	0.4	.158
3.5	6.31	0.7	4,417
3,7	6.8	0.8	5.44
3,9	7.51	0.8	6,008
4	9.64	1.5	14.46
4,4	10.03	1.7	17,051
4,8	11.02	2.5	27.55
5	11.73	3,3	38,709

Table II. Output Generator

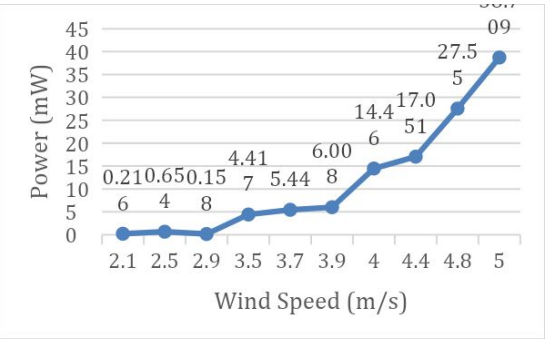


Figure 3. Graph of *Output* Generator

Field Testing

This test aims to determine the performance of *hybrid* power plants for *charging* and *discharging* accumulators with flashing lights. Tests carried out for 24 hours by checking the screen of the solar charger controller to determine the value of the accumulator voltage and capacity per 3 hours.

Figure. 4. Installation of wind turbine and solar cells in the lightning tower

Second check	Hour	Accumulator Voltage (Vdc)	*charging*	*Discharging*
1	6:00 p.m.	12.6		℘
2	9 p.m.	12.3		℘
3	0:00	12		℘
4	3 a.m.	11.5		℘
5	6:00	11.3	℘	℘
6	9:00	11.5	℘	
7	12:00 p.m.	13.5	℘	
8	3:00 p.m.	14.1	℘	
9	6:00 p.m.	12.6		℘

Table III. Actually of Output Generator

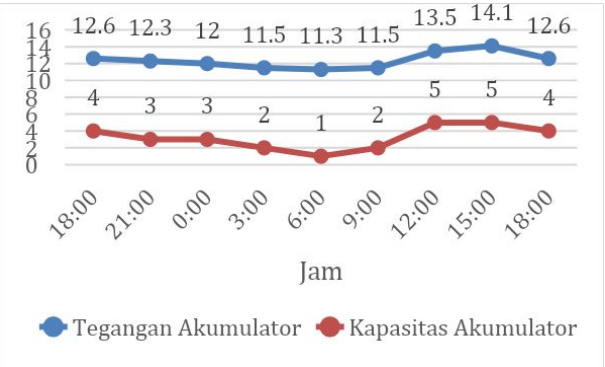


Figure 5. Graph of *Output* Generator

IV. CONCLUSION

Based on the test results, the wind speed results required for the initial start of the turbine are equal to 2.14 m/s when unloaded and 2.45 m/s when loaded. As for the output, the maximum rotation produced is no load of 304 rpm and a voltage of 18.64 V, when the maximum rotation is 281.3 rpm, 11.73 V, 0.003 A, 0.038 W power with a wind speed of 5 m/s. In testing with the same wind speed, the output in the form of rotation and the resulting voltage, no-load produces a greater rotation and output voltage, than the load. From the test results above, hybrid power plants using savonius helix wind turbines and solar cells can be used as a source of blinking lights in the lightning rod with a duration of 12 hours of use and charging a full accumulator during the day with a duration of testing of 5 hours per day.

V. ACKNOWLEDGMENT

The authors would like to thank the institute for Research and Community Service (LPPM), Indorama Engineering Polytechnic.

REFERENCES

[1]. Prasetyo, Septian Dhimas. 2018. *Rancang Bangun Pembangkit Hybrid Tenaga Angin Dan Sel Surya Untuk Penerangan Jalan Raya*. Skripsi. Jurusan Teknik Elektro. Fakultas Teknik Universitas Muhammadiyah Surakarta. Surakarta

[2]. Badan Pusat Statistik Kabupaten Purwakarta. 2015. *Purwakarta Dalam Angka 2015*. Purwakarta.

[3]. Sargolzaly J. 2007. "Presdiction of the Power Ratio In Wind Turbine Savonius Rotors Using Artificial Neural Networks". Internasional Journal of Energy and Environtment, Issue 2, Volume 2.

[4]. Erich Hau. 2005. *Wind Turbine Fundamentals, Technologies, Application, Economics*, 2nd Edition, terjemahan Horst von Renuard, Springer, Germany.

[5]. Indra Bayu Aditya. 2012. *Desain Vertical Axis Wind Turbine Tipe Savonius Optimalisasi Kecepatan Angin Rendah*. Skripsi. Program Studi Teknik Mesin Universitas Indonesia. Depok.

[6]. Upasani, Mayuri dan Patil, Sagita. 2018. *Grid Connected Solar Photovoltaic System With Battery Storage For Energy Management*. Processdings Of The Second International Conference On Inventive System And Control (ICISC 2018). IEEE Xplore Compliant-Part Number: CFP18J06-ART, ISBN: 978-105386-0807-4. ©2018 IEEE.

[7]. Zulfikar, Dafi dan Broto Wisnu. 2016. "Optimalisasi Pemanfaatan Energi Listrik Tenaga Surya Skala Rumah Tangga". Jurnal. Prosiding Seminar Nasional Fisika (E-Journal) SNF2016. Vol. V, Oktober 2016. P-ISSN: 2339-0654

[8]. Munthe, Berayan. 2016. Modul Belajar Motor Listrik 1. Purwakarta. Politeknik Enjinering Indorama.

[9]. Suryadi, Aris. 2017. Perancangan Instalasi Penangkal Petir Eksternal Metoda Franklin pada Politeknik Enjinering Indorama, SINERGI Vol. 21, No. 3, Oktober 2017 : 219-230 http://doaj.org/toc/2460-1217 http://doi.org/10.22441/sinergi.2017.3.009

[10]. Suryadi, Aris. 2015. Diktat Pembangkit Energi Listrik & Lab. Purwakarta. Politeknik Enjinering Indorama.

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Fortran Program Forecasting On Maternal Mortality In Type C Hospitals In East Java Based On Predominant Variables

Sardjana Atmadja[1], Gulam Gumilar [2]
[1]Syarif Hidayatullah State Islamic University
[2]Gajah Mada University

Author Notification
29 August 2019
Final Revised
30 August 2019
Published
03 September 2019

To cite this document:
atmadja, sardjana. (2019). Fortran Program Forecasting On Maternal Mortality In Type C Hospitals In East Java Based On Predominant Variables.
ADI Journal on Recent Innovation (AJRI), *1*(1), 7-13.

DOI: https://doi.org/https://doi.org/10.34306/ajri.v1i1.89

Abstract

In Indonesia, the effort to reduce maternal mortality rate remains unsatisfactory and is progressing slowly due to the lack of working ethos, blood facility, communication facility, obstetrician and gynecologists, midwifes, nurses, and functionaries of Indonesian Red Cross. Objective. To forecast maternal mortality in all type C hospitals in East Java, 2010 - 2015. This study was a development of clinical management from predominant variables that lead to maternal mortality in type C hospitals in East Java using FORTRAN simulation program. Results. The contribution of working ethos to clinical management model in reducing maternal mortality in governmental type C hospital was 45.46%, indicating that the contribution if this variable can be expandable to 57.99%. The contributions of blood facility and communication facility were 27.22% and 26.95%, indicating a possible expanding contribution as much as 34.73% and 34.38% respectively.

Keywords: hybrid power plant, savonius helix, solar cell, flashing lights.

I. INTRODUCTION

Maternal mortality, in addition to describe maternal health status, also describes population and social political condition, and one of the most sensitive indicators of the use and outcome of health care. Maternal mortality rate in Indonesia, related to pregnancy and delivery, remains the highest in Southeast Asia. Household Health Survey (Survey Kesehatan Rumah Tangga, SKRT) by the Department of Health in 1986 showed that the maternal mortality rate was 450 per 100,000 living birth, and reduced to 421 in 1992. Furthermore, Indonesian Demographic and Health Survey Survei Demografi dan Kesehatan Indonesia, SDKI) in 1994 and 1997 indicated that the maternal mortality rates were 390 and 334 per 100,000 living birth. In Indonesia, the effort to reduce maternal mortality rate remains unsatisfactory and is progressing slowly due to the lack of working ethos, blood

II. METHODE

The Characteristics of Maternal Mortality. The causes of maternal mortality can be classified into direct obstetric death, indirect obstetric death, non-related obstetric death, and undetermined death. The characteristics of maternal mortality are presented in the following tables :

Table 1. The Characteristics of the Cause of Maternal Mortality and Time of Death at Obstetric Unit, Type C Hospitals

No	Characteristics of Maternal Mortality	Average (Year)			
		2002		2003	
		Total	%	Total	%
1	Bleeding				
	HB < 4 gr %)	155	73.08	96	58.9
	HB 4 – 6 gr %)	58	26.92	67	41.1
	Total	213	100	163	100
2	Preeclampsia/Eclampsia				
	T 140 – 140 mm Hg	71	65.38	56	66.66
	T 170 – 200 mm Hg	38	34.62	28	33.34
	Total	109	100	84	100
3	Infection				
	Temperature < 38 ^{0}C	107	73.80	69	61.29
	Temperature > 38 ^{0}C	38	26.20	42	38.71
	Total	145	100	111	100
4	Time of Death in Hospital				
	2 hours	76	14.6	66	16.6
	2 – 24 hours Working days Holidays	184 55 205	35.4 10.6 39.4	130 67 135	32.7 16.8 33.9
	Total	520	100	398	100

Table 1 shows that the indicators of death causes and the type of delayed care process remains following the previous pattern, i.e., bleeding (41%), preeclampsia/eclampsia (21%), infection (28%), and undetermined deaths (30%). The Variable of Working Ethos

Results of descriptive analysis on the variable of working ethos is presented in the following table.

Table 2. The Characteristics of the variable of working ethos at Obstetric Unit, Type C Hospitals

Subvariables	PROFESSIONS				TOTAL
	DOCTOR	MIDWIFE	NURSE	PMI FUNC.	
Income	2.06	2.00	2.02	2.04	8.12
Duties & Obligation	2.00	2.02	2.02	2.05	8.09
Working period	1.50	1.48	1.50	1.50	5.98
Linear Thinking	1.47	1.47	1.49	1.50	5.93
Working Days	1.95	1.95	1.96	1.97	7.83
Holidays	1.98	2.00	2.00	2.01	7.99
Length of Education	2.02	1.97	2.00	2.01	8.00
Profession	2.08	1.00	1.00	1.00	5.08
Standard Produre	1.38	1.43	1.43	1.38	5.62
Status of Civil Employment	2.08	1.00	1.00	1.00	5.08
Age	1.94	1.99	1.98	1.98	7.89
Sex	2.00	2.01	2.02	2.02	8.05

Source: processed primary data

The Variable of Blood Facility Results of descriptive analysis on the variable of blood facility is presented in the following table.

Table 3. The Characteristics of the variable of blood facility at Obstetric Unit, Type C Hospitals

Variables	PROFESSIONS				TOTAL
	DOCTOR	MIDWIFE	NURSE	PMI FUNC.	
Budget	2.02	2.04	2.01	1.48	7.55
Total Blood	1.95	2.00	1.98	1.98	7.91
Blood Needed	2.11	2.03	2.04	2.02	8.2
Blood Replacement	1.56	1.51	1.50	1.47	6.04
Type of Cooperation	1.52	1.51	1.53	2.03	6.59
Regular Donor	1.97	1.49	1.49	1.52	6.47
Type of Delivery	2.02	1.48	2.00	1.98	7.48

Source: processed primary data

The Variable of Communication Facility.

Table 4. The Characteristics of the variable of communication facility at Obstetric Unit, Type C Hospitals

Variables	PROFESSIONS				TOTAL
	DOCTOR	MIDWIFE	NURSE	PMI FUNC.	
Standard Procedure	2.03	1.53	2.01	1.97	7.54
Budget	1.53	2.03	1.51	2.01	7.08
Working Ethos	1.59	2.06	1.56	2.05	7.26
Type of Equipment	2.00	1.99	2.04	1.56	7.59
Common Agreement	1.98	2.03	1.98	1.97	7.96
Linear Thinking	1.95	1.98	1.98	1.48	7.39

RESULTS OF ANALYSIS AND OPTIMATION OF PREDOMINANT VARIABLES

Table 5. Expandable Sub-Variables

Subvariables	PROFESSION				NOTE
	DOCTOR	MIDWIFE	NURSE	PMI FUNC.	
Linear Thinking (x1)	#				
Income (x2)		#	#	#	
Holidays (x3)	#				
Education (x4)		#	#	#	
Age (x5)					
Blood Count (y1)	#	#	#	#	
Linear Thinking (y2)	#	#	#	#	
Budget (y3)	#	#	#	#	
Linear Thinking (z1)	#	#	#	#	
Budget (z2)	#	#	#	#	
Team Agreement (z3)	#				

Source: expandable capacity

Results of computation analysis Lindo obtained the objective function value 127.157, indicating that the maximum work of the model with existing variable condition and contraints was 57.8% from total ideal value of 220.

Results of Optimation of Working Ethos Structural Model.

Table 6. Results of Optimation for the Variable of Working Ethos

Variables	The Value of Object Function ®							
	DOCTOR		MIDWIFE		NURSE		PMI FUNCTIONARY	
	v	s/s	v	s/s	v	s/s	v	s/s
Linear Thinking (x1)	.476	4.52	5.00	0.00	5.00	0.00	5.00	0.00
Income (x2)	.000	5.00	.223	4.77	5.00	0.00	5.00	0.00
Holidays (x3)	.000	5.00	5.00	0.00	5.00	0.00	.736	4.26
Education (x4)	.000	5.00	5.00	0.00	.075	4.92	5.00	0.00
Age (x5)	.000	5.00	5.00	0.00	5.00	3.49	1.51	5.00

Table 6 shows that the contribution of subjects (doctors, midwives, nurses, and PMI functionaries) to the existing subvariables had reached the maximum, but some of them remained expandable. In the subject of PMI functionaries, the expandable subvariables are holidays and age, with non-zero slack or surplus value.

Results of Optimation of Blood Facility Structural Model.

Table 7. Summary of the Results of Optimation for the Variable of Blood Facility

Variables	The Value of Object Function ®							
	DOCTOR		MIDWIFE		NURSE		PMI FUNCTIONARY	
	v	s/s	v	s/s	v	s/s	v	s/s
Blood Count (y1)	.000	0.00	5.00	4.62	.379	0.00	5.00	5.00
Linear Thinking (y2)	.000	4.06	.393	0.00	5.00	0.00	5.00	1.56
Budget (y3)	3.43	0.00	5.00	0.00	5.00	5.00	.000	5.00

Table 7 shows that the contribution of the subjects (doctors, midwives, nurses, and PMI functionaries) to total blood, linear thinking, and budget has a significant variation. For the subject doctors, the subvariable of linear thinking still has expandable capacity with slack or surplus value of 4.06, while the subject of midwives the subvariable of total blood can be expandable

Results of Optimation of Communication Facility Structural Model

Table 8. Results of Optimation of the Factor for Communication Facility Variable

Variables	The Value of Object Function ®							
	DOCTOR		MIDWIFE		NURSE		PMI FUNCTIONARY	
	v	s/s	v	s/s	v	s/s	v	s/s
Budget (z1)	.000	0.00	2.36	5.00	5.00	0.00	5.00	0.00
Team Agreement (z2)	1.93	4.90	5.00	5.00	.000	0.00	5.00	0.00
Linear Thinking (z3)	5.00	0.00	.990	0.00	.000	0.00	5.00	0.00

Note: v = value s/s = slac or surplus

Above table shows that the subvariable of linear thinking for the subject of doctors provides maximum contribution to total model contribution of 45.35%. This result is obtained by multiplying value 5 with coefficient (c = 1). It is apparent in these results the subvariable of team agreement from the subject doctor can be expandable to reach the maximum capacity.

Results of FORTRAN Program Simulation Year 2005 – 2010

Table 9. Results of Interpolation of Maternal Mortality with Cubic Spline

HOSPITALS	MATERNAL DEATHS					
	2005	2006	2007	2008	2009 (target)	2010 (target)
Dist. Gresik	12	10	9	7	5	4
Dist. Sidoarjo	11	9	8	7	5	4
Dist. Mojokerto	18	13	10	6	5	4
Dist. Kerpoono	14	11	9	7	5	4
Dist. Bojonegoro	13	11	8	7	5	4
Dist. Tuban	16	13	10	8	6	4
Dist. Lamongan	18	12	9	7	5	4
Dist. Madiun	18	13	10	7	5	4
Dist. Ngawi	14	11	9	8	6	4
Dist. Magetan	16	13	11	8	6	4
Dist. Ponorogo	13	12	9	7	5	4
Dist. Pacitan	16	13	12	10	7	4
Dist. Nganjuk	14	11	9	7	5	4
Dist. Blitar	16	13	11	8	6	4
Dist. Tulungagung	18	12	9	6	5	4
Dist. Trenggalek	16	13	11	8	6	4
Dist. Malang	18	13	10	7	5	4
Dist. Pasuruan	14	11	10	8	6	4
Dist. Probolinggo	16	13	10	9	6	4
Dist. Lumajang	18	12	8	6	5	4
Dist. Bondowoso	16	13	12	10	7	4
Dist. Situbondo	14	11	9	8	6	4
Dist. Banyuwangi	13	11	10	8	6	4
Dist. Jember	16	13	11	9	6	4
Dist. Sampang	13	12	10	7	5	4
Dist. Sumenep	18	13	10	8	6	4
Dist. Bangkalan	14	11	9	6	5	4
City of Madiun	14	11	9	8	5	4
City of Probolinggo	16	13	11	8	6	4
City of Blitar	13	12	9	7	5	4
City of Kediri	18	14	11	9	6	4
City of Mojokerto	18	12	9	6	5	4
City of Pasuruan	16	13	12	9	6	4
TOTAL	521	395	324	249	183	132

III. RESULT AND DISCUSSION

Optimation for the Variable of Working Ethos.

The subvariable of linear thinking for the subject doctor provided contribution as much as 0.235% to the total model contribution 57.73%. The results were obtained by multiplying the value 0.45 with coefficient (c = 5). Slack or surplus valued indicated that the capacity of linear thinking from the subject doctor can still be expandable. From these results, we found that the capacity of linear thinking for the subjects midwifes, nurses, and PMI functionaries had reached the maximum value (5) with slack or surplus value of zero.

Government's policy is mostly focused to midwives, nurses, and paramedics, while actually the medical capability of the doctors themselves remained less optimal, as indicated from the results of analysis showing that an important subvariable, such as linear thinking,

was only used 20%. If the 80% of the capability can be optimally employed, the currently prevailing mismanagement can be prevented. It can also be seen in this optimation, that for the subvariables of income, holidays, length of education, and age among the subject doctors provided less influence. This implies that if the income is increased to certain level, it may have no influence on their performance.

Optimation for the Variable of Communication Facility

It is apparent in this optimation that the subvariable of team agreement among the subject doctors can still be improved to reach maximum capacity. This demonstrates that standard procedure in communication between medical teams remains not well-adapted. The standard procedure should be socialized in communication until the lewest lovel.

The reduction of maternal mortality rate to 45% in the condition of crisis, both in the society and government, will not be easy. This study revealed that by dealing with three main variables and twelve subvariables in clinical management, we may reduce maternal mortality rate to 45%.

IV. CONCLUSION

It can be concluded that the contribution of working ethos to clinical management model in reducing maternal mortality in governmental type C hospital was 45.46%, indicating that the contribution if this variable can be expandable to 57.99%; the contribution of blood facility to clinical management model in reducing maternal mortality in governmental type C hospital was 27.22%, indicating that the contribution if this variable can be expandable to 34.73%; and the contribution of communication facility to clinical management model in reducing maternal mortality in governmental type C hospital was 26.95%, indicating that the contribution if this variable can be expandable to 34.38%.

REFERENCES

1. Affandi, B. Gerakan Sayang Ibu. Simposium Gerakan Sayang Ibu: Pertemuan Ilmiah Tahunan X POGI. Ujung Pandang, Juli 1997.
2. Allen P. Accountability for clinical governance. Developing collective responsibility for quality in primary care. BMJ.2000.
3. Budiarso, L.R., Bakri, Z., Susanto,S.S., Daramadi,S., Djaja, S., Kristianti, C.M., Iskandar, J., Siagian, B.T. Survey Kesehatan Rumah Tangga 1986. Badan Penelitian Dan Pengembangan Kesehatan Pusat Penelitian Ekologi Kesehatan Depkes RI. Jakarta, 1986.
4. Giordano, F.R. and Weir, M.D. A First Course in Mathematical Modelling. Brooks/Cole Publ. Company. California. p. 382. 1985.
5. Li, W., Zhou, R.. The Analysis of the Causes and Changes in The Maternal Mortality in 42 Years. Chung-hua fu chan ko tsa chih Jan: 27-9, 1995
6. Mc Coll A dan Roland M. Knowledge and information for clinical governance. BMJ. 2000.
7. Meyer, W.J. concepts of Mathematical Modelling. Mc graw-Hill Inc. New York. p. 439. 1987.
8. Sardjana, Faktor Penentu kematian Ibu di Rumah Sakit Kepanjen Wlingi dan Pasuruan (Hasil Penelitian), 2000.

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Analysis Of Warganet Comments On It Services In Mandiri Bank Using K-Nearest Neighbor (K-Nn) Algorithm Based On Itsm Criteria

Febrian Wahyu Ramadhan[1], Husni Teja Sukmana[2], Luh Kesuma Wardhani[3], Kyung Oh Lee[4]
[1,2,3]Informatics Engineering Study Program, Faculty of Science and Technology, Syarif Hidayatullah State Islamic University Jakarta
[4]Dept. Computer Engineering, Sun Moon University, Asan Campus, South Korea

Author Notification
27 August 2019
Final Revised
28 August 2019
Published
03 September 2019

To cite this document:
Sukmana, H. (2019). Analysis Of Warganet Comments On It Services In Mandiri Bank Using K-Nearest Neighbor (K-Nn) Algorithm Based On Itsm Criteria. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 14-19.

DOI:
https://doi.org/https://doi.org/10.34306/ajri.v1i1.91

Abstract

Sentiment analysis is a method for reviewing products or services to determine opinions or feelings about a product. The results of the analysis can be used by companies as evaluation materials and considerations to improve the products or services provided. This study aims to test the level of public sentiment on the quality of Bank Mandiri services that have received ISO 20000-1 with the application of sentiment analysis using the K-NN algorithm based on ITSM criteria. The initial classification in this study uses the lexicon method by detecting words included in sentiment words, the results of which are included as labels on training data and test data. Formation of the classification with the K-NN algorithm by taking into account the results of the training data indexing and weighting of the test data, with the value of k as the decision maker limit. The trial results of 10 scenarios show that the classification using the K-NN algorithm as a sentiment classification is 98% accuracy value of 50 test data to 600 training data, with 24% getting positive sentiment, 22% negative sentiment and 55% neutral sentiment, with f -measure 95.83%. while in testing 100 the test data obtained 79% accuracy value with 21% getting positive sentiment, 42% negative sentiment and 38% neutral with an f-measure value of 68.42%.

Keywords: K-NN Algorithm, Sentiment Analysis, Bank Mandiri, Twitter.

I. INTRODUCTION

The use of the internet is now a part of human needs. Almost all devices are equipped with technology that allows users to surf online. Based on a report released by Tetra Pak Index (2017), there are around 132 million internet users in Indonesia, and 40% of them are social media users. Twitter is one of the most popular microbloging or social media service providers in Indonesia. Based on an article released by JakartaGlobe (2017), the number of Twitter accounts in the world in 2017

reached 328 million. The number has increased by around 14% compared to 2016, where 24.34 million accounts from Indonesia put Indonesia in the third position of Twitter users.

The high use of social media in Indonesia is widely used by companies or agencies as a means to communicate with the community interactively so that it can directly get feedback from the community (Setyanto, 2016).

Bank Mandiri is one of the State-Owned Enterprises (SOEs) engaged in banking, which has implemented work principles in accordance with IT Service Management (ITSM) criteria, based on ISO 20000: 2011 on IT Service Management. As the role of a bank in general, namely as a data collector, distributor of funds and other bank service providers, Bank Mandiri must always prioritize customer satisfaction by building good corporate governance, one of which is the management of information system services according to criteria ITSM.

Sentiment analysis which is a computational research of opinions, sentiments and emotions is used in determining the sentiments of opinions expressed (Ira & Edi, 2017). The type of sentiment of the opinion can be positive, negative or neutral opinion (Liu, 2012).

The classification process in this sentiment analysis research uses the K-Nearest Neighbor algorithm. The advantage of K-NN algorithm is that it is more resilient to data that has a lot of noise and is more effective against large amounts of data (Alfian et al, 2014) in addition KNN can be used as a classification for various domains (Imandoust et al., 2013). The algorithm was chosen referring to previous research by (Rezwanul et al. 2017) about Sentiment Analysis on Twitter Data Using KNN and SVM. The results of these studies indicate better values based on accuracy, precision, and recall (Rezwanul et al., 2017).

Therefore, this research is important to do, to find out public sentiments towards the quality of Bank Mandiri services with the application of sentiment analysis using K-NN algorithm based on ITSM criteria. So that the results of the analysis can be used by companies as evaluation materials and considerations to improve the products or services provided.

II. METHODE

Method of collecting data

In this study, the data collection process was carried out by the literature study method. Literature study is to collect data, based on theories obtained from reference books, journals, similar thesis and related articles. In addition the author also accesses YouTube, and other sites to learn the concepts of sentiment analysis, natural language processing, lexicon classification and K-NN algorithm

Data Observation

Data observations were taken from the @mandiricare twitter account as a source of data relating to Bank Mandiri IT services through the @mandiricare account to be used as training and test data in the system analysis application. Retrieval of tweets is done from September to October 2018. Twitter data retrieval process uses a library created on the site https://github.com/abraham/twitteroauthdemo/blob/master/templates/index.html/ using PHP programming language. Successful Twitter data can then be saved to the MySQL database. The data that was successfully obtained and used as a source of information in this study were 700 tweets, with the division of 100 tweets used as test data and 600 tweets used as training data.

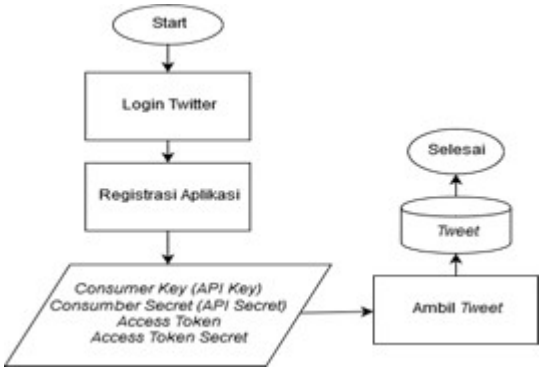


Figure 1. Twitter data retrieval steps

Simulation

Application development in this study uses a simulation method with the following steps:

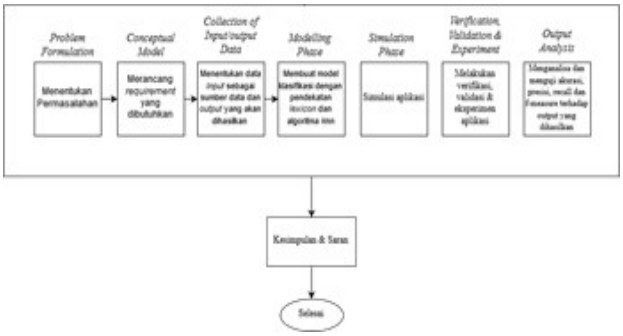


Figure 2. The workflow of the simulation method

Testing

Testing is done based on the value of k, namely k = 1 to k = 10. Things that were tested include: testing accuracy, precision, recall and f-measure.

III. RESULTS AND DISCUSSION

The results of sentiments with the K-NN algorithm, the authors use 50 test data and 100 test data obtained from crawling Twitter data after passing the lexicon preprocessing and classification process, in conducting testing, the writer uses 5 k values as a comparison of the accuracy of each k.

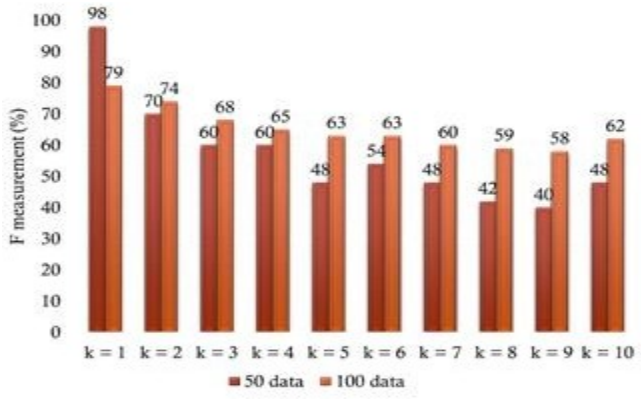


Figure 3. Comparison of K-NN Algorithm Accuracy with 50 test data Based

On figure 3, it is known that the highest accuracy value uses k = 1, both with the amount of test data 50 (f measurement = 98%), and the amount of test data 100 (fmeasurement = 79%). Meanwhile, the lowest accuracy value uses k = 9, both with the amount of test data 50 (f measurement = 98%), and the amount of test data 100 (f measurement = 79%). Accuracy results tend to decrease because the value of k increases so the greater the range in choosing the biggest weight.

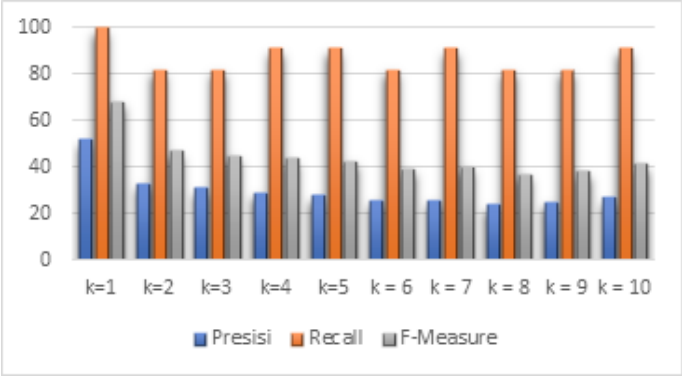


Figure 4. Comparison of Precision, Recall and F-Measure K-NN Algorithms with 100 data

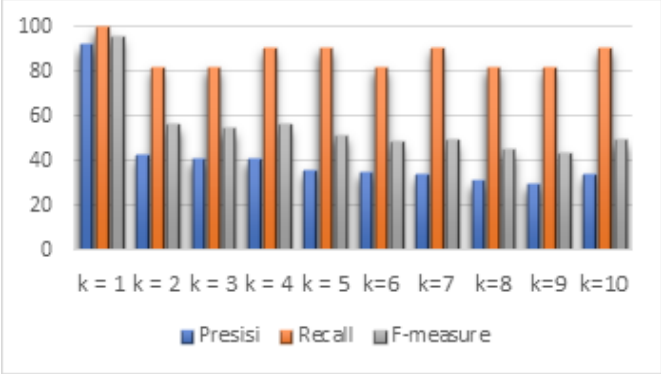


Figure 5. Comparison of Precision, Recall and F-Measure K-NN Algorithms with 50 data

IV. CONCLUSION

The results obtained with each optimal accuracy show positive sentiment results get lower than negative and neutral values, which shows that there are still many users who are still not satisfied with the services of Bank Mandiri. In accordance with the results of the sentiment classification obtained shows that the application of the ISO 20000-1 standard by Bank Mandiri has not yet received a positive response to the services provided by Bank Mandiri. The result of lower positive sentiment towards negative and neutral sentiment is due to the nature of users who are more likely to be quiet if they have received good service and will react to services that are less satisfying. The system is still not optimal in overcoming abbreviated words and / or words not found in the KBBI dictionary.

V. ACKNOWLEDGMENT

Suggestions for Bank Mandiri to improve their services, especially for services related to IT to comply with ISO 20000: 1 standards. As for further research, there should be an increase in the text-processing prinfrastructure ocess to overcome short or excessive words. Add training data, test data and collection of sentiment words to get better accuracy. Data retrieval is better in the form of a questionnaire than using Twitter because it will be more objective in producing classification. In addition, other algorithms are expected to be used to compare accuracy and performance for better results.

REFERENCES

[1] Asghar, Muhammad Zubair, Fazal Masud Kundi, Aurangzeb Khan, and Shakeel Ahmad. 2014. “Lexicon-Based Sentimen Analysis in the Social Web.” *J. Basic. Appl. Sci. Res* 4(6): 238–48.

[2] Bassil, Youssef. 2012. “A Comparative Study on the Performance of the Top DBMS Systems.” *arXiv preprint arXiv:1205.2889*: 20–31. http://arxiv.org/abs/1205.2889.

[3] Buntoro, Ghulam Asrofi, Teguh Bharata Adji, and Adhistya Erna Purnamasari. 2014. “Sentimen Analysis Twitter Dengan Kombinasi Lexicon Based Dan Double Propagation.” *Citee 2014* ISSN: 2085(OCTOBER 2014): 7–8.

[4] Dwiki, Dyar, and Adriadi Nur. 2015. “PENGEMBANGAN APLIKASI SENTIMEN ANALYSIS MENGGUNAKAN METODE NAÏVE BAYES. (Studi Kasus Sentimen Analysis Dari Media Twitter).” (November): 2–3.

[5] H, Aris Tri Jaka. 2015. “Preprocessing Text Untuk Meminimalisir Kata Yang Tidak Berarti Dalam Proses Text Mining.” *Jurnal Informatika UPGRIS* 1: 1–9.

[6] Haddi, Emma, Xiaohui Liu, and Yong Shi. 2013. “The Role of Text Pre-Processing in Sentimen Analysis.” *Procedia Computer Science* 17: 26–32. http://dx.doi.org/10.1016/j.procs.2013.05.005.

[7] Imandoust, Sadegh Bafandeh, and Mohammad Bolandraftar. 2013. “Application of K-Nearest Neighbor (KNN) Approach for Predicting Economic Events: Theoretical Background.” *International Journal of Engineering Research and Applications* 3(5): 605–10.

[8] Indriani, Aida. 2014. “Klasifikasi Data Forum Dengan Menggunakan Metode Naïve Bayes Classifier.” *Seminar Nasional Aplikasi Teknologi Informasi (SNATI)*: 5–10.

[9] Karyono, Giat, Fandy Setyo Utomo, Arsitektur Sistem, and Temu Balik. 2012. “Temu Balik Informasi Pada Dokumen Teks Berbahasa Indonesia Dengan Metode Vector Space Retrieval Model.” *Seminar Nasional Teknologi Informasi dan Terapan 2012* 2012(Semantik): 282–89.

[10] Kataria, Aman, and M D Singh. 2013. “A Review of Data Classification Using K-Nearest Neighbour Algorithm.” *International Journal of Emerging Technology and Advanced Engineering* 3(6): 354–60.

[11] Mario, Hitoshi, Naga Mait, and Mirna Adriani. “Making Stemming Synonym Indonesian Using Algorithm Nazief and Adriani .”

[12] Medhat, Walaa, Ahmed Hassan, and Hoda Korashy. 2014. “Sentimen Analysis Algorithms and Applications: A Survey.” *Ain Shams Engineering Journal* 5(4): 1093–1113. http://dx.doi.org/10.1016/j.asej.2014.04.011.

[13] Menggunakan, Sekolah, and Algoritma Porter. 2014. “STEMMING BAHASA INDONESIA SEBAGAI MEDIA BELAJAR SISWA.”

[14] Mujilahwati, Siti. 2016. “Pre-Processing Text Mining Pada Data Twitter.” *Seminar Nasional Teknologi Informasi dan Komunikasi* 2016(Sentika): 2089–9815.

[15] Mustakim,Giantika O. 2016. “Algoritma K-Nearest Neighbor Classification Sebagai Sistem Prediksi Predikat Prestasi Mahasiswa.” *Jurnal Sains dan Teknologi Industri* 13(2): 195–202.

[16] Ogc. 2007. ITIL Library *The Official Introduction to the ITIL Service Lifecycle*.

[17] Prasath, V. B. Surya, Haneen Arafat Abu Alfeilat, Omar Lasassmeh, and Ahmad B. A. Hassanat. 2017. “Distance and Similarity Measures Effect on the Performance of K-Nearest Neighbor Classifier - A Review.” : 1–50. http://arxiv.org/abs/1708.04321.

[18] Raulji, Jaideepsinh K et al. 2016. “Stop-Word Removal Algorithm and Its Implementation for Sanskrit Language.” *International Journal of Computer Applications* 150(2): 975–8887. http://www.ijcaonline.org/archives/volume150/number2/raulji-2016-ijca-911462.pdf.

[19] Rezwanul, Mohammad, Ahmad Ali, and Anika Rahman. 2017. “Sentimen Analysis on Twitter Data Using KNN and SVM.” *International Journal of Advanced Computer Science and Applications* 8(6): 19–25. http://thesai.org/Publications/ViewPaper?Volume=8&Issue=6&Code=ijacsa&SerialNo=3.

[20] STROE, Ion-Sorin. 2011. “MySQL Databases as Part of the Online Business, Using a Platform Based on Linux.” *Database System Journal* II(3): 3–12.

[21] Tommasel, Antonela, and Daniela Godoy. 2018. “A Social-Aware Online Short-Text Feature Selection Technique for Social Media.” *Information Fusion* 40: 1–17. http://dx.doi.org/10.1016/j.inffus.2017.05.003.

[22] Ugm, Fmipa, and Fmipa Ugm. 2014. “Analisis Sentimen Twitter Untuk Teks Berbahasa Indonesia Dengan Maximum Entropy Dan Support Vector Machine.” 8(1): 91–100.

[23] Vijayarani, S., J. Ilamathi, and Ms. Nithya. 2015. “Preprocessing Techniques for Text Mining - An Overview.” *International Journal of Computer Science & Communication Networks* 5(1): 7–16. http://www.ijcscn.com/Documents/Volumes/vol5issue1/ijcscn2015050102.pdf.

[24] Yazici, Ali L I, Alok Mishra, and Paul Kontogiorgis. 2015. “IT Service Management (ITSM) Education and Research: Global View.” *International Journal of Engineering Education* 31(4): 1071–80.

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

The Application of RSA and LSB in Securing Message on Images

Bob Subhan Riza1, M. Y.Mashor2, Edy Victor Haryanto S.3
Universitas Potensi Utama1,3, University Malaysia Perlis2
E-mail: bob.potensi@gmail.com, edyvictor@gmail.com

Author Notification
31 August 2019
Final Revised
01 September 2019
Published
03 September 2019

To cite this document:
haryanto, edy, & Riza, B. (2019). Application of RSA and LSB in Security of Messages on Imagery. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 20-31.

DOI:
https://doi.org/https://doi.org/10.34306/ajri.v1i1.96

Abstract

In this study is to discuss cryptography and steganography where the function is to insert a message or text into an image with JPG extension, the text to be inserted into the image has been encrypted using the RSA method so that the file is safer to be inserted into images, messages that are inserted into a blue image, this application aims to secure a message that you want to save, this application is made made using Android Studio and can be run on a mobile phone.

Keywords : ecurity, Cryptography, Steganography, RSA, LSB

I.` INTRODUCTION

Currently the development of technology has been very good and very fast and almost human activity is inseparable from the role of technology both for daily work at home or work in the office so that humans really need technology. Therefore the security of the technology used must also be increased, especially in terms of data that utilizes technology so that the data that we store in these technological devices can be protected and safe.

Cryptography is a method for securing data where the data that is secured is converted into a form that has no meaning so that others cannot find out the data. The RSA algorithm is one part of cryptography where RSA uses very difficult calculations to produce encrypted ciphertexts from secured data. It takes a long time to find out the meaning of the original data from a

ciphertext from RSA encryption algorithm without knowing the correct key pair. Therefore the RSA algorithm is still the safest cryptographic algorithm to date.

Steganography is the development of cryptographic methods in which steganography hides data into the cover object so that its existence is not known by others. LSB (Least Significant Bit) is one of the steganographic methods that insert data on the last bits of the cover object so that changes before and after the insertion process are not visible to the human senses. This is because the change in value of each pixel on the cover object only increases 1 or decreases by 1 value.
The combination of cryptography and steganography has been done in previous studies, this shows that the combination has a high level of security so that the development of methods and algorithms is also widely carried out. The combination of RSA and LSB is considered very

appropriate because RSA cryptography is the safest algorithm to date and LSB steganography is needed to hide the ciphertext results from RSA cryptography into images so that its presence is unknown to others. [3]

Barkah in his research designed an application in the field of steganography in securing images using the F5 method. [4]

II. METHODE

2.1 Cryptography

Cryptography (cryptography) comes from Greek: "cryptos" means "secret" writing "Cryptography is defined as the science and art of maintaining the confidentiality of messages by encoding them into a form that cannot be understood anymore. Cryptography has two concepts The main thing is encryption and decryption Encryption is the process of encoding plaintext into ciphertext, whereas decryption is the process of returning ciphertext to the original plaintext Encryption and decryption require keys as parameters used for transformation.

Cryptography is divided into 2 (two), namely:

1. Classic cryptography (character mode):
   - Cipher Substitution
   - Transposition Cipher
2. Modern cryptography (bit / binary mode):
   - Symmetry key ciphers: stream ciphers, block ciphers
   - Public key cryptography [1.]

2.2. RSA

In 1977, Ronald L. Rivest, Adi Shamir, and Leonard M. Adleman formulated a practical algorithm that implements a public-key cryptographic system called the RSA cryptographic system. The pair of keys used in both processes are the public key (e, n) as the encryption key and the private key as the decryption key where e, d and n are positive integers. The RSA algorithm is a block cipher algorithm (an algorithm that works per block of data) which groups plaintext into blocks before encryption is made to ciphertext [2]

III. RESULT AND DISCUSSION

In the RSA cryptographic process, input the message as a plaintext is ASCII characters that is 255 characters. The results obtained from the encryption process are ciphertext in the form of decimal values generated from the calculation of the RSA algorithm encryption formula. After the ciphertext is obtained it is converted into a binary form which will then be inserted in each pixel cover object in the form of an RGB image, in this case a blue pixel. Image image used in the format * .jpg with image

p-ISSN : 2685-9106
e-ISSN : 2686-0384

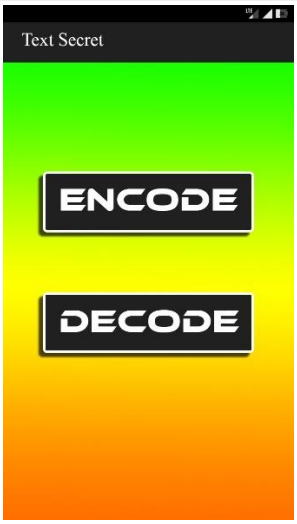


Figure 1. Main Menu Layout

In the main menu layout of the application, the user can choose a menu on the application for further processing by the system. There are 2 main menus, namely the encode menu which will encrypt the message which is then inserted into the image image, and the decode menu which will extract the message from the image that produces the ciphertext and then decrypt it using the RSA algorithm that produces a plaintext in the form of the original message. The following encoding menu layout can be seen in Figure 2 :

Figure 2. Layout Menu Encode

In the encode menu the user can encrypt and insert messages where as an example of this research, the message used is "Great Indonesia". The first step the user must first select the cover object that will be used by clicking on the Image button, the system will open the system gallery that will display images across all user devices. After the cover object is selected, then the next generation of key pairs by entering two primes that are not the same value, in this study used the values of 43 and 47, the following is a manual key generation calculation :

a. Search value n :
   n = p x q
   = 43 x 47
   = 2021
b. Search value Θn :
   Θn = (p-1) x (q-1)
   = (43-1) x (47-1)
   = (42) x (46)
   = 1932
c. Search value e :
   e = 2
   *While Θ*n mod e ≠ 0
   e = e + 1
   End While
   Proses 1 :
   Θn mod e = 1932 mod 3= 0
   e = 3 + 1
   e = 4
   Proses 2 :
   Θn mod e = 1932 mod 4
   = 0
   e = 4 + 1
   e = 5
   Proses 3 :
   Θn mod e = 1932 mod 5
   = 2
   e = 5
d. Search value d :
   U1 = 1
   U2 = 0
   U3 = Θn
   V1 = 0
   V2 = 1
   V3 = e
   While V3 = 0
   Q = Int(U3 / V3)
   N1 = U1 - (Q x V1)
   N2 = U2 - (Q x V2)
   N3 = U3 - (Q x V3)
   U1 = V1
   U2 = V2
   U3 = V3
   V1 = N1
   V2 = N2
   V3 = N3
   End While

Process 1:
   Q = Int(U3 /V3)
   = Int(1932 /5)
   = 386
   N1 = U1 - (Q x V1)

= 1 - (386 x 0)
= 1
N2 = U2 - (Q x V2)
= 0 - (386 x 1)
= -386
N3 = U3 - (Q x V3)
= 1932 - (386 x 5)
= 1932 - 1930
= 2
U1 = 0
U2 = 1
U3 = 5
V1 = 1
V2 = -386
V3 = 2

Process 2:

Q = Int(U3 /V3)
= Int(5 / 2)
= 2
N1 = U1 - (Q x V1)
= 0 - (2 x 1)
= -2
N2 = U2 - (Q x V2)
= 1 - (2 x - 386)
= 773
N3 = U3 - (Q x V3)
= 5 - (2 x 2)
= 5 - 4
= 1
U1 = 1
U2 = -386
U3 = 2
V1 = -2
V2 = 773
V3 = 1

Process 3:

Q = Int(U3 /V3)
= Int(2 / 1)
= 2
N1 = U1 - (Q x V1)
= 1 - (-2 x -3)
= 5
N2 = U2 - (Q x V2)
= -386 - (2 x 773)
= -1932
N3 = U3 - (Q x V3)
= 2 - (2 x 1)
= 0
U1 = -2
U2 = 773
U3 = 2
V1 = 5
V2 = -1932
V3 = 0

After the calculation process, the RSA algorithm's key pair is obtained with the value. Then the encryption process is then performed by changing the original messange into the ciphertext with manual calculations as follows :

Ci = Pie mod n
Ci = Cipherteks
Pi = Plainteks
e = Nilai kunci e
n = Nilai kunci n

Enkripsi Pertama :
I = 73
Ci = Pie mod n
= 735 mod 2021
= 2073071593 mod 2021
= 528

Enkripsi Kedua :
n = 110
Ci = Pie mod n
= 1105 mod 2021
= 16105100000 mod 2021
= 1604

Enkripsi Ketiga :
d = 100
Ci = Pie mod n
= 1005 mod 2021
= 10000000000 mod 2021
= 1055

Enkripsi Keempat :
o = 111
Ci = Pie mod n
= 1115 mod 2021
= 16850581551 mod 2021
= 927

Enkripsi Kelima :
n = 110
Ci = Pie mod n
= 1105 mod 2021
= 16105100000 mod 2021
= 1604

Enkripsi Keenam :
e = 101
Ci = Pie mod n
= 1015 mod 2021
= 10510100501 mod 2021
= 1156

Enkripsi Ketujuh :
s = 115
Ci = Pie mod n
= 1155 mod 2021
= 20113571875 mod 2021
= 1869

Enkripsi Kedelapan :
i = 105
Ci = Pie mod n
= 1055 mod 2021
= 12762815625 mod 2021
= 546

Enkripsi Kesembilan :
a = 97
Ci = Pie mod n
= 975 mod 2021
= 8587340257 mod 2021
= 102

Enkripsi Kesepuluh :
[space] = 32
Ci = Pie mod n
= 325 mod 2021
= 33554432 mod 2021
= 1790

Enkripsi Kesebelas :
H = 72
Ci = Pie mod n
= 725 mod 2021
= 1934917632 mod 2021
= 106

Enkripsi Ketigabelas :
e = 101
Ci = Pie mod n
= 1015 mod 2021
= 10510100501 mod 2021
= 1156

Enkripsi Keempatbelas :
b = 98
Ci = Pie mod n
= 985 mod 2021
= 9039207968 mod 2021
= 507

Enkripsi Kelimabelas :
a = 97
Ci = Pie mod n
= 975 mod 2021
= 8587340257 mod 2021
= 102

Enkripsi Keenambelas :
t = 116
Ci = Pie mod n
= 1165 mod 2021
= 21003416576 mod 2021
= 270

The encoding process is continued by inserting the RSA encryption algorithm results intothe blue pixel cover object, where the encrypted cipher text is added with the character "|" as a delimiter between words to facilitatethe process of decryption later. The ciphertext after adding a delimiter is "5 2 8 1 2 4 1 6 0 4 1 2 4 1 0 5 5 1 2 4 9 2 7 1 2 4 1 6 0 4 1 2 4 1 1 5 6 1 2 4 1 8 6 9 1 2 4 5 4 6 1 2 4 1 0 2 1 2 4 1 7 9 0 1 2 4 1 0 6 1 2 4 1 1 5 6 1 2 4 5 0 7 1 2 3 1 0 2 1 2 3 2 7 0" the system will change the cover object to RGB where the system will use the pixel blue value as a medium to insert the ciphertext. Here is an example of insertionin a blue pixel :
After the calculation process, the RSA algorithm's key pair is obtained with the value. Then the encryption process is then performed by changing the original message into the ciphertext with manual calculations as follows:

44	39	48	47	98	19	19	17
66	67	13	13	38	39	39	22
66	68	65	49	48	48	50	50
90	67	66	13	13	21	21	23
90	12	12	12	11	30	30	31
91	12	13	13	22	22	23	50

Table 3. Pieces of RGB pixel image value

After getting the cover object's RGB value, the system will separate it into 3 parts and only use one part, the blue pixel segment. The Following results are the separation of image pixel value :

48	47	98	19
13	13	38	39
65	49	48	48
66	13	13	21
12	12	11	30
13	13	22	22

Table 4. Pieces of blue pixel image

The result of the separation of image pixels is then converted into a binary form to do the insertion process in the image. The conversion results can be seen in the following table :

00110000	00101111	01100010	00010011
00001101	00001101	00111000	00111001
00110101	00110001	00110000	00110000
00110110	00001101	00001101	00100001
00001100	00001100	00001011	00011000
00001101	00001101	00010010	00010010

Table 5. Conversion of image pixel values

The next process is to change the message binary form, for eexample the message is "RSA" and converted to binary to "010100100101001101000001". The following is the result of inserting the message into the cover object.

0011000<u>0</u>	0010111<u>1</u>	0110001<u>0</u>	0001001<u>1</u>
0000110<u>0</u>	0000110<u>0</u>	0011100<u>1</u>	0011100<u>0</u>
0011010<u>0</u>	0011000<u>1</u>	0011000<u>0</u>	0011000<u>1</u>
0011011<u>0</u>	0000110<u>0</u>	0000110<u>1</u>	0010000<u>1</u>
0000110<u>0</u>	0000110<u>1</u>	0000101<u>0</u>	0001100<u>0</u>
0000110<u>0</u>	0000110<u>0</u>	0001001<u>0</u>	0001001<u>1</u>

Table 6. Results for inserting messages in blue pixels

After the process is complete, the system will store the cover object in storage and the system will display a dialog that "The message was successful in Encode"

Gambar 3. *Layout* Menu Decode

In the decode menu layout, the system will extract the cover object that has been inserted image by changing the image into the RGB form. The image is converted into the RGB form and then the value of each pixel is taken, thefollowing is the value of the pixel image:

44	39	48	47	98	19	19	17
66	67	12	12	57	56	39	22
66	68	52	49	48	49	50	50
90	67	54	12	13	33	21	23
90	12	12	13	10	24	30	31
91	12	12	12	18	19	23	50

Table 7. RGB image values

After getting the RGB image value, the system will take the blue pixel value that has been pasted in the encoding process, the blue pixel value can be seen as follows :

48	47	98	19
12	12	57	56
52	49	48	49
54	12	13	33
12	13	10	24
12	12	18	19

Table 8. Blue pixel values

The blue pixel value is then converted to a binary number so that the last bits of the pixel can be taken as a secret message. Here are the results of the conversion of blue pixel values into binary forms:

00110000	00101111	01100010	00010011
00001100	00001100	00111001	00111000
00110100	00110001	00110000	00110001

00110110	00001100	00001101	00100001
00001100	00001101	00001010	00011000
00001100	00001100	00010010	00010011

Table 9. Results of blue pixel conversio

After being converted, every last bit of pixel is taken and put together to form a message Following is the process of taking the last bit of pixel:

00110000	00101111	01100010	00010011
00001100	00001100	00111001	00111000
00110100	00110001	00110000	00110001
00110110	00001100	00001101	00100001
00001100	00001101	00001010	00011000
00001100	00001100	00010010	00010011

Table 10. The process of extracting pixel bits

Then the binary message will be obtained as follows "010100100101001101000001" which if converted will produce the message "RSA". Furthermore, the system will perform the decryption process by changing the encrypted ciphertext into a plaintext again by using the key pairs and values which were first raised in the previous encryption process. For example there is a ciphertext which is "5 2 8 1 2 4 1 6 0 4 1 2 4 1 0 5 5 1 2 4 9 2 7 1 2 4 1 6 0 4 1 2 4 1 1 5 6 1 2 4 1 8 6 9 1 2 4 5 4 6 1 2 4 1 0 2 1 2 4 1 7 9 0 1 2 4 1 0 6 1 2 4 1 1 5 6 1 2 4 5 0 7 1 2 4 1 0 2 1 2 4 2 7 0 ", The decryption process will be carried out with keys n and d, namely 2021 and 773. First the ciphertext is separated from the character marker" | "to get the results of the character, then after the separation, the ciphertext "

Pi = Cid mod n
Pi = Plainteks
Ci = Cipherteks
d = Nilai d
n = Nilai n

Then the result of the calculation is that Pi, which is an ASCII decimal value, is converted to ASCII characters so that the plaintext can be read again.

Dekripsi Pertama :
Ci = 528
Pi = Cid mod n
= 528773 mod 2021
= 3,9447739231444509389840801901531e+2104 mod 2021
= 73 = I

Dekripsi Kedua :
Ci = 1604
Pi = Cid mod n
= 1604773 mod 2021
= 4,19733209258219018227436146202 65e+2477 mod 2021
= 110 = n

Dekripsi Ketiga :
Ci = 1055
Pi = Cid mod n
= 1055773 mod 2021
= 9,42217783430040455685240432772 3e+2336 mod 2021

= 100 = d

Dekripsi Keempat :
Ci = 927
Pi = Cid mod n
= 927773 mod 2021
= 3,569722804787872846138228426669 7e+2293 mod 2021
= 111 = o

Dekripsi Kelima :
Ci = 1604
Pi = Cid mod n
= 1604773 mod 2021
= 4,19733209258219018227436146202 65e+2477 mod 2021
= 110 = n

Dekripsi Keenam :
Ci = 1156
Pi = Cid mod n
= 1156773 mod 2021
= 4,63880105569341474130773727553 44e+2367 mod 2021
= 101 = e

Dekripsi Ketujuh :
Ci = 1869
Pi = Cid mod n
= 1869773 mod 2021
= 8,99476799315888307171468024468 32e+2528 mod 2021
= 115 = s

Dekripsi Kedelapan :
Ci = 546
Pi = Cid mod n
= 546773 mod 2021
= 7,07803671001269949946332559380 6e+2115 mod 2021
= 105 = i

Dekripsi Kesembilan :
Ci = 102
Pi = Cid mod n
= 102773 mod 2021
= 4,44562444641747925671802610195 21e+1552 mod 2021
= 97 = a

Dekripsi Kesepuluh :
Ci = 1790
Pi = Cid mod n
= 1790773 mod 2021
= 7,17318215536983196813360177383 64e+1341 mod 2021
32 = [space]

Dekripsi Kesebelas :
Ci = 106
Pi = Cid mod n
= 106773 mod 2021
= 3,64278760078552296457516367569 21e+1565 mod 2021

= 72 = H

Dekripsi Keduabelas :
Ci = 1156
Pi = Cid mod n
= 1156773 mod 2021
= 4,63880105569341474130773727553 44e+2367 mod 2021
= 101 = e

Dekripsi Ketigabelas :
Ci = 507
Pi = Cid mod n
= 507773 mod 2021
= 9,35734333460908323344878369094 54e+2090 mod 2021
= 98 = b

Dekripsi Keempatbelas :
Ci = 102
Pi = Cid mod n
= 102773 mod 2021
= 4,44562444641747925671802610195 21e+1552 mod 2021
= 97 = a

Dekripsi Kelimabelas :
Ci = 270
Pi = Cid mod n
= 270773 mod 2021
= 2,78092768014549025442399426507 56e+1879 mod 2021
= 116 = t

The results of the decryption process above produced a text which means "Great Indonesia". From the results of manual calculations and those produced by the system, there are no significant differences. Therefore RSA and LSB cryptography on the red pixel was successfully processed by the system.

V. ACKNOWLEDGMENT

From the encryption, decryption, embedded, and extraction processes that are running well, the researchers concluded that:

1. The combination of cryptographic RSA algorithm techniques and LSB method steganography techniques is able to maintain the confidentiality of messages because the presence of messages is difficult to know thanks to the LSB method that inserts messages into image images. And also the difficulty of knowing the original message without having an RSA key pair.
2. Insertion of messages successfully on image images with * .jpg format and at 3888x2592 resolution.

VI. ADVICE

In this research, it still has shortcomings under weaknesses that can be developed for subsequent research. Suggestions for future research are as follows:

1. Does not show RSA encryption results in the form of ciphertext making it difficult to compare calculations manually.
2. Researchers can develop programs using Android bass programming
3. Prime numbers still need to be entered manually, in the next research, random primers can be added.

VII. REFERENCES

[1] Rakhmat, B., & Fairuzabadi, M. (2010). Steganografi Menggunakan Metode Least Significant Bit Dengan Kombinasi Algoritma Kriptografi Vigenère Dan Rc4. *Jurnal Dinamika Informatika*, *5*(2), 1-17.

[2] Alvianto, A. R., & Darmaji, D. (2015). Pengaman Pengiriman Pesan Via SMS dengan Algoritma RSA Berbasis Android. *Jurnal Sains dan Seni ITS*, *4*(1), A1-A6.

[3] Arif, M. H., & Fanani, A. Z. (2016). Kriptografi Hill Cipher dan Least Significant Bit untuk Keamanan Pesan pada Citra. *CSRID (Computer Science Research and Its Development Journal)*, *8*(1), 60-72.

[4] Akbar, M. B., & Haryanto, E. V. (2018). Aplikasi Steganografi dengan Menggunakan Metode F5. *JUSITI: Jurnal Sistem Informasi dan Teknologi Informasi*, *4*(2), 165-176.

[5] Rambe, M. R., Haryanto, E. V., & Setiawan, A. (2018). Aplikasi Pengamanan Data dan Disisipkan Pada Gambar dengan Algoritma RSA Dan Modified LSB Berbasis Android. *Konferensi Nasional Sistem Informasi (KNSI) 2018*.

[6] Haryanto, E. V., & Utama, U. P. (2012). Jaringan Komputer. Penerbit Andi.

[7] Haryanto, E. V. (2015). Penerapan Metode Adaptif Dalam Penyembunyian Pesan Pada Citra. Proceedings Konferensi Nasional Sistem dan Informatika

[8] Haryanto, E. V. (2015). Perbandingan Metode Robinson 5 Level Dan Prewit Dalam Mendeteksi Tepi Citra Digital. *Proceedings Konferensi Nasional Sistem dan Informatika (KNS&I)*. (KNS&I).

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

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

Rosdiana[1], Padeli[2], Revi Sajidah Sri Handayni[3], Rifky Alfian[4]
[1,2,3,4]Universitas Raharja Tangerang
e-mail: ros@raharja.info, padeli@raharja.info, revi.handayani@raharja.info, rifky.alfiani@raharja.info

Author Notification
02 September 2019
Final Revised
03 September 2019
Published
03 September 2019

To cite this document: Rosdiana, R., Padeli, P., Handayani, R., & Alfian, R. (2019). Design And Development Of Population Service Administration System With Pieces Method In Kemiri Village Head Office Banten. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 33-45.

DOI: https://doi.org/https://doi.org/10.34306/ajri.v1i1.98

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.

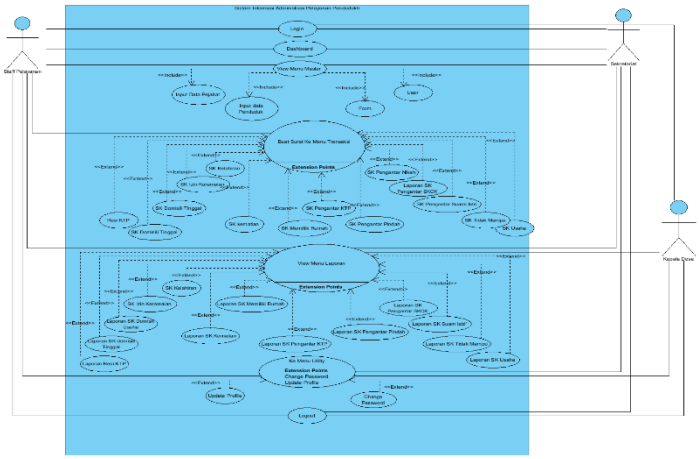


Figure I. Use Case Diagrams

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 }

	#	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

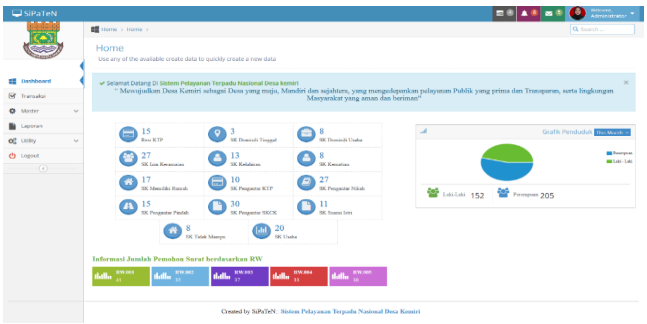


Figure.II Display the dashboard

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.

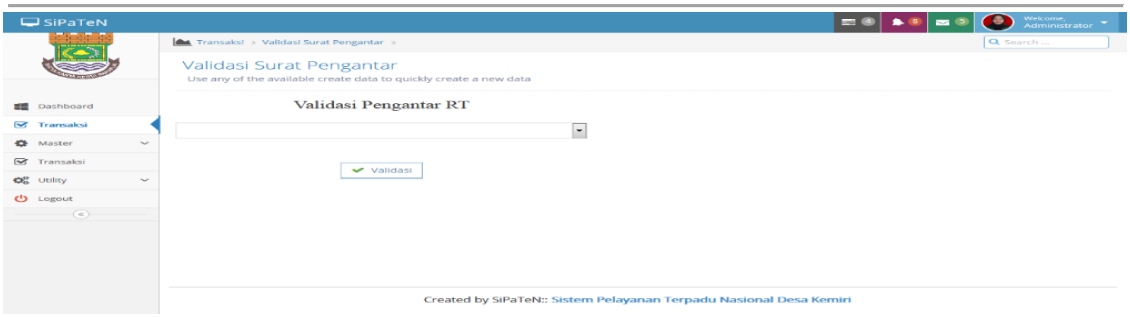


Figure.III Display Introductory RT Validation on Transaction Menu

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.

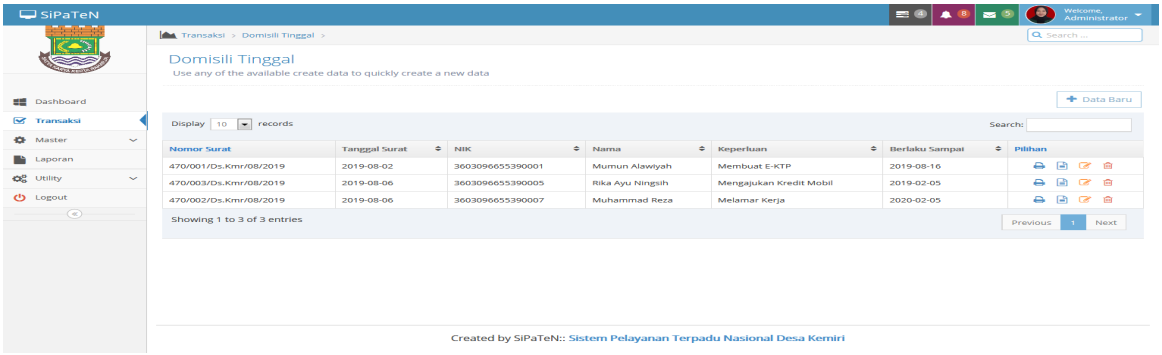
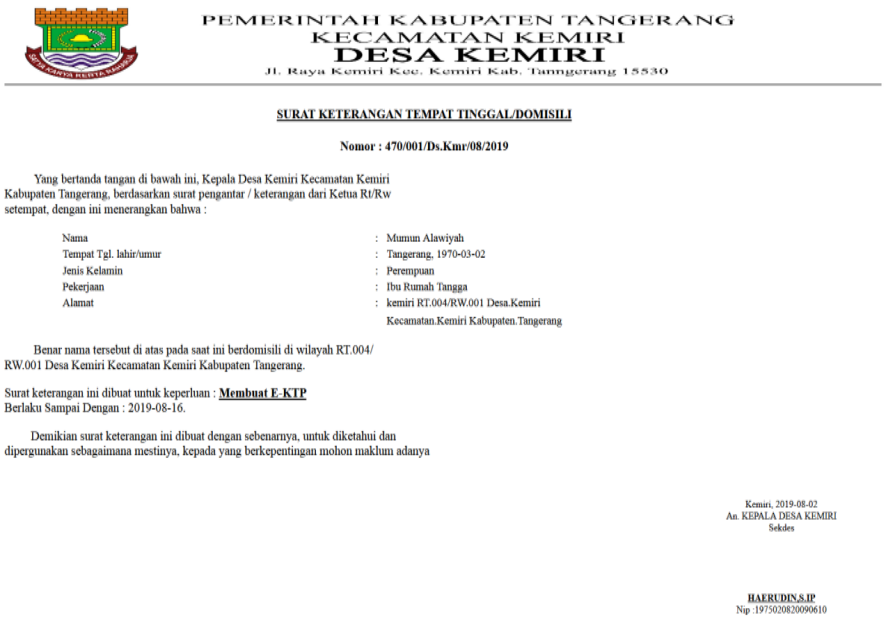


Figure.IV Display Menu Data letter that has been inputted

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.

REFERENCES

1. Undang-Undang Republik Indonesia Nomor 24 Tahun 2013 Tentang Perubahan Atas Undang-Undang Nomor 23 Tahun 2006 Tentang Administrasi Kependudukan.
2. Sunarti Dkk. 2016. Faktor-Faktor Yang Mempengaruhi Kepuasan Masyarakat Dalam Pengurusan Kartu Identitas Penduduk (Ktp-El) Dan Dokumen Kependudukan Di Kantor Dinas Kependudukan Dan Pencatatan Sipil Kota Semarang. Journal Of Management Volume 2 No.2.
3. Hengki Tamando Sitohang. 2018. Sistem informasi pengagendaan surat berbasis web pada pengadilan negeri medan. Jurnal informatik pelita nusantara : Vol.3, No.1.
4. Junaidi, J., Cholisoh, N., & Hasanah, N. (2018). Rancang Bangun Sistem Manajemen Aset IT Untuk Pencatatan History Maintenance Sebagai Pendukung Keputusan. SENSI Journal, 4(2), 220-231.
5. Martono, A., & Junaidi, D. Y. imulation game based on jarimagic method to calculate more quickly for elementary students.
6. Soleh, Oleh, Febby Astriza, Vischa Arrofiv Hamid. 2015. Analisa Masalah Sistem Informasi Penggajian MenggunakanMetode Pieces Di Smk Am Ma'mur. Prosiding Snif Universitas Potensi Utama. Vol.1, No.1.
7. Susena, Edy, Ema Utami Dan Andi Sunyoto. 2015. Perancangan Strategis Sistem Informasi Smart Campus Untuk Meningkatkan Pelayanan Di Politeknik Indonusa Surakarta. Sainstech Indonusa Surakarta. Vol.1 No.3".
8. Sidharta, Iwan dan Mirna Wati. 2015. Perancangan dan Implementasi Sistem Informasi Urunan Desa (URDES) Berdasarkan pada Pajak Bumi dan Bangunan. Jurnal Computech & Bisnis. Vol.9, No.2.

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Strategies Of Food Safety Program Improvement To Prevent Food Poisioning Outbreak At Oil & Gas

[1]Kholil, [2]Kohar Sulistyadi and [3]Subagja Arlan
[1,2]Lecturer in Post Graduate Sahid University, Jakarta, Indonesia
[3]Student Magister Program of Occupational, Health, Safety, and Environmental Post graduate program of Sahid University Jakarta

Author Notification
02 September 2019
Final Revised
03 September 2019
Published
03 September 2019

To cite this document:
Kholil, K., Sulistyadi, K., & Arlan, S. (2019). STRATEGIES OF FOOD SAFETY PROGRAM IMPROVEMENT TO PREVENT FOOD POISIONING OUTBREAK AT OIL & GAS INDUSTRIAL CITY. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 46-53.

DOI:
https://doi.org/10.34306/ajri.v1i1.99

Abstract

Nowadays, The food safety issue is a major problem which is related to the people's health, livelihood, and the national economy. However, the food safety incidents occur frequently in recent years. These incidents bring the blow for the consumer's confidence and it leads to the crisis of trust. These incidents not only affect the health and the safety of the consumers, but also affect seriously the health development of the food industry. Consumers require the higher requirement for the safety degree of the food. In order to reduce the occurrence of the food safety issue and ensure the quality of life, it is necessary to evaluate the food safety program implementation. Food safety program is importance barrier to prevent any food poisoning outbreak and issue in oil & gas industrial city. The purpose of this study is to determine the most priority and most important of food safety program in oil & gas industrial .Data analysis method used is descriptive analysis based on expert justification and assessed using SAST (Strategic Assumption Surfacing & Testing) and AHP (Analytic Hierarchy Process). The result of SAST analysis shows that program inspection and monitoring to food service facility (food producer) is most certain and most importance. Based on assessed by AHP analysis, the first priority of food safety program is also inspection & monitoring with a value 0.275, followed by food safety training (0.207), campaign & awareness (0.184), HACCP system (0.136), public involvement (0.108) and the last is law enforcement (0.090). The consistency value ratio (CR) is 0.01 less than 0.1.

Key word : Food Safety, SAST, AHP, Food Poisoning outbreck

I. INTRODUCTION

In the last few decades, the problem of food poisoning outbreak and the issue of food safety in the world has increased due to the increasing incident of food poisoning. According to the report published by the World Health Organization in 2015, An estimated 600 million – almost 1 in 10 people in the world – fall ill after eating contaminated food and 420 000 die every year, resulting in the loss of 33 million healthy life years. The report includes estimates of the burden of foodborne diseases caused by 31 bacteria, viruses, parasites, toxins and chemicals.

Most of this food poisoning outbreak is causes food is contaminated by microorganism, chemical and other of food material during production. In order to prevent any food contamination, the food service company must comply with food safety standard and regulation start from selecting raw material, proper storage & segregation, hygienic processing and safe food services. According to WHO (2016) the main cause of food poisoning is food contaminated by microorganism in food due to improper food safety program in production. More over according to Makhunga *et al,* 2018 studies show that outbreaks of food-borne diseases result from failure to observe general hygiene requirements in one or more of the following activities, namely: food handling; storage; preparation; processing; cooking; and distribution. Factors such as lack of basic infrastructure, poor hygienic practices, inadequate sanitary facilities, improper handling and storage of food and food utensils, poor personal hygiene, improper waste storage, and disposal can contribute to poor quality of foods

The oil and gas industrial city in this research are industrial complex area for oil and gas producer companies, specifically for natural gas based industries that produce gas products and their derivatives from the natural gas produced. The Oil & gas industrial city provided infrastructural including common service corridors for gas pipelines, utility pipelines, power & telecom; commercial complex, camp accommodation, conservation-green belt areas; and also support services such as Fire Services, building security, emergency response Services. The total population in industrial city is around 35 000 workers who stay in camp accommodation. All food supply by catering company which have approval from HSSE industrial city and there are 3 catering service companies. Every year there are always reports of suspected cases of food poisoning in the industrial area. Symptoms of food poisoning can begin sometime after eating up to three days after consuming contaminated food. Symptoms that generally occur such as feeling nausea and vomiting, diarrhea, pain or stomach cramps. According to annual HSSE report 2019 in oil & gas industrial city there were reported cases of suspected food poisoning illness around 100 workers out of a total of 40 000 workers each year from 2015 to 2018.

The consequences of food poisoning outbreak in oil & gas industrial are outbreak and massif illness that can be disturb the project or operation in the company; the illness can lead patient die and can make bad reputation of food service company. The barrier factor to prevent of treat of food contamination is implementation of food safety program and standard. Sporadic and distracted of implementation of food safety program in oil & gas industrial causes in effective to prevent any food poisoning outbreak. Prevention of food poisoning outbreak involves many partner and parties including food safety regulator, food business and customer.

Research by Cortese, Veiros, Feldman and Cavalli (2015) in Brazil, regarding Food safety and hygiene practices of during the chain of street food production indicated a need for improvement of the environment conditions at these sites to prevent foodborne diseases due to the food producer not follow food safety standard. Specific local and national laws for street fod need to be created to protect the consumer and continuous training of vendor could help address the lack of food quality and safety.
The prevention program of food poisoning outbreak in oil & gas industrial is one of key factor and importance as business continuity aspect. This research would describe and determine food safety program which can prevent food poisoning outbreak effectively and low cost. An appropriate food safety program strategy and focusing on targets according to priorities in the prevention of food poisoning will help oil and gas companies in the region to keep workers healthy and safe.

The purpose of research is determine the most priority and most important of food safety program in oil & gas industrial city and to select the most effective strategy to prevent any food poisoning outbreak.

II. LITERATURE REVIEW

Food poisoning is an acute illness with recent consumption of contaminated food or water. It can be infectious or noninfectious. Infectious food poisoning is caused by eating food or water contaminated by bacteria, viruses, parasites or their toxins. It is also called a food born disease. The most common symptoms of food poisoning are nausea, vomiting, abdominal cramps and diarrhea. Other symptoms that may occur are fever and abdominal pain. The case an outbreak of foodborne disease is defined as the occurrence of two or more cases of a similar illness resulting from ingestion of a common food (CDC, 2016)

Studies by WHO 2015 in all the word have shown that approximately 90% of foodborne diseases are caused by microorganisms. 6% of food diseases are caused by chemicals and the remaining 4% are caused by physical factors. According to Sprenger. RA (2011) the main reason for food poisoning are negligence, ignorance, poor management and a failure to implement food safety & hygiene program. Food poisoning can be prevented by developing good food safety program in all food business. This involves effective supervision and the instruction and training of food safety.

Food safety means assurance that food is acceptable for human consumption according to its intended use and Food Safety Management System means the adoption of Good Manufacturing Practices, Good Hygienic Practices, Hazard Analysis and Critical Control Point (HACCP) and such other practices as may be specified by regulation, for the food business. Food safety is a global issue affecting billions of people who suffer from diseases caused by contaminated food. This is one of the most widespread health problems and an important cause of reduced economic productivity. Food safety can be described as the voluntary approach by some socially conscious and responsible companies that encourage the development, implementation and maintenance of HACCP based programs in all food related establishments and grading stations for which external monitoring and verification programs are to be properly established (Ansari et al., 2013)

According to Hajnalka (2014) food safety is quite complex, made up by many components, only an integrated authority being responsible for the whole food chain – would be able to control it properly. However, the requirement of proper functioning could be only reached within a framework of a well-defined and specified statute basis. It means for controlling and guaranteeing the monitoring process by the authorities.

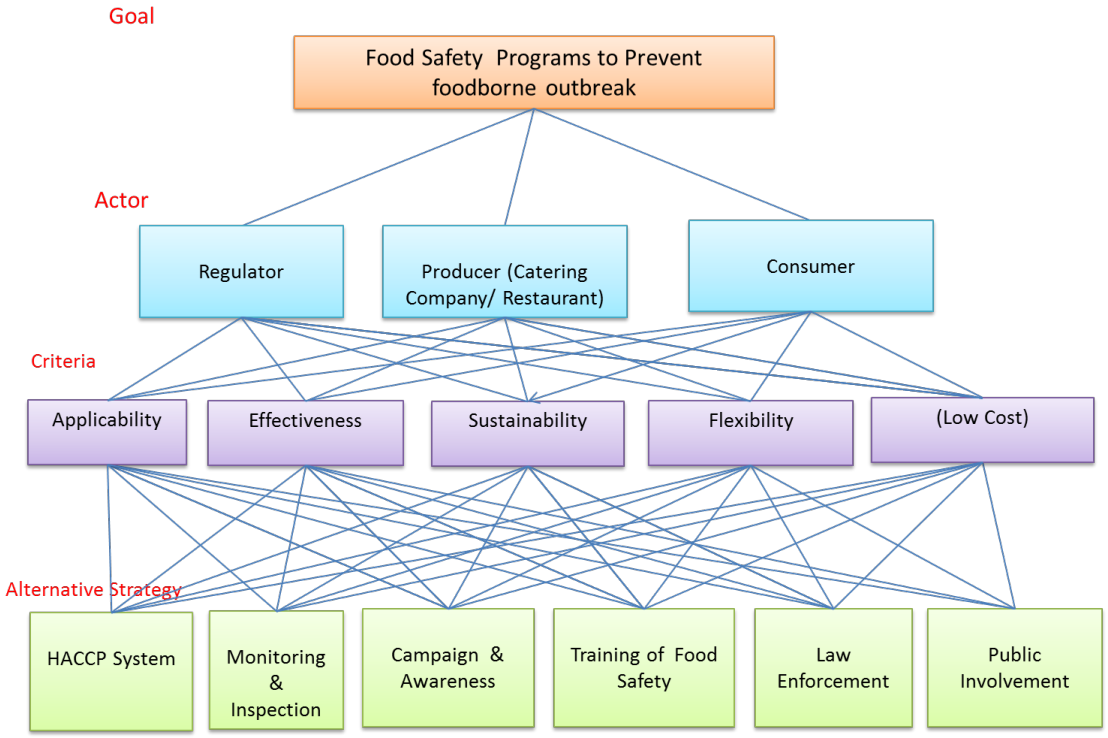
Food safety fact that foodborne diseases delay socio economic development by straining health care systems, and harming national economies, tourism and trade. Good collaboration between governments, producers and consumers helps ensure food safety. The Second International Conference on Nutrition (ICN2), held in Rome in November 2014, reiterated the importance of food safety in achieving better human nutrition through healthy nutritious diets. Improving food safety is thus a key in achieving Sustainable Development Goals. Governments should make food safety a public health priority, as they play a pivotal role in developing policies and regulatory frameworks, establishing and implementing effective food safety systems that ensure that food producers and suppliers along the whole food chain operate responsibly and supply safe food to consumers. In this regard, governments, the food industry and consumers have a shared responsible to adopt the best practices for the control of food safety hazard (WHO, 2016)

Food safety is a critical component for sustainable development. Safer food contributes to less illness, and hence increased productivity and improved livelihood. Safe food, conforming to international food safety standards, contributes to increased export, hence, increased income. Consistent food safety and high food quality are essential ingredients for the success of any food business. Food Safety Program is vital for a successful food business. If your customer service provides your customers' first taste of your business, food safety and food quality are the aftertaste and what will linger as a memory. When used as a proactive strategy to add

value to your food business' service and reputation, a Food Safety Program can bolster your business' efficiency, streamline its waste, and prevent food safety hazards that could harm your business. (WHO, 2016)

III. METHOD

The type of research are non-experimental research and descriptive qualitative uses expert justification (expert base). The opinion from five experts through questioner regarding level of certain and importance of food safety program, and also to make priority as well through using SAST and AHP analysis. Kholil (2018) stated that SAST can be used to identify the most important and certanty aspects. The data consists of primary and secondary data. Primary data obtained through observation, questionnaire and interview, while secondary data obtained through literature study. Data was collected by experts discussion and question are which involved five expert in food safety (Health & Hygiene Advisor, Food Hygiene Officer, Restaurant Supervisor, Health & Hygiene Inspector and Industrial Hygienist). Data analysis through SAST (Strategic Assumption Surfacing and Testing) method which was developed by Mason and Mitroff (1981), and AHP (Analytical Hierarchy Process) developed by Saaty (1983). SAST was selected to determine basic assumptions which must be considered in food safety program. This analysis is based on response to question are from experts, while AHP to determine the appropriate strategy based multicriteria, by using AHP the best strategy can be selected Kholil, Sri Lisa Susanti, & Soecahyadi. (2016); and Kholil, Kohar Sulistyadi and Diny Agustiny (2017) . Prioritizing the strategy is carried out using the Analytic Hierarchy Process (AHP) method. According on experts discussion generally AHP structure as follow:

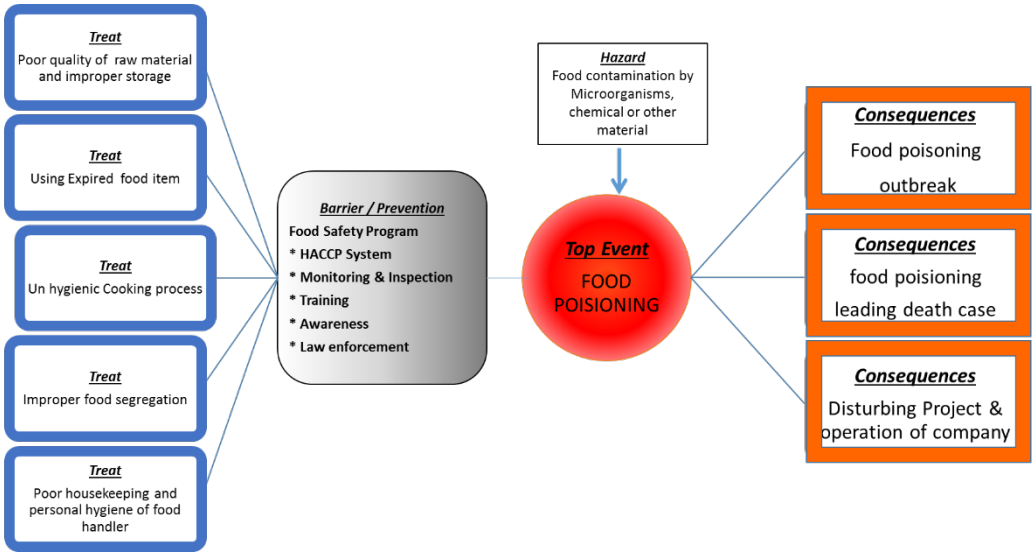


Picture 1.AHP structure of Food Safety Program

IV. RESULT AND DISCUSSION

Based on observation, interviews and expert discussion find the model of Food poisoning qualitative risk assessment at Oil & Gas industrial city area as shown in picture 2. :

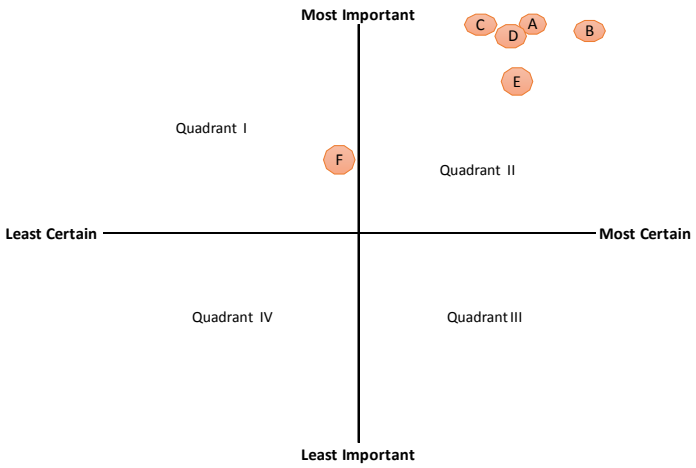
p-ISSN : 2685-9106
e-ISSN : 2686-0384



Picture 2. Model of Food poisoning risk assessment at Oil & Gas industrial city area

In this risk assessment qualitatively mode shows the hazard is food contaminant; Top event is food poisoning; The consequences are massif food poisoning outbreak, death, disturbing operation/business; The Threats are poor quality of raw material, using expired items, improper storage & segregation, unhygienic & unsafe cooking process, poor housekeeping of facility and poor persona hygiene of food hander; And Barrier as a prevention of the hazard are implementations of food safety program include HACCP system, monitoring & inspection, training, campaign & awareness, and law enforcement.

The result of expert justification regarding certain and importance level of food safety program using SAST analysis displayed as below:



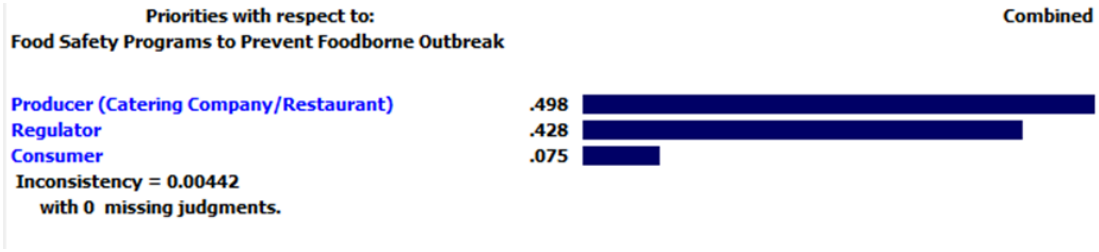
A	Implementation & Audit of HACCP system at Food Producer
B	Inspection & monitoring to Food producer by regulator
C	Campaign & Awareness of Food Safety
D	Education & Training
E	Law Enforcement
F	Public involvement (suggestion & complaint)

Picture 3. SAST Analysis of Food Safety Programs

As per picture above and based on the SAST analysis plot on the assumption of a food safety program are almost all in quadrant II which mean importance and certainty for shows the programs are important and certain for prevention any food poisoning outbreak in the gas and oil industry area. Except public involvement program in quadrant I which mean the program is important but not certain for preventing any food poisoning. Outbreak to prevent any food

poisoning outbreak in the gas and oil industry area. The SAST analysis plot shows that the inspection and monitoring program of all food establishment by the HSE Department as a regulator is the highest assumption of certainty value (5.7) and its importance (5.7), then followed by HACCP implementation & audit; Training on food handling; Campaign & Awareness program; and a law enforcement. All programs that are in quadrant II are purposed and ensure the food production facilities always during the preparation and process of food production in safe and healthy condition in order to minimize the food contamination that can lead food poisoning outbreak.

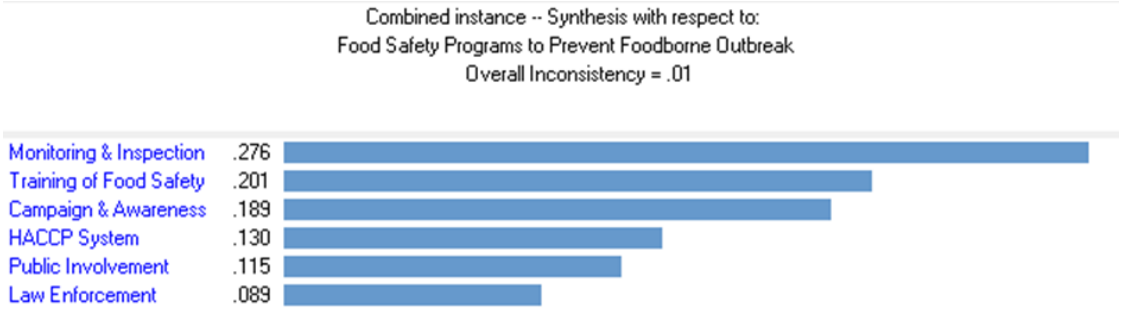
The reason chosen AHP to select strategic priorities of food safety program are AHP have high flexibility, the ability to accommodate the complexity of the existing problems and accommodate differences of opinion from experts. Based on the results of expert discussions then analyzed using Expert Choice 11 software will show the highest value given for actor and criteria is mean highest influence and weight. The highest value for strategy alternative is mean considered the most the priority of food safety program the strategy with respect to actor and criteria. The result AHP analysis for weighing and influence actor for succeeding food safety program shown below:



Picture 4. AHP result with respect to Actor

As per picture above shown food producer is the most influential and weighs actors with a value of 0.498, followed by regulator (0.428) and consumers (0.075). Also shown in the picture above the consistency value ratio (CR) is 0.004 (0.4%) less than 10% and is mean the data is considered consistent and logic. In other word, the food producer is the most influential actor in implementing a food safety program to prevent any food poisoning outbreak at oil & gas industrial city area.

The strategy alternative to improve the safety program as prevention of food poisoning outbreak at oil & gas industrial city area as per expert justification and result AHP analysis respect to global/combined priorities, actors and criteria can be seen below picture:



Picture 5. Alternatives Strategy based on AHP analysis for Food Safety Program

Based on picture above shown Food safety program monitoring & inspection to food producer (0.276) is the highest priority program, then followed by food safety training (0.207),

campaign & awareness (0.184), HACCP system (0.136), public involvement (0.108) and the last is law enforcement (0.090). Also seen in the picture above, the consistency value ratio is

0.01 (1%) less than 10% is means the experts justification/opinion are considered logic and consistent.

Food safety program monitoring and inspection as the first priority are considered respect to criteria effective and low cost program to prevent food positioning outbreak in oil & gas industrial city area. Moreover, the monitoring & inspection program is activity to ensure that food producer comply with food safety standard and regulation. According to WHO (2017), Food safety regulatory authorities are tasked with safeguarding consumers interests by ensuring food they eat meets relevant food standards. Sound food safety policies and program are required to ensure food safety issues of highest concern are identified, and the appropriate control measures are implemented

However law enforcement programs are the last priority, might be the program is less effective and not sustain prevent case of food poisoning outbreak. Besides that the food safety program at oil & gas industrial city area as safety culture for all activity at food producer

IV. CONCLUSION

Food safety program is importance activities to prevent any case of food poisoning outbreak at oil & gas industrial city areas caused by food contamination. Implementation of food safety program such as HACCP system; Inspection & Monitoring; Food Safety Training; Campaigns & Awareness, Law Enforcement and public involvement should be applied consistently by regulator and food producers.

The result from SAST analysis plot shows that program inspection and monitoring to food service facility (food producer) is most certain and most importance. Based on assessed by AHP analysis, the first priority of food safety program is also inspection & monitoring with a value 0.275, followed by food safety training (0.207), campaign & awareness (0.184), HACCP system (0.136), public involvement (0.108) and the last is law enforcement (0.090). The consistency value ratio (CR) is 0.01 less than 0.1. This meant the justification and opinion of expert are considered logic and consistent

IV. SUGESSTION

To improve the monitoring & inspection food safety as first priority program more effective & sustain to prevent food poisoning outbreak is recommended to implement comprehensive monitoring & inspection based on risk (risk based inspection) for all food establishments. Moreover, from the results of the inspection and monitoring program also can be assessed compliance level and can used to give reward programs for food establishment which are consistently apply food safety standard & practices.

REFERENCES

[1]. Ansari. M.A., Vikas, K., Chhatarapal, S., Vani. S., and Rajendra. K., 2013. Studies on Food Safety Management and It's Significance in Maximizing the Profit for Food Industry. Internet Journal of Food Safety, Vol.15, 2013, p20-28. Copyright© 2013, FoodHACCP.com Publishing.
[2]. [CDC] Centre for Disease Control and Prevention. 2016. Surveillance for Foodborne Disease Outbreaks United States, 2016: Annual Report
[3]. Dewi. A.R. R 2017. Strategi Peningkatan Mutu dan Keamanan Pangan Olahan Pertanian Melalui Penerapan Good Manufacturing Practices pada Usaha Mikro, Kecil

dan Menengah (UMKM) Pangan Berdaya Saing di Kawasan Bandung (tesis). Sekolah Pascasarjana - IPB, Bogor

[4]. Expert Choice. 2004. Quick Start Guide and Tutorials Copyright 2000-2004 . Arlington, VA, USA: Expert Choice, Inc.

[5]. Hajnalka KS, 2014, The Quality Management and Food Safety Preparedness of the Small and Medium Sized food Industry Enterprises in Serbia, Before the EU Accession, Tesis University of Debrecen Jeno Hankoczy Doctoral Shcool

[6]. Kholil. 2018. Pendekatan Holistik dan Model Dinamik: Untuk Masalah yang Komplek. (1st ed.). Jakarta, Yayasan Komunikasi Pasca Tiga belas Sahid Sudirman Center 11th Floor Suite A. Jl. Jenderal Sudirman Kav.86. Jakarta., INA: Indigo Media. doi:ISBN 978 602 52218 1 1.

[7]. Kholil, Sri Lisa Susanti, & Soecahyadi. 2016. Potential leading resource in Padang Panjang city. The development of regional economic based on Soft System Methodology(SSM). Journal of Scientific research and reports, 9(7), 1-8. King, F. (2013).

[8]. Kholil, Kohar. S., and Dini A.S. 2017. Gender-responsive of micro enterprise development strategy using sast (strategic assumption surfacing and testing) and ism (interpretative structural modeling). International Journal of Development Research Vol 07, Issue 12 pp 17830 - 17834

[9]. Makhunga. S., Tivani. M.T., Mbuzeleni. H., and Khumbulani. H., 2018. Evidence on charitable food assistance system's compliance with safety and general hygiene requirement: A systematic scoping review. Journal of Food Safety and Hygiene Vol. 4 No. 3-4

[10]. Saaty, T., & Vargas, L. 2012. Model, Methods, Concepts & Applications of the AHP. International Series in Operations Research & Management Science. New York: Springer:Science & Busines Media

[11]. Sprenger. RA. 2011. The Higfield Food Safety Handbook (level 2), Highfield.co.uk Limited

[12]. Sifferin A. Food poisoning. 2015. On https://time.com/3768003/351000-people-die-of-food-poisoning-globally-every-year/. Accessed 27 Apr 2019.

[13]. Tang. P and S. Zhu, 2015, Research on Food Safety Guarantee System Based on AHP. Advance Journal of Food Science and Technology 7(2): 110-112

[14]. WHO, 2015 WHO estimates of the global burden of foodborne diseases Foodborne diseases burden epidemiology reference group 2007-2015. Switzerland.

[15]. WHO, 2016, Risk Communication applied to Food Safety Handbook. Food and Agriculture Organization of the United Nation Word Health Organization, Rome.

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Islam Wasathiyah To Build A Dignified Indonesia (Efforts To Prevent Radical - Terrorism)

Amirsyah Tambunan
Syarif Hidayatullah State Islamic University Jakarta
e-mail : amirsyahtambunan@yahoo.com

To cite this document :
Tambunan, A. (2019). ISLAM WASATHIYAH TO BUILD A DIGNIFIED INDONESIA. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 54-61.

DOI :
https://doi.org/10.34306/ajri.v1i1.108

Author Notification
10 September 2019
Final Revised
16 September 2019
Published
18 September 2019

Abstract

Muslims in Indonesia in Indonesia face global challenges in the form of liberalism in various dimensions of life. Therefore, Muslims can express their aspirations through the known 411 action, 212 in a peaceful manner. Various parties respect Muslims, because they are able to prove Muslims who agree in Indonesia. Carrying out Islam wasathiyah (moderate), so as not to cause anarchy.

However important prevention efforts that promote Islam as a religion of mercy to all the worlds (Islam rahmata lil 'alamin) through understanding of Islam washatiyah, to avoid understanding the extreme form of terrorism, anarchism, separatism and other forms of destructive life of society, nation and state.

Keywords: *Islam Wasathiyah, Building a Dignified Indonesia*

1. INTRODUCTION

Indonesia is facing challenges in implementing Islam as a religion of mercy for all the worlds (Islam rahmata lil 'alamin) through understanding of Islam wasathiya. One of the challenges facing the people and the nation is the rise of extreme understanding.

There are several term used to describe the sense of extreme, such as al-ifrat (extreme and outside the boundaries of the real thing), al-tafrit (very low or small), al-ghuluww (confidence-burdening that are beyond the capability), al-israf (extravagant), al-tasyaddud (very tight), and al-tanattu' (inappropriate or too committed to religious rituals (Worship). (Basri Ibrahim al-Hasani al-Azhari, 2007: 6 -9; (Amir Faishol Fath, 2012: 43-47)

It required a balanced understanding in line with the enforcement of the values of justice to give birth to civilization and nation. Said al Wasathiyah is an Arabic term derived from wasata. Actually, the term is taken and elaborated from the word ummatan wasatan (moderates), which is found in the word of Allah.
Moderate is the opposite of being a fundamentalist-extremist, which portrays a very 'lose' religious attitude. Hence, according to the perspective of a moderate, if one holds a strong religious attitude such as being obedient to all the religious commandments, then one is a fundamentalist. This thinking actually emerged from the Christians from the West who were

uncomfortable with the Evangelicals who basically held firm to the Bible and they were also called fundamentalist (Ghazali Basri, 2008:124)

Based on the definition of al - wasathiyah , which in Arabic means " the center " , the concept is growing moderately, fair and the best approach. It aims to balance the extreme and fanatical actions in every aspect of human life. In line with the aspirations of the Government of Indonesia to promote unity among people of different races and to refrain from social unrest , the Indonesia government uses the concept of al-wasathiyah in approach to implementing *Islam rahmatan lil 'alamin.*

Therefore, the purpose of writing this peper is to provide an explanation of the importance of understanding Islam wasathiyah in the context of building a just and civilized Indonesia, so as to prevent extremist and sectarian understanding.

The implication of the Islamic understanding wasathiyah in accordance with the Qur'an and the Hadith (Islamic epistemology) is not only the literal sense, but more substantive to explain the meanings attached to goodness (Khayr) instead of ugliness (*facade*) or between only ('*adl*) and not tyranny (*zulm*).

In fact, the concept of al wasathiyah according to Islamic epistemology carry messages to do good with the fortitude, strength, truth and consistency as well as the abandonment of all forms of evil and forbid the evil with wisdom.

But in fact, in many parts of the world conflict is prolonged, as a result of political antagonism, hate, terror, resulting in ethnic killings we have witnessed since World War II in 1945, especially in Bosnia and Herzegovina and Rwanda (Mohd Azizuddin Mohd Sani , 2013).

2. RESULT AND DISCUSSION

Islam Wasathiyah

National Conference IX Indonesia Council of Ulama (MUI) in Surabaya on 24-27 August 2015. The five-year Thema highest clerical organization in Indonesia this time the theme " Islam wasathiyah to Indonesia and a just and civilized world .

Islamic concept Washatiyah generated National Conference MUI necessary to be in the present context to Prevent extreme measures like terrorism, sectarianism. Prevention should be done early through religious understanding is moderate (*wasathiyah*).

Wasathiyah meaning of a keyword in the discussion of this paper. In various references as described in Mufradât Al - fâzh Al - Qur'ân Raghib al -Isfahani (Vol. II) mention in a language that the word wasath this means, "Something has two sides ends of comparable size.

This word can also mean something that is awake, valuable, and was elected . Therefore, anything that is in the middle is not easy to reach directly allowing it to become a place to store things that are valuable and good. As the word "city center".These words show where the best and most valuable of a town . (Al -Tahrir wa al - Tanwir Vol. II).

Meanwhile, wasath above meaning there are few, .Fakhrudin Al-Razi mentions there is some meaning to each other by each other and complement each other . Therefore, it is expected to produce the same perception for Muslims, among others.

First, wasath means fairness. This meaning is based on passages that convey the same hadith the prophet, and some explanation of the meaning of this Arab sya'ir . Based on the history of

Al-Qaffal of Al-Thawri from Abu Sa'eed al-Khudry of the Prophet. that ummatan wasathan are a people unjust.

Second, wasath means choice. Al-Razi chose this sense compared with other meanings, for several reasons, among others: the word is the language closest to the meaning wasath and most in accordance with paragraph that convey the same to him that the verse , "You are the best people who are born into the hands of man ... " (Surah Ali Imran [3] : 110).

Third, wasath means the most good, because to understand the negative aspects , because overuse of the attitude of extreme left and extreme right .

Fourth, wasath means people in religion are in the middle between ifrath (exaggerated to invent a new religion) and tafrith (subtract cut down religious teachings). (Tafsir Al - Razi , Vol. II, pp. 389-390).

Above meanings are complementary, not contradictory to each other. Therefore, Al - Sa'di concluded that Ummah wasath in question is a fair and elected people . Allah glory to Him has made this race mid (wasath) in all matters of religion (compared with other religions) as in the case of prophethood, the Shari'ah, and others.

Muslims are a people who should have the most perfect religion, most good behavior, the most important charity. Allah glory to Him has given science, the softness of manners, justice, and kindness (ihsan) is not given to another people . Therefore, they become "ummatan wasathan", people were perfect and fair so that "they bear witness to all men. "(Tafsir al - Karim al - Rahman fi Tafseer Kalam Al - Mannan Vol. I p. 70) .

Exegetes of explanation about the meaning wasath in the paragraph above it can be concluded that the nature wasath embedded on the Ummah of Muhammad sallallaahu 'alaihi Wassalam is something inherent since these people receive various instructions of His Prophet. It is a gift of God's glory to Him. Consistent running the teachings of God's glory to Him, then that's become the best people and the elected.

Therefore, Rashid Rida said ummatan wasathan associate this with the previous paragraph, that " ... yahdî man yasyâ'u shirath ila al-mustadaqîm (...he will give instructions to anyone who wills to the straight path). When linked with the previous paragraph, then the best people, elected, and moderates are those guided by Allah glory to Him to the straight path (Tafsir Al-Manar Vol. II, page 4).

The straight path (al-mustadaqîm sirâth) is, as described in the letter of Al - Fatihah, is a middle way between the people who hated (Jews) and those who go astray (Nashrani).

Having noted the significance ummh al-wasath which means people who are consistently on the instructions of Allah glory to Him. (Al-shirath al -mustadaqîm), we are able to understand that the meaning of this wasath nature something that is already patented in the Quran itself, not the meaning given the new nature, not from the Koran.

In this case, the Quran has determined that the teachings of Islam that comes from al - Quran and al- Sunnah is the teaching of the fair, best, choice, and moderate so that people who consistently do it, then he will automatically become a people who same nature with the teachings of the implementation. Ali Muhammad Al- Wasathiyah Shallaby in fi al-Qur'ân quite extensively discussed aspects wasathiyah in various teachings of Islam.

The Role of the Indonesian Ulema Council Preventing Radical Terrorism

Various attempts have been made Indonesia Council of Ulama to prevent such extreme acts of terroris m, including the Indonesia Council of Ulama Set your Fatwa No. 3 in 2004 about terrorism affirm difference jihad with terrorism namely.

a. All efforts and utmost efforts and willingness to endure hardship in combat and resist enemy aggression in all its forms . Jihad in this sense is also called al - qital or al – harb.
b. All efforts were earnest and continuous to maintain and exalt the religion of Allah (*li i'laai kalimatillah*).

So terrorism is a crime against humanity and civilization which poses a serious threat to the sovereignty of the state, the dangers to security, world peace and detrimental to the welfare of society. Terrorism is a form of organized crime as well (well organized), is trans -national and classified as an extraordinary crime (extra-ordinary crime) which does not discriminate between the target (indiskrimatif).

Therefore, the law did Terrorism and Jihad. First, the law does terror is forbidden, whether committed by individuals , groups and nations. Second, the law of jihad is obligatory.

First, people who suicide kills himself for his own vested while pelak'amaliyah al - istisyhad offered himself as a sacrifice for the sake of religion and the Ummah . People who commit suicide are a pessimist of him and God's provision while the perpetrators ' amaliyah al - istisyhad is a man who throughout his ideals directed to seek the grace and pleasure of Allah Subhanahu wa Ta'ala.

Second, suicide bombing is haram because it is one form of an act of desperation (al - ya'su) and harm themselves (ihlak an- nafs), both conducted in a peaceful area (*dar al -shulh / dar al - salam / dar al - da ' wah*) and in the regions of war (*dar al - harb*).

Thirdly, ' amaliyah al-istisyhad (actions seeking martyrdom) is permissible because it is part of jihad binnafsi done in the area of war (dar al - harb) or in a state of war with the aim of provoking fear (irhab) and a bigger loss in the enemies of Islam , including acts that resulted in the killing themselves. 'Amaliyah al-istisyhad different from suicide.

The fatwa is based, then the MUI copes with were full to prevent Muslims avoid extreme attitudes, such as terrorism and committed ISIS, since it is incompatible with the nature of Islam as a religion of mercy for all the worlds.

An important role Indonesia.

The attitude of these extremists triggered a political issue pitting the group who had no understanding of moderate religious, has no human values, resulting in bloodshed as the civil war in Syria, killing Rohingya in Myanmar, a dispute between Shiite with Sunnis in Pakistan, in Iraq and etc.

To address the problem, various measures had been taken. For example, the UN Security Council in 1993 has established the International Criminal Tribunal 1; and Malaysia has established the South East Asia Regional Centre for the fight against terrorism. 1 The International Criminal Tribunal constituted in accordance with UN Security Council Resolution 827 which was approved on May 25, 1993 .

In the context of Indonesia has made various efforts to address the various acts of violence, terrorism, spatarisme, of whom gave birth Criminal Acts of Terrorism Act.Indonesia is always committed to prevention, counter-terrorism, including counter-terrorism efforts under the United Nations framework.

In this regard, Indonesia plays an active role in cooperating with the United Nations Counter Terrorism Implementation Task Force (CTITF), Terrorism Prevention Branch - United Nations Office for Drugs and Crime (TPB - UNODC), and the United Nations Counter - Terrorism Executive Directorate (UNCTED) . Furthermore, Indonesia made efforts to implement the four (4) pillars of the United Nations Global Counter - Terrorism Strategy (UNGCTS).

In 2010, Indonesia became the host of the "Regional Workshop on the Implementation of the United Nations Global Counter-Terrorism Strategy in Southeast Asia ", in cooperation with the UN CTITF. The results have been reported at the meeting of the ministerial meeting of the International Counter - Terrorism Focal Points Conference on Addressing the Conditions Conducive to the Spread of Terrorism and Promoting Regional Cooperation in Geneva in 2013 .

Indonesia's important role in combating international terrorism has been recognized by the UN with the re-election of Indonesia as a member of the Advisory Board of the UN Counter - Terrorism Center for the period 2015-2018 .

Indonesia also underlined the importance of international law in combating international terrorism. In this regard, Indonesia has ratified the 8 (eight) international conventions related to counter-terrorism that strengthen the national legal framework .

Related to the issue of Foreign Terrorist Fighters (FTF), Indonesia is a co - sponsor of UNSC Resolution 2178 (2014) which calls on countries to make efforts required in dealing with issues of FTF, including the prevention of recruitment and facilitate the departure of the FTF, border control, exchange of information, as well as rehabilitation and reintegration program.

Furthermore, Indonesia has hosted a number of regional workshops and international conferences involving many countries to exchange information and good practices, as well as opportunities to strengthen international cooperation in addressing the issue of FTF.

In addition to ongoing support for Indonesia under the framework of the United Nations, Indonesia is also actively participating in the Global Counter - Terrorism Forum (GCTF), especially as co-chairs Southeast Asia Capacity Building Working Group (SEAWG) together with Australia for the period 2011 to 2013, and continued his active role together with Australia as co - chairs of Detention and Reintegration Working Group (DRWG) .

The formation of this working group initiated by Indonesia with the aim to strengthen the capacity of stakeholders to handle the management of violent extremist offenders in correctional institutions, and addressing the need for exchange of information and good practices related.

In this regard , Indonesia has been the host of the GCTF DRWG Inaugural Meeting in Bali on 12-13 August 2014, which have adopted DRWG work plan for the period 2014-2016. Furthermore, within the framework of DRWG , Indonesia also has been the host of the Workshop on Capacity Building and Training for the Appropriate Management of Violent Extremist Offenders in Medan on April 8-9 , 2015. GCTF DRWG also works closely with the Global Center on Cooperative Security (GCCS) has organized a Workshop on Education, Life skills and Vocational Training Courses for Violent Extremist Offenders incarcerated in Nairobi, Kenya, on 7-8 October 2015.

In addition, Indonesia and Australia has hosted the second plenary meeting of GCTF DRWG in Sydney on Nov. 2-3, 2015. Second Plenary Meeting DRWG GCTF has been discussed about the management of prisons and efforts to strengthen the security of prisons, rehabilitation and reintegration, and capacity building programs for prison officers.

Indonesia also contribute actively in strengthening the capacity of law enforcement officers who deal with the issue of terrorism and transnational crime. In this regard, Indonesia is working with Australia have established the Jakarta Centre for Law Enforcement Cooperation (the Centre).

Since its inception in 2004, the center has organized 768 training programs involving 18 398 participants and 4,385 trainers from 70 countries.

Indonesia is committed to supporting counter-terrorism, including in combating the financing of terrorism. In this regard, Indonesia participates actively as a member of the Asia Pacific Group on Money Laundering (APG - ML), as well as members of the Steering Group representing the countries in Southeast Asia.

In addition, the active role of Indonesian diplomacy, the FATF Plenary Assembly held in Brisbane, Australia , 21 to 26 June 2015 Indonesia has been removed in its entirety from the list of "countries that have strategic weaknesses in the regime of anti-money laundering and combating the financing of terrorism" or of the review process International Cooperation review Group (ICRG) FATF.

Furthermore, Indonesia through the Center for Financial Transaction Reporting and Analysis (PPATK) has signed a Memorandum of Understanding with the Financial Intelligence Unit (FIU) of the 48 countries to strengthen the regime of handling money laundering and terrorism financing.

In conjunction with the soft approach, Indonesia conduct de-radicalization programs and counter- radicalization through the National Counter Terrorism Agency has launched Blueprint Deradicalisation and founded the Center for terrorist convicts Deradicalisation involving akademsi, scholars .

Referring to the Blueprint document, de-radicalization programs include rehabilitation, reintegration and re-education for inmates empowering terrorists with religious leaders, scholars and psychologists to provide counter -narratives.

But most important is the emergence of the phenomenon of radicalism terrorism that misuse religion , other than a frustration with government policy dictated rated West , also based on the strength of the State -run system, rated not accommodate the spirit of fairness (Amir : 2012) .

Al-Wasathiyah in Education

The wasathiyah concept is applied in the education context with the intention of seeking a point of balance not only as a process for delivering information, knowledge and superficial skills but it is also a transformation process of the self and the system. True and beneficial knowledge if disseminated and interpreted according to the wasathiyah concept would eventually yield people with firm religious beliefs and a civilised mannerism. This becomes very relevant in these changing times because it possess a good balanced quality.

Many Islamic countries do not have an integrated education system, which eventually causes knowledge associated with managing systems to be under developed and the capability to manage system resources to be deficient. Thus, this causes the spiritual quality among the people to rise but the ability to practice becomes unproductive and the Islamic people become pawns to the powerful adversaries, especially in the field of science and technology.

Therefore, education based on the wasathiyah concept is education that integrates the mental and physical knowledge and also the religious knowledge pertaining to the self and society. In the Malaysian context, the wasathiyah concept has been applied in education. For example, besides being taught subjects in science, the arts and so forth, they are also taught Islamic studies. Besides the Islamic studies being taught in schools, the authorities have also catered for classes in religious studies or fardu ain outside the normal school hours.

However, the application aspect of the wasathiyah concept in education ought to be consolidated because in the present public examination system the Islamic Studies subject is

not acknowledged as a compulsory passing subject. Moreover, if this matter continues, hence efforts to balance the aspects of mental strength and spiritual strength would be difficult.

Quality education is education that is capable of forming characters and exemplary personalities. A source of an example is something that is of the finest quality because it is from that example that the best behaviour would emerge. This was the basis of the Prophet's SAW struggle to spread reformation and education in order to refine the human character.

3. CONCLUSION

For a review of Justice hearts realize different dimensions of Life in Indonesia needed many things; including; First, the importance of strengthening the understanding of Islam wasathiyah on, thus giving birth An action, Behavior represent a sense of justice hearts every action, especially the hearts of law enforcement. Secondly, hearts Justice Teachings of Islam is the fruit From washathiyah understanding of Islam. Thirdly, Indonesian Muslims hearts Challenges Facing the Global Form hearts hearts liberalism different dimensions of Life has proved People Yang Peace through action which is known Protest 411, The top 212 The Super Peace Around 7 million people.

Nonetheless Important done Prevention Yang promoting understanding of Islam as a religion of mercy for the whole of nature (Islam rahmata lil 'alamin) through the World Education based on understanding Islam wasathiyah, in order to avoid From understanding Its extreme Forms of terrorism, anarchism, separatism and other forms That ruined Social life , nation and state.

REFERENCES

[1]. Al-Mahalliy, Jalal al-Din Muhammad bin Ahmad. & al-Suyutiy, Jalal al-Din 'Abd Al-Rahman bin 'Abi Bakr. (n.d). Tafsir al-Jalalayn bi Hamisy al-Mushaf al-Syarif bi al-Rasm al-'Uthmaniy. Beirut, Lubnan: Dar al-Ma'rifah.
[2]. Al-Nasafiy, 'Abd Allah bin Ahmad. (1996). Tafsir al-Nasafiy Madarik al-Tanzil wa Haqa'iq al-Ta'wil, Vol. 1. Beirut, Lubnan: Dar al-Kutub al-'Ilmiyyah.
[3]. Al-Qardawi, Yusuf. (1981). Al-Khasa'is al-'Ammah li al-Islam. Kaherah: Maktabah Wahbah.
[4]. Al-Qardawi, Yusuf. (2000). Pengantar Pengetahuan Islam, Prinsip, Keunikan, Matlamat, Sumber, terj.Mohammad Zaini Yahya. Selangor: As-Syabab Media.
[5]. Al-Qurtubiy, Abu 'Abd Allah Muhammad bin Ahmad al-Ansariy. (1993). Al-Jami' li Ahkam al-Qur'an, Vol. 1.Beirut, Lubnan: Dar al-Kutub al-'Ilmiyyah.
[6]. Al-Raziy, Fakhr al-Din. (1990). Al-Tafsir al-Kabir aw Mafatih al-Ghayb, Vol. 2. Beirut, Lubnan: Dar al-Kutub al-'Ilmiyyah.
[7]. Al-Tabariy, Abi Ja'far Muhammad bin Jarir. (1992). Tafsir al-Tabariy al-Musamma Jami' al-Bayan fi Ta'wil alQur'an, Vol. 2. Beirut, Lubnan: Dar al-Kutub al-'Ilmiyyah.
[8]. Al-Zamakhsyariy, Abu al-Qasim Jar Allah Muhammad bin 'Umar bin Muhammad. (1995). Al-Kasysyaf 'an
[9]. Haqa'iq wa Ghawamid al-Tanzil wa 'Uyun al-Aqawil fi Wujud al-Ta'wil, Vol. 1, Syahin, Muhammad 'Abd al-Salam (Ed.). Beirut: Dar al-Kutub al-'Ilmiyyah.
[10]. Al-Zuhayliy, Wahbah. (1991). Al-Tafsir al-Munir fi al-'Aqidah wa al-Syari'ah wa al-Manhaj, Vol. 2. Beirut,Lubnan: Dar al-Fikr al-Mu'asir
[11]. Amir Faishol Fath, (2012) Al-Tafsir *al-Munir fi al-'Aqidah wa al-Syari'ah wa al-Manhaj*, Vol. 2. Beirut, Lubnan: Dar al-Fikr al-Mu'asir.
[12]. Amirsyah, (2012).Meluruskan Salah Paham Terhadap Deradikalisasi, Pemikiran, Konsep dan Strategi Pelaksanaan, Jakarta, Grafindo,
[13]. *Mufradât Al-fâzh Al-Qur'ân Raghib Al-Isfahani* (Jil. II; entri w-s-th)

[14]. *Al-Tahrir wa Al-Tanwîr Jil*. II.
[15]. Basri Ibrahim al-Hasani al-Azhari (2007). Melampau, Punca-Punca, Ciri-Ciri dan Cara Mengatasi. Kuala Lumpur: Al-Hidayah Publication. Department of Islamic Development Malaysia (2010).
[16]. Tafsîr Al-Râzî, Jil. II.
[17]. *Tafsîr Al-Karîm Al-Rahmân fî Tafsîr Kalâm Al-Mannân Jil.* I
[18]. Tafsîr Al-Manâr Jil. II
[19]. Resolusi Dewan Keamanan PBB 827 yang telah disetujui pada 25 Mei 1993.
[20]. Fatwa Nomor 3 Tahun 2004 Tentang Terorisme, Komisi Fatwa Majelis Ulama Indonesia.
[21]. Ghazali Basri (2008). Dinamika Tasawwur Islam Dalam Pembentukan Keperibadian Umat, translated by Mohd Mokhtar Syafii. Bandar Seri Begawan: Kolej Universiti Perguruan Ugama Seri Begawan
[22]. M.Quraish Shihab (1996). Wawasan Al-Qur'an: Tafsir Maudhu'i Atas Pelbagai Persoalan Umat. Bandung: Penerbit Mizan.
[23].Mashitoh Ibrahim (2011). Minda: Wasatiyyah Tangani Kepelbagaian Kaum. Retrive from http://www.hmetro.com.my/myMetro/articles/minda_Wasatiyyahtanganikepelbagaiankaum/Article, on 18 Mac 2011.© Center for Promoting Ideas, USA www.ijhssnet.com 6.
[24]. Mohamed Azam Mohamed Adil et al. (2010). "1Malaysia: Satu Analisis Dari Perspektif Pelembagaan
[25]. Persekutuan", kertas kerja yang dibentang di Seminar Kebangsaan 1Malaysia, anjuran Pusat Penataran Ilmu dan Bahasa Universiti Malaysia Sabah (UMS), bertempat di Universiti Malaysia Sabah, pada 1-3 November
[26]. Mohd Ayop Abd Razid (2010). Prinsip Kesederhanaan Mampu Wujudkan Kesejahteraan Sosial. Retrive from http://www.bharian.com.my/articles/Prinsipkesederhanaanmampuwujudkan kesejahteraansosial/Article/print_html, on 14 Januari 2011.
[27]. Mohd Haniff Hassan (2003). Muslim Moderat Warga Singapura. Singapura: PERDAUS dan Lembaga Pentadbir Masjid al-Khair.
[28]. Mohd Hashim Kamali (2010). Moderation and Balance in Islam: The Qur'anic Principle of Wasatiyyah, IAIS
[29]. Malaysia Monograph Series No.1. Kuala Lumpur: International Institute of Advance Islamic Studies Malaysia.

*) Speakers are Fulltime FAI and the Deputy Secretary General of MUI. lecturer Associate Professor at Syarif Hidayatullah State Islamic University Jakarta DPK at Muhammadiyah University Jakarta. Secretary General of the Indonesian Lecturers Association.

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Application of Information Session Information System as Media Submission of Final Results Comprehensive Session

James Leonard[1], Dian Maharani Damanik[2], Oktika Gita Amrikhasanah[3]
[1]UNSA Sydney [2,3] Universitas Raharja
e-mail: leonadrjm@gmail.com, dian.maharani@raharja.info, oktika@raharja.info

Author Notification
27 August 2019
Final Revised
28 August 2019
Published
03 September 2019

To cite this document:
Leonard, J., Damanik, D., & Amirkhasanah, O. (2019). Application of Information Session Information System as Media Submission of Final Results Comprehensive Session. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 62-70.

DOI :
https://doi.org/10.34306/ajri.v1i1.115

Abstract

Good information that is based on data that has been processed properly so as to generate useful communication. The trial assessment system has 3 parts, but the system is not mutually integrated because 2 of them can already be accessed online while the examiner's assessment system still uses the local network. In the grading system, the examiner has a session news information system that is useful for conveying the final results of the session to the trial participants. This is because as technology advances are utilized as well as possible by educational institutions in this case namely universities to be used in a comprehensive session of thesis students or final assignments. Therefore, development is carried out on the examiner's assessment system so that it can be accessed online, where there is a trial news information system. The research was conducted using the method of observation, interviews and literature to maximize this research. The trial news information system is a very important system when a comprehensive trial process takes place. This is because the news information system of the hearing has information about the grades, grades and status obtained by the trial participants. This certainly becomes very vital in the trial assessment system. The display that will be developed in the examiner's rating system will be user friendly, making it easier for the board of examiners to use it. Even though the system was developed but did not change the original flow of the examiner's assessment system so that the board of examiners could adjust well to the new system, along with the news information system of the trial. With the existence of a hearing news information system, it makes the comprehensive trial process perfect and the trial assessment system becomes integrated again as before.

Keywords: Information System, Assessment, Session News

I. INTRODUCTION

Information is data that has been processed into a form that is more useful for those who receive it (Sihotang, 7-2018). Information is a very important thing to use in communicating. Likewise with a system, the delivery of good information and clearly determines the quality of a system. A very well-made system will be able to convey good and clear information to its users so that they can communicate well. The information submitted is not just random but is obtained from data that has been processed very well so that it makes it clear and not fake.

Technology that has increasingly developed rapidly so that every aspect of life is not separated from technology. From starting with everyday life to government agencies. No exception with educational institutions, especially universities. At present universities have begun to implement the i-Learning learning system, which of course already uses technology. Not only that technology has also been applied in a comprehensive trial process of the final research of college students.

The technology applied to a comprehensive hearing was called the hearing assessment system. But in higher education the system still uses local networks and is not yet online of course. Starting in the last few years, systems have been developed but not as a whole. Of the three parts of the system there are two parts that have been developed such as objective assessment and assessment of the supervisor. Only the assessment of the examiners is still in the development stage to be accessible online and make it integrated with each other.

In the grading system for examiners who still use the local network there is a hearing information system. The system is useful for conveying the final results of the trial to students who have completed a comprehensive hearing. However, because it is in the assessment system, the examiners are still using the local network so that the system is still considered to be less than optimal because it has not been integrated with other congregation assessment systems.

II. METHODE

In conducting a study there are several research methods used to launch the research process so that the desired goals can be achieved. There are several research methods used in this study, namely observation, interviews and literature.

The researcher observes a college to see the system being used still using local networks. Then the researcher conducted an interview with the stakeholders on how the experience of using the trial assessment system. The board of examiners as stakeholders stated that the system is still not optimal because it has not been integrated with other congregation assessment systems. Then the researcher also conducted a literature study to look for references to similar research in the form of a literature review.

Literature Review

Efforts in improving this research, there are several literature reviews that have been prepared to avoid repetition, and continue the research that has previously been done. Some literature reviews include the following:

1. The research was conducted by Diah Aryani, Muhamad Arif Nurdin, Pandi Baskara (2017) with the title "MOTOR VEHICLE ASSET MANAGEMENT INFORMATION SYSTEM IN STMIK RAHARJA TANGERANG". This study explains that at Higher Education Raharja the process of reporting motor vehicle asset management is done manually which results in the process of finding data and reporting asset data takes time. So that the vehicle asset management information system is proposed using php and mysql. Which aims to be able to overcome difficulties in finding the desired data and delay in maintaining vehicle assets and in making reports.
2. The research was conducted by M. Kirom (2014) with the title "GEOGRAPHIC INFORMATION SYSTEM OF ELECTION-BASED ELECTION-BASED ELECTION MAPPING IN JOMBANG DISTRICT" Discussing about Geographic Information Systems (GIS) is defined as a tool or media to enter, store, retrieve, manipulate, analyze and display geographical attribute data (spatial data). GIS can display diverse information in an image field. One information system that can be developed to provide information on the

vote results of regional head elections in Jombang Regency is to use an open source Geographic Information System (GIS).

3. In 2017 Untung Rahardja, Qurotul Aini and Lily Ratna Sulastrini conducted research with the title "Application of Inbound Official Site Information Systems to Increase Webometrics Rank". This study discusses inbound for Information Systems website, because with the presence of many inbound, of course, will make the official site Information System better known, especially for the Personal Raharja Information Systems department as a place to get accurate information.
4. The research entitled "UTILIZATION OF AUGMENTED REALITY AS A CAMPUS INFORMATION MEDIA USING BROCHURE" in 2015 was carried out by Latius Hermawan and Mochamad Hariadi. This study discusses by utilizing AR technology, information on brochures commonly used to provide information to readers can actually be added to the form of 3D information that is displayed virtually, so that the campus can complete important information that has not been contained in the brochure. The results obtained show that the reader can see the AR brochure in detail and environment in the brochure will also feel more alive with the existence of supporting animations such as buildings, trees, and so forth.
5. The research was carried out in 2018 with the title "Utilization of RinfoSheet as a Media for Information on Goods Sales Reports at the Internet Cafe Shop" by Untung Rahardja, Eka Purnama Harahap, and Dini Intan Pratiwi. This study discusses the use of RinfoSheet as an information medium for recording accounting reports because it can be done anywhere and anytime. Not only that report data that has been inputted can be stored online.
6. The research was carried out by Hani Dewi, Aris Martono and Danang Suprayogi in 2019 with the title "Student Profile Information System at Pessta + Assessment Assessment in Higher Education". The study explained that after the examiner's assessment system that had been developed became online, the student profile information system was also developed online by adding some information that could make the system more communicating to its users. The Final Project can be better and clearer. Because information about student profiles is very important for examiners in providing trial scores to Thesis and Final Project students.
7. The research conducted by Untung Rahardja, Muhamad Yusup and Ana Nurmalina in 2018 "THE IMPLEMENTATION OF iLEARNING SURVEY (iSur) IN IMPROVING THE QUALITY OF INFORMATION SYSTEMS DURING THE LEARNING PROCESS IN HIGHER EDUCATION EDUCATION". This study discusses about how to assess the extent to which the campus has developed and how the performance of lecturers in teaching students in the classroom, and iLearning Survey (ISUR) can be used as a valid media information for an assessment throughout Raharja college activities.
8. The research entitled "Prototype of Detection of Rainfall and Information Systems Based on ESP8266 in BMKG Tangerang Class I Geophysical Climatology" conducted by Indri Handayani, Hendra Kusumah and Nursohit in 2018 discussed about developing inexpensive equipment and for providing direct information about weather conditions in certain area. Information on weather conditions whether or not rain occurs, this is very useful for people who want to travel to a certain place or region.

III. RESULT AND DISCUSSION

The examiner's rating system is still under development and will be accessible online at this time so as to facilitate the board of examiners in inputting values. Because the trial assessment system is now integrated with each other. But before this research was carried out everything was still separate because of the different process of developing the system.

The previous session news information system already exists and is used at the final session of students, because the examiner's assessment system still uses the local network. The assessment system of testers who still use local networks makes the information system less optimal in conveying information because it is not yet integrated.

Based on these problems, the examiner's assessment system must be developed so that it can be accessed online with the trial news information system. Because the news information system of the trial becomes one part with the examiner's assessment system so if the examiner's assessment system is developed into online, the news news information system can also be accessed online.

Research Implementation

The testing grading system that is being developed so that it can be accessed online by the board of examiners, does not change the flow in the examiner's rating system that uses local networks. The display presented is not like the one that still uses the local network but is more user friendly. So that the board of examiners can easily use it.

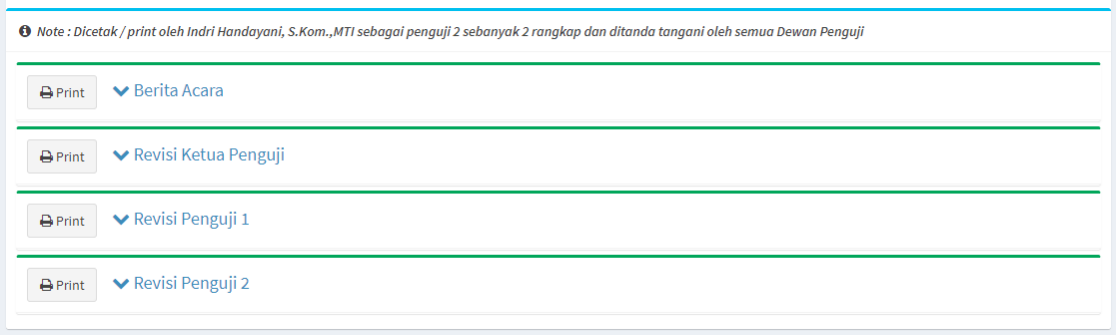


Figure 1. Session News Information System

Figure 1. is a display of a news news information system. In the above display there are four menus, namely the official report, revision from the chairman of the examiner, examiner revision 1 and the revision of the examiner 2. The whole news session was printed and printed by 2 examiners as much as 2 sheets. 1 sheet was given to the participants of the trial while the others were filed.

Figure 2. Display of minutes of hearings

Figure 3. Display print of the minutes of the trial

Figure 2. is the appearance of the minutes of the trial, while picture 3. is a print display of the minutes of the trial. In the appearance of the minutes of the hearing there is information on the day and date of the holding of a comprehensive session, nim, name, level, department of the participants of the trial. Not only that there are grades and grades obtained by the trial participants, and the most important is the status given by the board of examiners whether the trial participants are eligible to be declared pass or not. And also there are information requirements that must be done by the participants if they have been declared passed by the board of examiners.

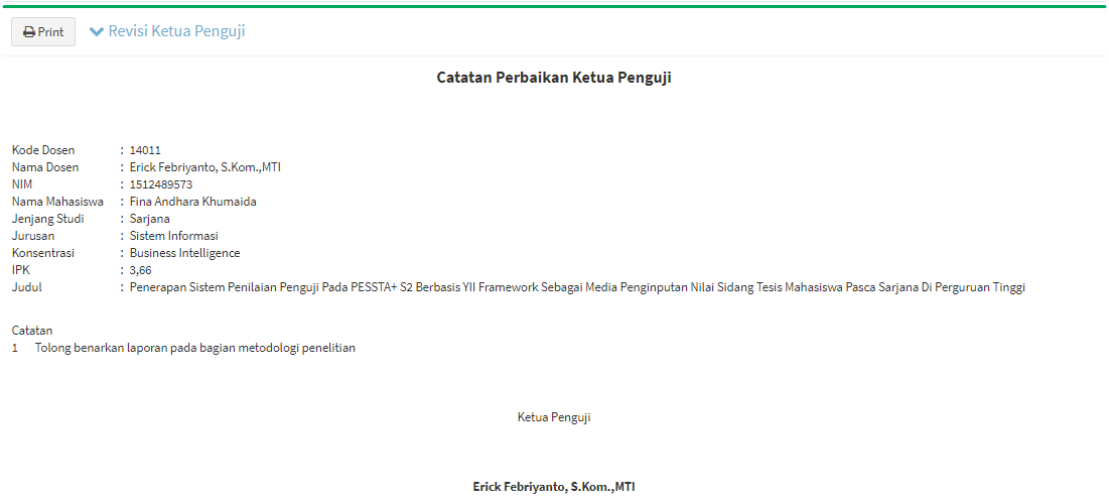


Figure 4. Display revision of the examiner chairman

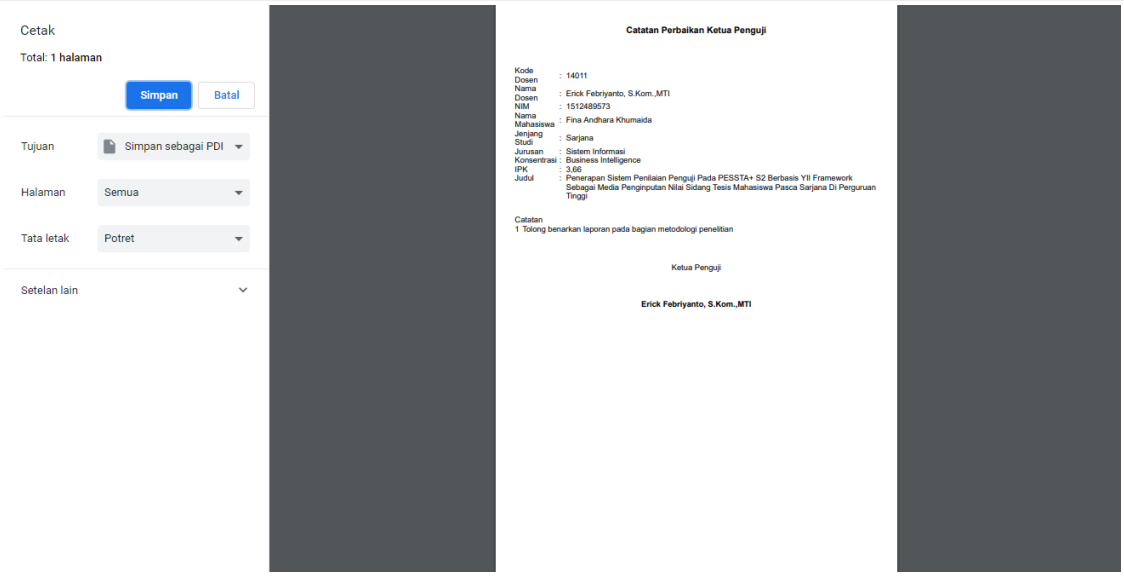


Figure 5. Display print of the revision of the examiner's chairman

Figure 4. is a revised view of the examiner's chairman, while figure 5. is a revision of the examiner's chairman. In the revision of the examining chair there is information about the revision given by the examining chair to the participants of the session with a maximum period of 10 days from the end of the trial.

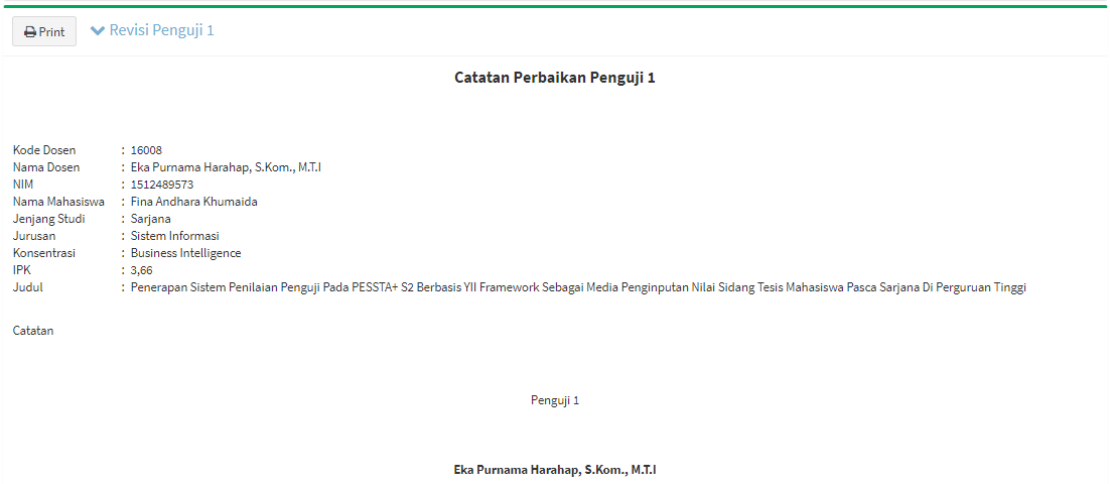


Figure 5. Display of testing revisions 1

p-ISSN : 2685-9106
e-ISSN : 2686-0384

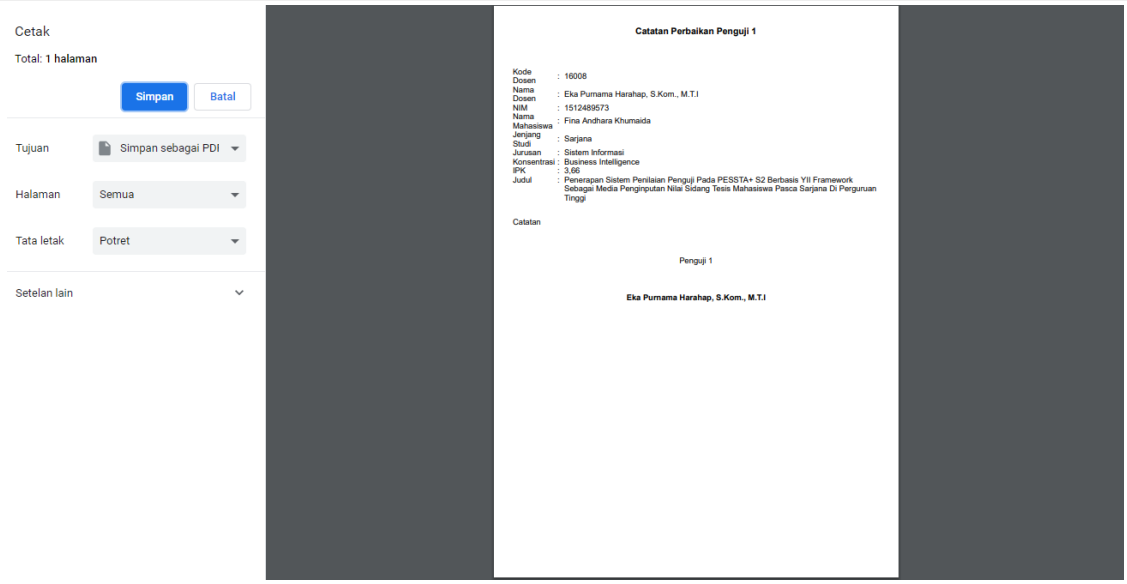


Figure 6. Display print test revision 1

Figure 5. is a revised view given by examiner 1 and picture 6. is a display to print a revision sheet. Usually the board of examiners maximally gives revisions to the trial participants 10 revisions.

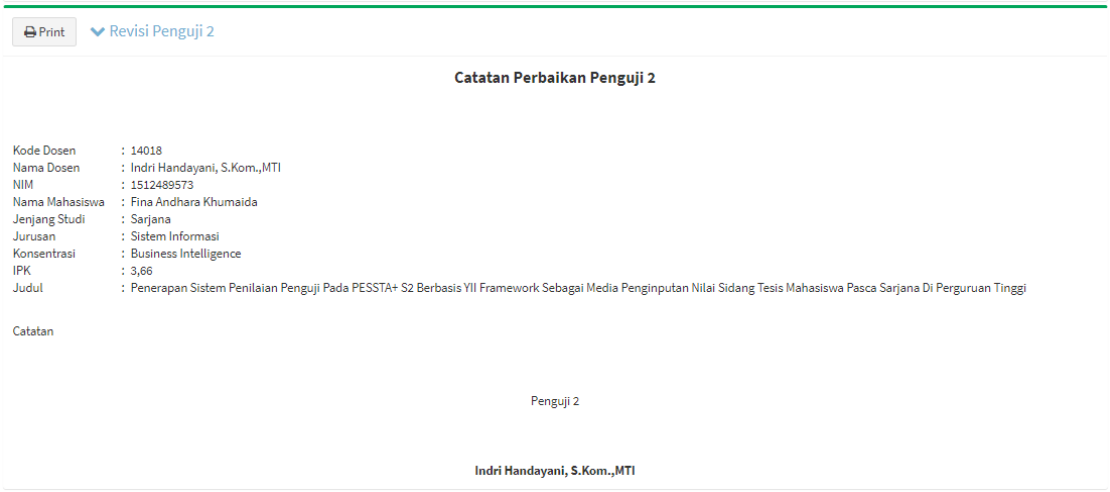


Figure 7. Display of testing revisions 2

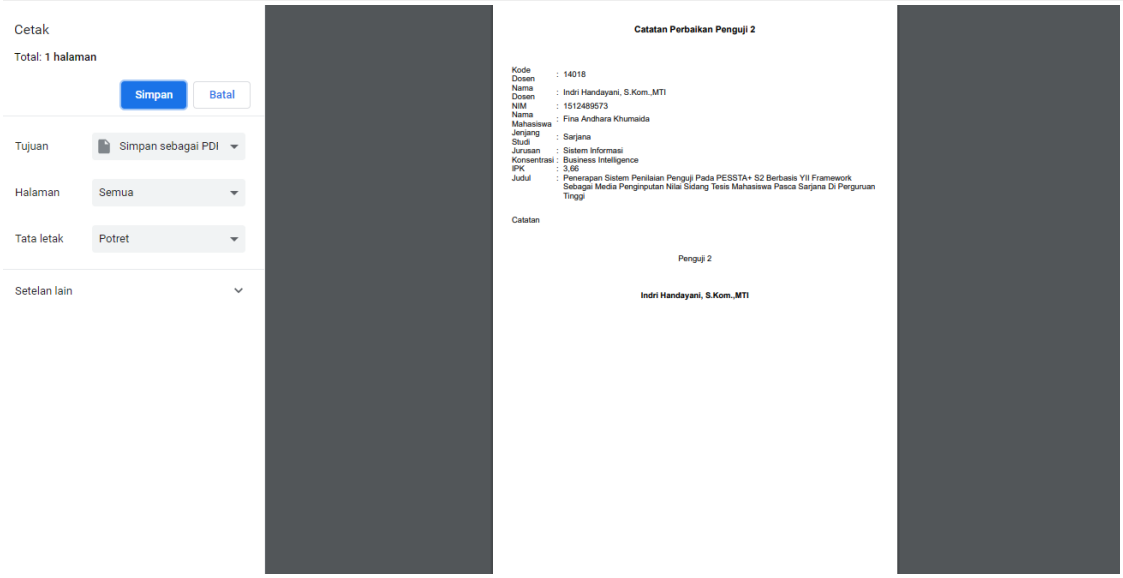


Figure 8. Display print test revision 2

Figures 7 and 8 above are displays for examiner revisions 2. The same as the display of the examiner and examiner chairman 1. The display contains the lecturer number and the name of the examining board in charge. Not only that, there are names, levels, majors and concentration of the participants of the trial.

IV. CONCLUSION

The examiner assessment system that has been developed and can be accessed online makes the trial news information system can also be used by the board of examiners. The user friendly display makes the board of examiners easily use it. In the session news information system there is a lot of information presented, but if it cannot be integrated with other trial assessment systems, it is felt to be less than optimal in its use. There is information on the final results and grades obtained by the trial participants. Not only grades and grades, there is also information on the status of eligible participants declared to pass or not by the board of examiners. Then there is information about remissions given by the board of examiners to be worked out by the trial participants.

V. ACKNOWLEDGMENT

The authors would like to thank the institute for Universitas Raharja.

REFERENCES

[1] Sihotang, H. T. (2018). Sistem Informasi Pengagendaan Surat Berbasis Web Pada Pengadilan Tinggi Medan. Journal Of Informatic Pelita Nusantara, 3(1).

[2] Aryani, D., Nurdin, M. A., & Baskara, P. (2017). SISTEM INFORMASI PENGELOLAAN ASET KENDARAAN BERMOTOR PADA STMIK RAHARJA TANGERANG. CERITA Journal, 3(1), 75-84

[3] Kirom, M. (2014). Sistem informasi geografis Pemetaan suara pemilukada berbasis open source di kabupaten jombang. Edutic-Scientific Journal of Informatics Education, 1(1).

[4] Rahardja, U., Aini, Q., & Sulastrini, L. R. (2017). Penerapan Inbound Official Site Sistem Informasi Untuk Meningkatkan Rank Webometrics. Technomedia Journal, 1(2), 105-115.
[5] Hermawan, L., & Hariadi, M. (2015). Pemanfaatan Augmented Reality Sebagai Media Informasi Kampus Menggunakan Brosur. In Seminar Nasional Teknologi Informasi dan Komunikasi (SENTIKA) Yogyakarta(Vol. 28).
[6] Rahardja, U., Harahap, E. P.,& Pratiwi, D. I. (2018). Pemanfaatan RinfoSheet Sebagai Media Informasi Laporan Penjualan Barang pada Raharja Internet Cafe. Jurnal Ilmiah Teknologi Informasi Asia, 12(1), 65-74.
[7] Ariessanti, H. D., Martono, A., & Suprayogi, D. (2019). SISTEM INFORMASI PROFIL MAHASISWA PADA PENILAIAN PENGUJI PESSTA+ DI PERGURUAN TINGGI. CERITA Journal, 5(1), 76-88.
[8] Rahardja, U., Yusup, M., & Nurmaliana, A. (2014). Penerapan iLEARNING SURVEY(iSur) dalam Meningkatkan Kualitas Sistem Informasi Selama Proses Pembelajaran Di Perguruan Tinggi raharja. CCIT Journal, 7(3), 335-354.
[9] Handayani, I., & Kusumah, H. (2018). Prototipe Deteksi Curah Hujan Dan Sistem Informasi Berbasis Pada ESP8266 Di BMKG Klimatologi Geofisika Klas I Tangerang. Voice Of Informatics, 7(2). [6]. Upasani, Mayuri dan Patil, Sagita. 2018. *Grid Connected Solar Photovoltaic System With Battery Storage For Energy Management*. Processdings Of The Second International Conference On Inventive System And Control (ICISC 2018). IEEE Xplore Compliant-Part Number: CFP18J06-ART, ISBN: 978-105386-0807-4. ©2018 IEEE.
[7]. Zulfikar, Dafi dan Broto Wisnu. 2016. “Optimalisasi Pemanfaatan Energi Listrik Tenaga Surya Skala Rumah Tangga”. Jurnal. Prosiding Seminar Nasional Fisika (E-Journal) SNF2016. Vol. V, Oktober 2016. P-ISSN: 2339-0654
[8]. Munthe, Berayan. 2016. Modul Belajar Motor Listrik 1. Purwakarta. Politeknik Enjinering Indorama.
[9]. Suryadi, Aris. 2017. Perancangan Instalasi Penangkal Petir Eksternal Metoda Franklin pada Politeknik Enjinering Indorama, SINERGI Vol. 21, No. 3, Oktober 2017 : 219-230 http://doaj.org/toc/2460-1217 http://doi.org/10.22441/sinergi.2017.3.009
[10]. Suryadi, Aris. 2015. Diktat Pembangkit Energi Listrik & Lab. Purwakarta. Politeknik Enjinering Indorama.

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Design And Implementation Of Licensing Information Systems In The Outside Of Employees At PT.Sintech Berkah Abadi

Nur Azizah[1], Nike Nur Anisa[2], Yosa Auzadina[3]
Raharja University Lecturer[1] , Raharja University Student Graduated[2],
Raharja University Student[3]
e-mail: nur.azizah@raharja.info[1], nike@raharja.info[2], yosa@raharja.info[3]

Author Notification
10 September 2019
Final Revised
16 September 2019
Published
18 September 2019

To cite this document:
Azizah, N., Anisa, N., & Auzadina, Y. (2019). DESIGN AND IMPLEMENTATION OF LICENSING INFORMATION SYSTEMS IN THE OUTSIDE OF EMPLOYEES AT PT.SINTECH BERKAH ABADI. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 71-78.

DOI :
https://doi.org/10.34306/ajri.v1i1.109

Abstract

Along with the development of current technology that has been very sophisticated and rapidly happening in this world, namely in a company, agency, even the world of education as well. At PT Sintech Berkah Abadi has an obligation to give permission to employees who submit. At this time, the management of employee exit permits is still running manually and has not been centralized computerized. Therefore, it requires papers in each process and is less efficient and it is difficult to control permit approval by employees if the HRD and the Chair are outside the office. The method used to develop an information system is to apply the analytical method using SWOT analysis, as well as data collection methods, there are three stages that must be done in collecting data, namely, Observation, Interview, and determining Literature Review (Literature Study) with the journal. The design method is done using the Unified Modeling Language (UML), Notepad ++, XAMPP and the web browser used to open the web that has been designed, Google Chrome. With the licensing system in and out of employees at PT Sintech Berkah Abadi can make it easier for employees to permit and more efficient in its use because they do not have to wait for HRD or leaders when outside the city.

Keywords: Licensing Information System, UML, Company

I. INTRODUCTION

The development of technology and information goes so fast and rapidly, such as the development of the internet (website), computers, telecommunications technology, and others. This is because the need for technology and information is very high to help various types of human work, one of which is in the corporate world or agencies. This is in line with the challenges of utilizing information technology in the increasingly evolving corporate world.

Utilization of information technology in the world of companies or agencies is not optimal. One of them is in the management of licensing and entry of employees at PT Sintech Berkah Abadi still. PT Sintech Berkah Abadi is a company engaged in the software house. The current

employee entry and exit permit system is still not running well and still uses paper media and has not been computerized in a system, so companies often experience employees who are absent, especially employee exit permits.

Based on the above problems, this research aims to design and develop a web-based employee licensing data processing information system. Therefore, from the previous process which still uses a lot of paper forms and requires quite a long time, so that with this system the process of processing employee licensing data becomes computerized. It also can facilitate the process of submitting, approving, confirming, inputting, and making reports and minimizing the level of errors that exist.

II. METHODE

In writing this report, a research method is needed, the research methods used by researchers are as follows:

1. Data Collection Method
   There are three stages of data collection methods that must be done including, namely, Observation, Interview, and Literature Review.
2. Analysis Method
   The method of analysis used is the SWOT analysis method because when it will make a system design it should have evaluated the Strengths, Weaknesses, Opportunity and Threats that exist in the company for making the system in the company. So to find the problems that will be found then an analysis of the existing system is carried out so that the new system can overcome these weaknesses.
3. Design Method
   The design method used by researchers is to use Visual Paradigm for UML Interprise Edition used to create diagram models, and design the application system using the PHP programming language and MySQL database.

III. RESULT AND DISCUSSION

System Analysis

This stage is the stage of research on a running system with the aim of knowing the running system procedures. System analysis is described using Unified Modeling Language (UML), including Use Case Diagrams as follows:

p-ISSN : 2685-9106
e-ISSN : 2686-0384

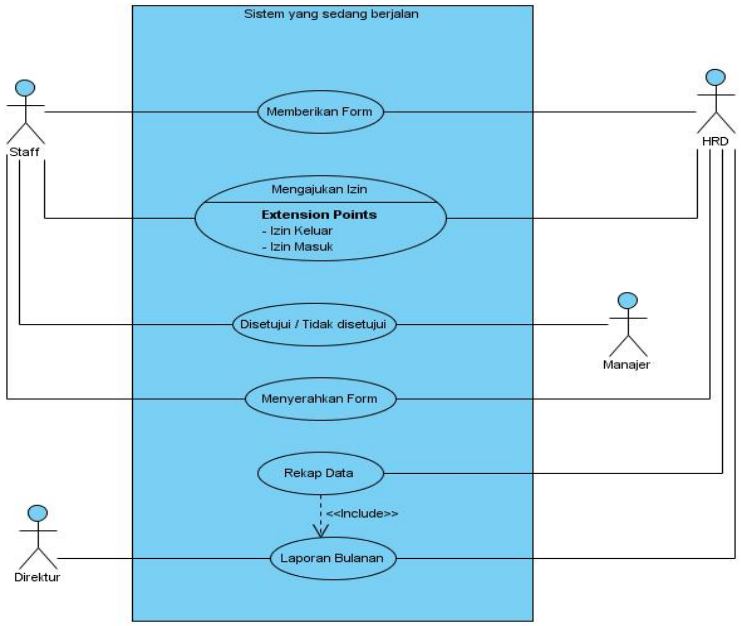


Figure 1. Use Case Diagram

Based on Figure 1 use case diagram, then explained as follows:

1) There are 4 Actors, consisting of Staff, HRD, Managers and Directors.
2) There are 6 Use Cse, consisting of providing forms, submitting permits (exit permits, entry permits), approved / disapproved, submitting forms, recap data to include into monthly reports.

Proposed system design

The design stage is the stage in determining the processes and data needed by the proposed system with the aim of meeting user needs. The tools used are visual paradigm software to describe Use Case Diagrams and Class Diagrams

1. Proposal Use Case Diagram

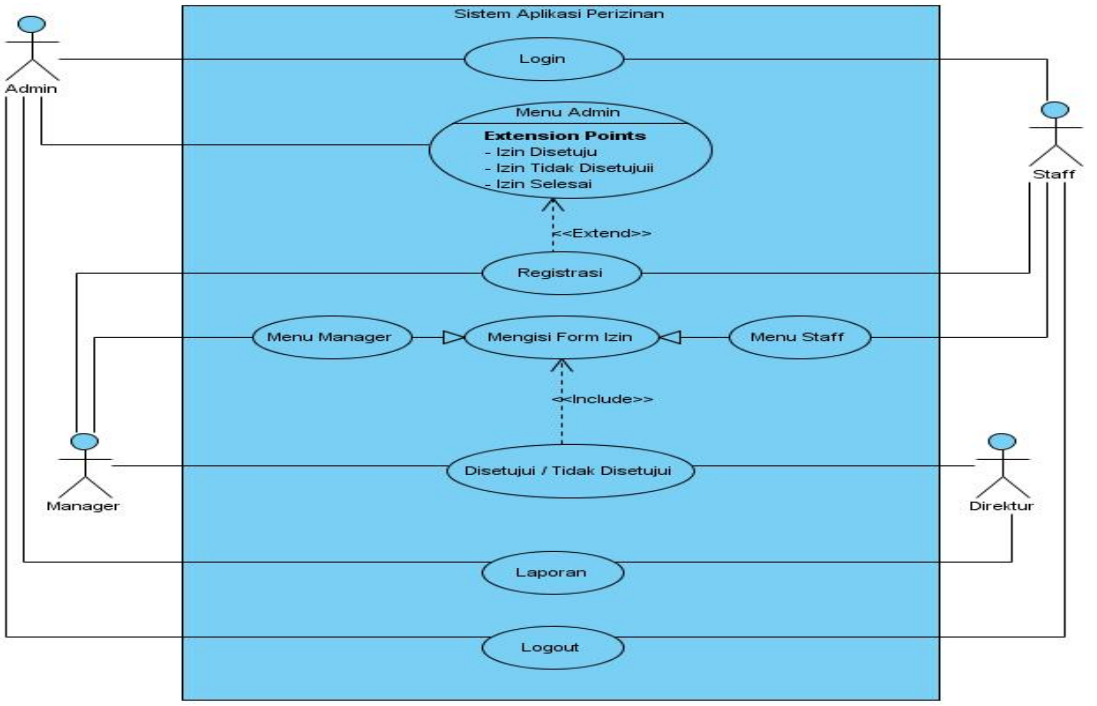


Figure 2. Use Case Diagram

Based on the picture above can be explained as follows:

Has 1 system named licensing application system, this application has 4 actors: Staff, Manager, Director, Admin, from 4 actors have their main tasks and functions which are described through 9 use cases namely; login between Admin, Staff and Manager has a login relation between the 3 actors which are interconnected with one another, the Staff login is required to register by Admin as well as the Manager. After registering the Staff and Manager contained in the Admin menu, Staff and Manager can directly enter the Staff or Manager menu using a username and password that has been registered previously by the Admin. After Staff log in and enter the Staff menu, Staff can fill out the Permission Form then proceed and enter the Manager menu and the Manager gives a value (Approved / Disapproved) after that it is processed into the Director's menu and the Director can give a value (Approved / Disapproved) after providing a value it will be returned again to the Staff or Manager who makes permissions through the permission form then the process ends and provides the value that is recapitulated into a report that can be seen by the Director and Admin, then all actors can logout.

2. Proposal Class Diagram

p-ISSN : 2685-9106
e-ISSN : 2686-0384

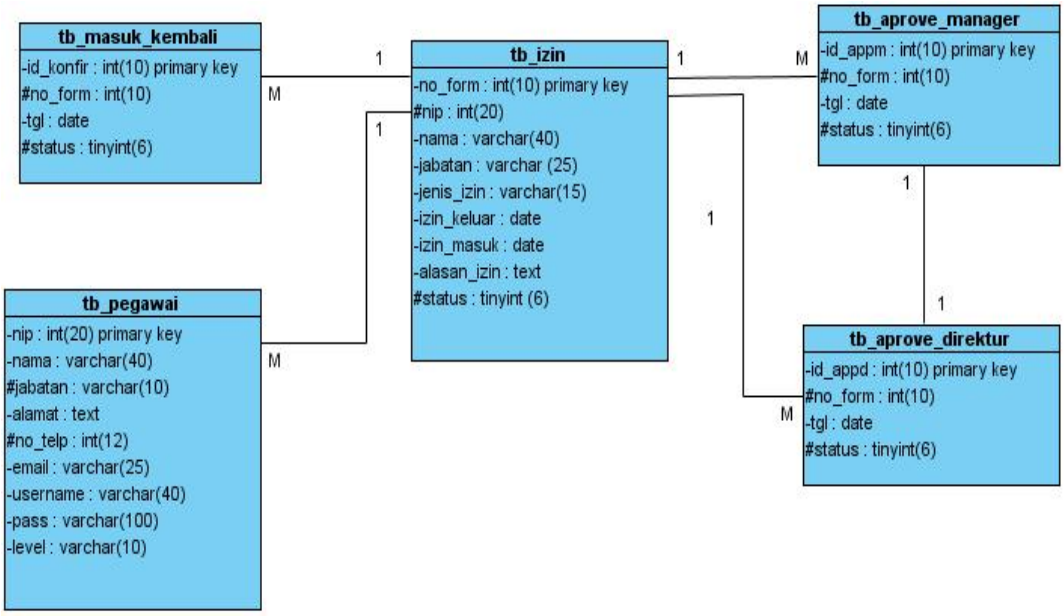


Figure 3. Calss Diagram

Class Diagram Archive Services Information System Design that illustrates the database design that will be used on the system.

System Prototype Design

1. Application Login Page

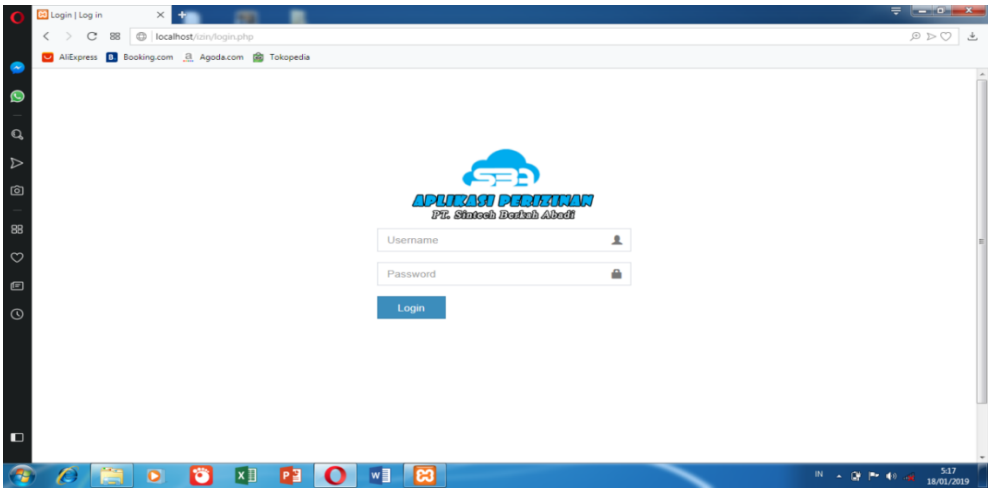


Figure 4. Application Login Page

Login page that is used to be able to enter the employee or admin menu, in accordance with what you want to access..

2. Employee Data Form Page

p-ISSN : 2685-9106
e-ISSN : 2686-0384

2.1 Employee Data Form

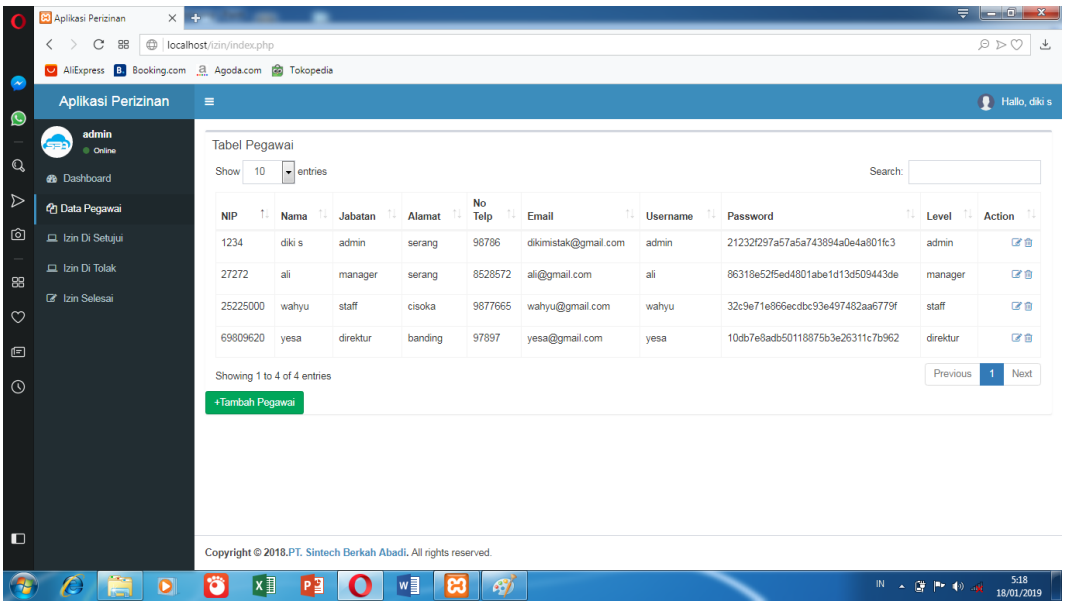


Figure 5. Employee-Admin Data Form

This page displays the employee data form on the admin page where the admin can view employee data.

2.2 Add Employee Data

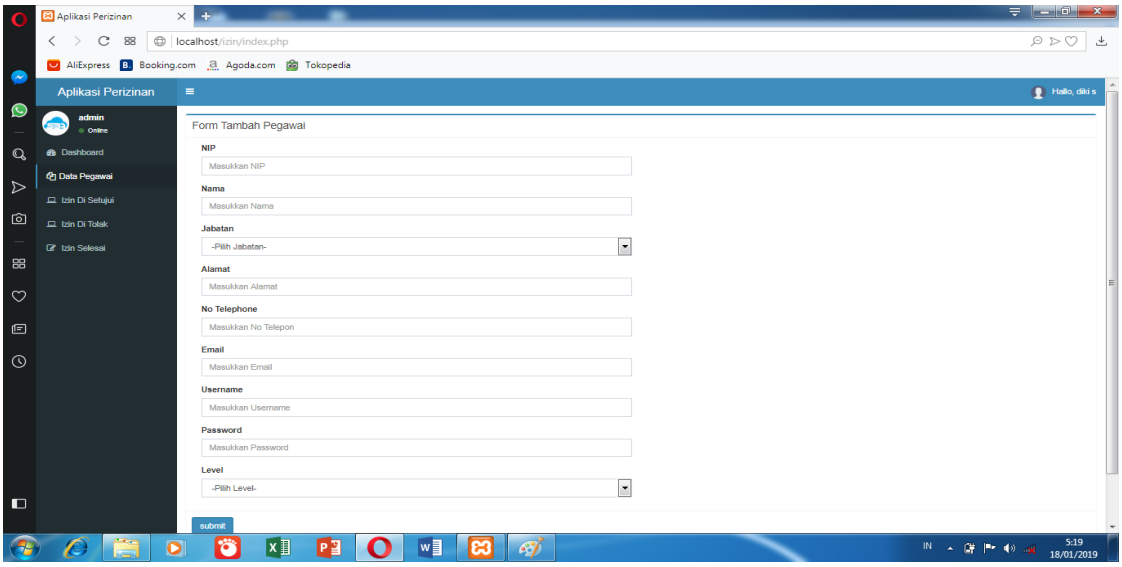


Figure 6. Add Staff-Admin Data

This page displays the employee data add menu, which only admins can do.

3. Approved Permission Form page

p-ISSN : 2685-9106
e-ISSN : 2686-0384

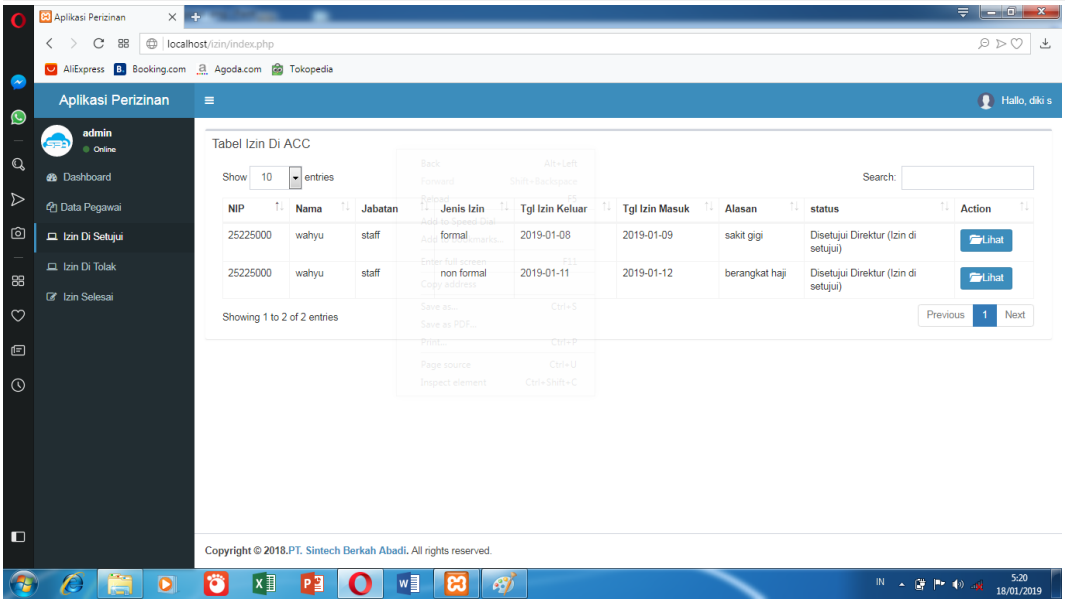


Figure 7. Admin-Approved Permission Form page

This page the admin can also see the permission that was submitted by the employee and has been approved.

4. Permission Form Page Declined

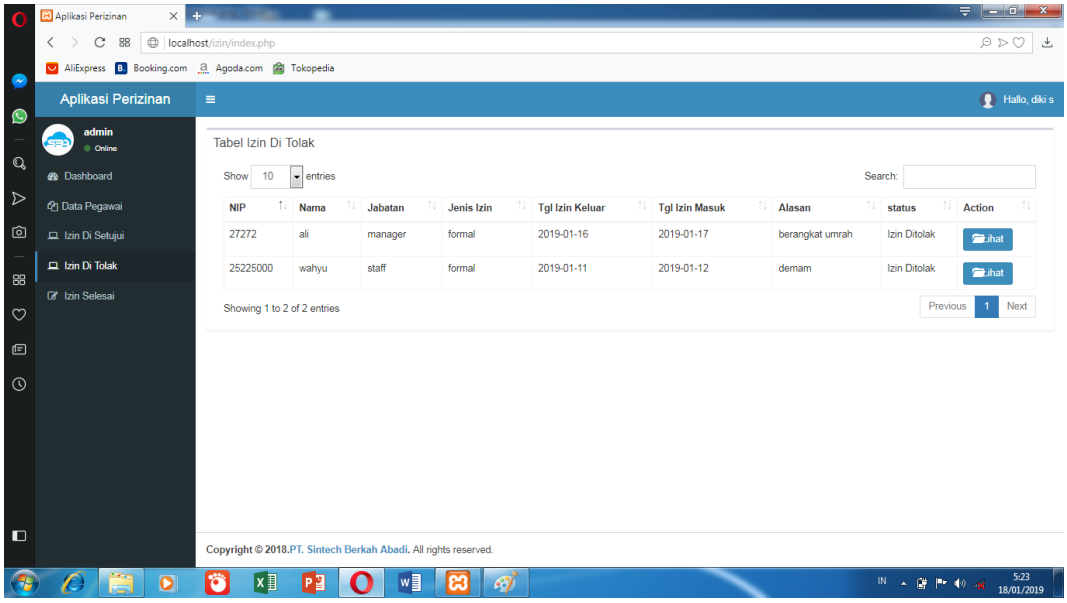


Figure 8. Admin-Denied Permission Form Page

On this page, check the status of disapproved / denied permissions.

5. Permission Completed page

p-ISSN : 2685-9106
e-ISSN : 2686-0384

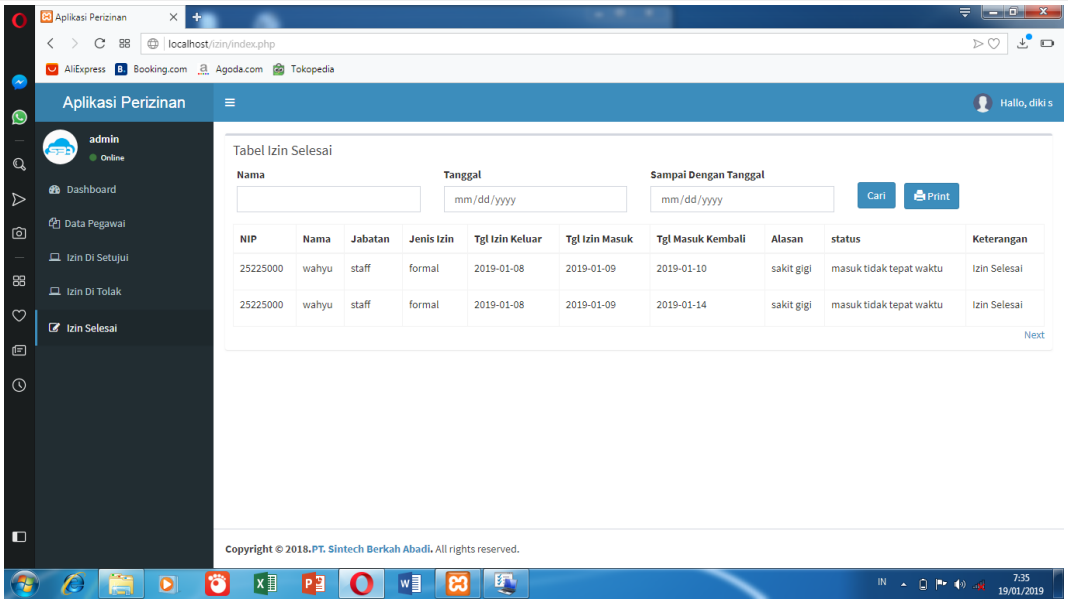


Figure 9. Admin-Complete Permission page

This page is very important for the Director to know that the permit has been completed.

6. Completion Permit Report

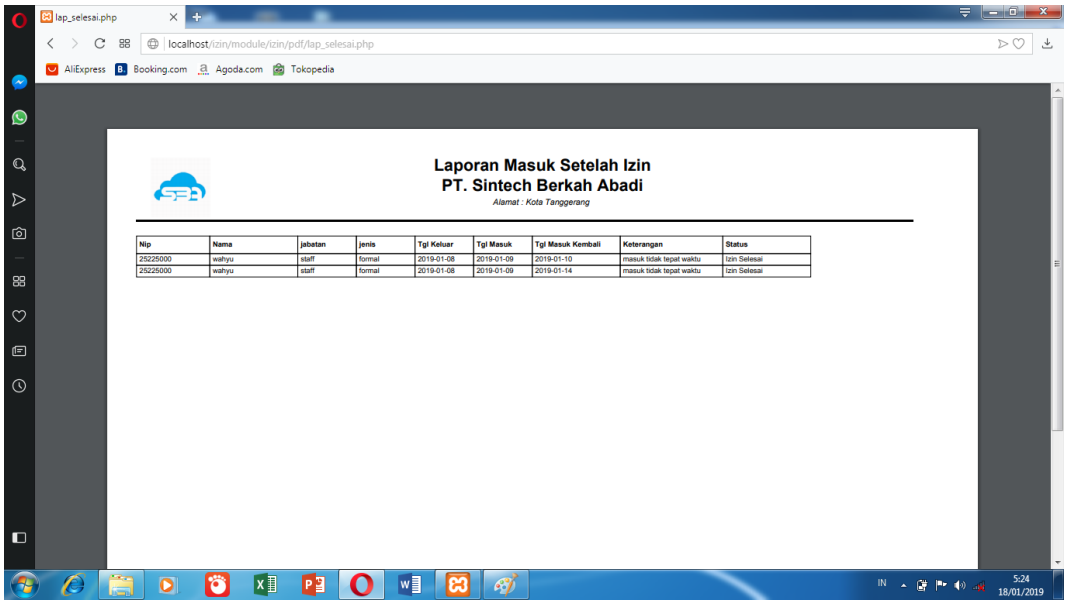


Figure 10. Admin-Complete Permission Report

IV. CONCLUSION

Based on the results of the previous research and discussion as well as the results of the analysis conducted regarding the research that has been done, the following are the conclusions of the study:

- Employee licensing system that is currently running is still manual, because it still uses paper media.

- Based on research conducted by the author, PT Sintech Berkah Abadi requires a web-based employee licensing data processing information system. So from the previous process that still uses a lot of paper forms and requires quite a long time, so with the system the processing of employee licensing data becomes computerized. It also can facilitate the process of submitting, approving, confirming, inputting, and making reports and minimizing the level of errors that occur.
- To build an employee licensing data processing information system that can help facilitate employees, HRD, Managers and Directors. What is needed is a number of stages starting from observation to the research site, then conducting interviews with stakeholders by giving a number of questions about the information system about employee permit data processing that runs at PT Sintech Berkah Abadi. After conducting an interview, a solution was found to design a computerized system that is an effective and efficient web-based employee licensing information system using UML (Unified Modeling Language) to describe the system design and PHP (Hypertext Preprocessor) as a programming language with a MySQL database

V. ACKNOWLEDGMENT

The author would like to thank the supervisor, friends who always support, and for the research site of PT Sintech Abadi..

REFERENCES

[1] Wahyudiono, Sugeng dan Faisal. 2015. Sistem Informasi Berbasis Web Otacatic Yogyakarta. Magelang: Jurnal TRANSFORMASI Informasi & Pengembangan Iptek Vol. 11, No. 1, 2015.
[3] Aditya. Bayu dkk 2017. Pengaruh Status Pekerja Dan Lingkungan Kerja Terhadap Kinerja Karyawan (Studi pada Karyawan Auto 2000 Sukun Malang). Malang : Jurnal Administrasi Bisnis (JAB) Vol. 44, No. 1, Maret 2017.
[4] Mallu, Satriawaty. 2015. Sistem Pendukung Keputusan Penentuan Karyawan Kontrak Menjadi Karyawan Tetap Menggunakan Metode Topsis. Makasar: jurnal ilmiah Teknologi Informasi Terpan Vpl. 1, No. 2, April 2015.
[5] Fajarianto, Otto. 2016. Prototype Pelayanan Akademik Terhadap Komplain Mahasiswa Berbasis Mobile. Banten: Jurnal Lentera ICT Vol. 3, No.1, Mei 2016.
[7] Rohendi, K. (2015). "Sistem Informasi Pengajuan Cuti Pegawai Dinas Perhubungan Komunikasi dan Informatika Propinsi Sumatera Barat," Jurnal TeknoIf ISSN 2338-2724, vol. 3, no. 2.
[8] Syaripudin, G. A., & Cahyana, R. (2015). "Pengembangan Aplikasi Web untuk Pengajuan Cuti Pegawai Secara Online," Jurnal Algoritma, vol. 12, no. 1

ADI Journal on Recent Innovation (AJRI)
Vol 1 No. 1 September 2019

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Web-Based Logistic Demand Information System Design At Raharja University

Rosmawati Dwi[1], Siti Wulandari[2], Dewi Nur Khasanah[3]
Raharja University Lecturer[1] Graduated Raharja University[2], Raharja University[3]
rosmawati.dwi@raharja.info, siti.wulandari@raharja.info, dewi.nur@raharja.info

Author Notification
10 September 2019
Final Revised
16 September 2019
Published
18 September 2019

To cite this document:
Khasanah, D., Wulandari, S., & Dwi, R. (2019). WEB-BASED LOGISTIC DEMAND INFORMATION SYSTEM DESIGN AT RAHARJA UNIVERSITY. *ADI Journal on Recent Innovation (AJRI)*, *1*(1), 79-84.

DOI :
https://doi.org/10.34306/ajri.v1i1.111

Abstract

In the present Information Technology (IT) is highly developed. Even in daily life, everything is computerized, such as in companies, schools, offices, shopping centers, and many more. Nearly the average has used a computerized system for service and information presentation. With this computerized system, it is expected to be able to facilitate in all aspects of life. The purpose of this study is to design a logistics goods demand system at Raharja College. The approach taken in this report is by direct observation through field studies. To examine how the procedure for processing logistical demand data at Raharja University. Data processing is very important to produce a logistical demand report. The logistical demand data processing system that runs currently is semi computerized using Microsoft office Excel. So that errors often occur in the calculation of logistics goods demand reports and the processing process becomes less effective in terms of time. This study uses a SWOT analysis method, system requirements elicitation, and system modeling using UML (Unified Modeling Language) to visualize, which is then implemented with the Hypertext Preprocessor (PHP) programming language with the MySQL-Server database as the database used. With the logistics demand system, it can make it easier for the finance department to produce accurate logistics goods demand reports with fast time, so that it can create effective and efficient performance, and can support evaluation in internal control for the leadership of the report.

Keywords: Logistics, Demand for Goods.

I. INTRODUCTION

Information technology that prepares human resources that can compete in the IT industry in the world. The processing of data on demand for goods at Raharja University is computerized but the processing is still using Microsoft Excel. The data collection process is still complicated and requires a lot of time so that employees who want to make monthly reports on stock and demand for goods require high accuracy considering the number of requests for goods is quite a lot. With

the information system demand for goods expected to record the demand for goods can simplify the activities of the University of Raharja and can be addressed more effectively.

In this case the author tries to analyze the information system of inventory and demand for computerized goods that are applied at the University of Raharja, so the system analyzed is expected to be able to provide solutions so that data processing of goods inventory and demand for goods can be done quickly and on time

II. METHODE

Method of analysis

This study uses a SWOT analysis method to evaluate strengths, weaknesses (opportunities), opportunities (Opportunities) and threats (Threats) of the current logistics system so that it can help in conveying information to Raharja University staff related to the current logistics system .

***Strengths* (S)**	***Weaknesses* (W)**
1. Logistics staff are accustomed to using card stock 2. Applying staff are accustomed to using SPB cards	1. Cardstock buildup occurs 2. Stock items often do not update 3. Reports are stacked manually 4. Frequent errors in inputting 5. Recap data still using Microsoft Excel
***Opportunities* (O)**	***Threatss* (T)**
1. The availability of a lot of paper 2. Utilizing available facilities as a support in making computerized systems	1. Risk of human error 2. Risk of missing files

III. RESULT AND DISCUSSION

Based on the analysis conducted by researchers in the logistics department of raharja university, the process of requesting goods has been going well but it still takes a long time to reach a report data, Stock items are often not updated because the process of painting and searching stock data is still using stock cards and Microsoft Excel so the logistics department must search one by one to find out the inventory data, sometimes inventory is empty but unknown it can hamper demand.

1. Display Login Page

p-ISSN : 2685-9106
e-ISSN : 2686-0384

Login page display is the main system page which contains a login display that uses a username and password but to make it easier for employees to use Rinfo

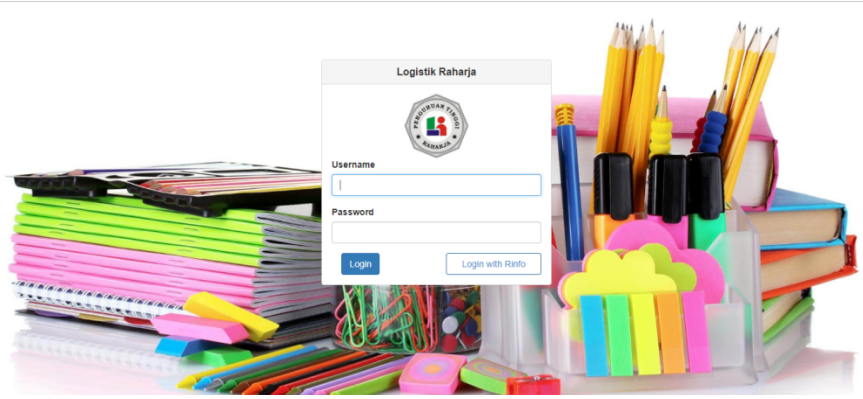


Figure 1 Login Page Display

2. Display Profile or Register Login Page
   Register page for new users to make it easier for admins to know employees and be allowed into the item request system.

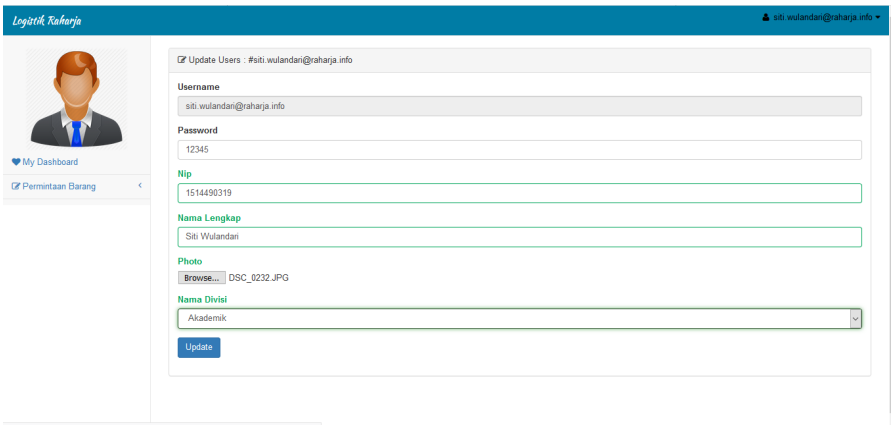


Figure 2 The Profile Update or Register Login Page

3. My Dashboard Page Views
   Main page on the user, which is useful for knowing the history of requests for user goods.

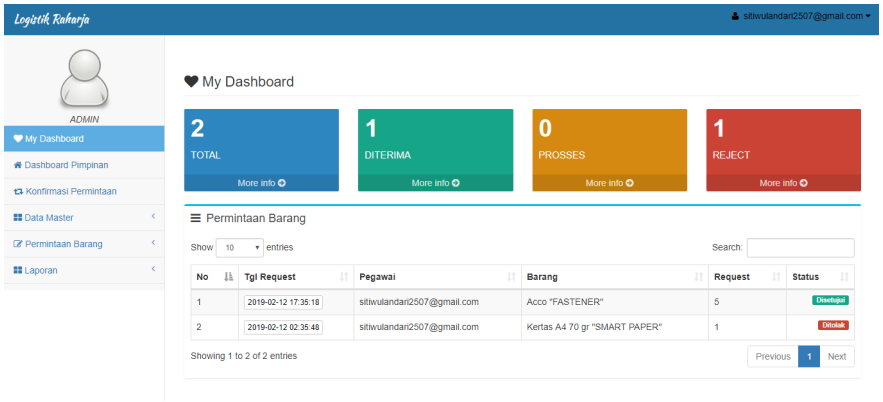


Figure 3 Display My Page Dashboard

4. Leaders Dashboard Page Views
   Pages for administrators and managers monitoring and history of all requests for user items.

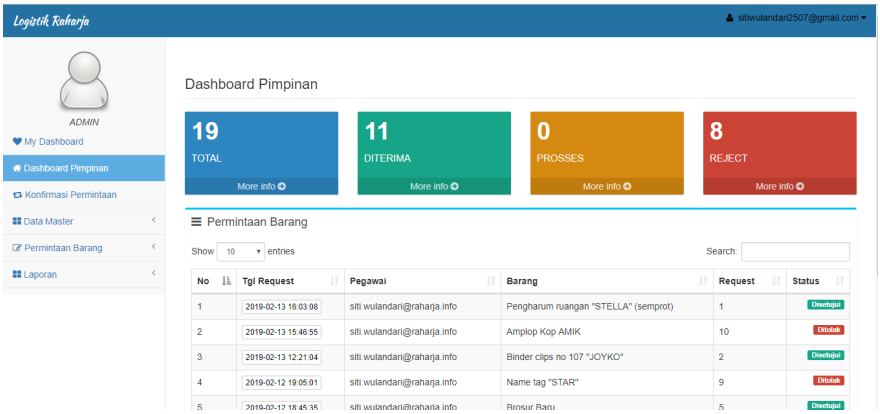


Figure 4 Display the Leaders Dashboard Page

5. Display the Item Master Data Page
   Item master data page which is useful for making it easy for admin to update, edit and delete item data

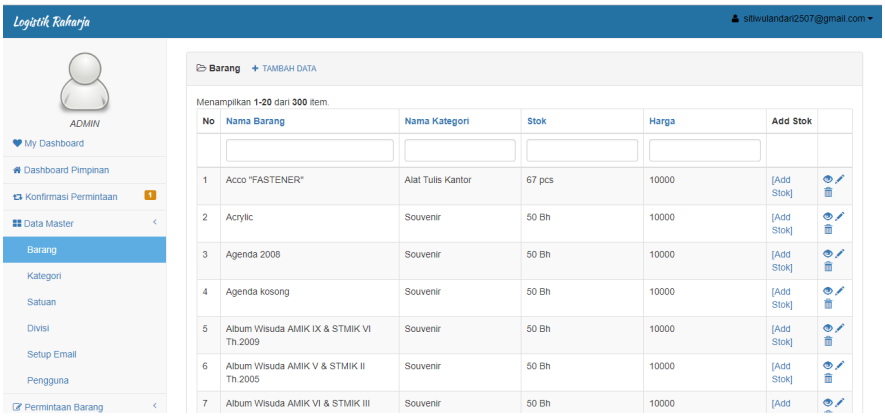


Figure 5 Display the Goods Master Data Page

6. Email Setup Master Data Page View
   Email settings page that is useful for managing email notifications that will be sent to admin, leader 1 and leader 2.

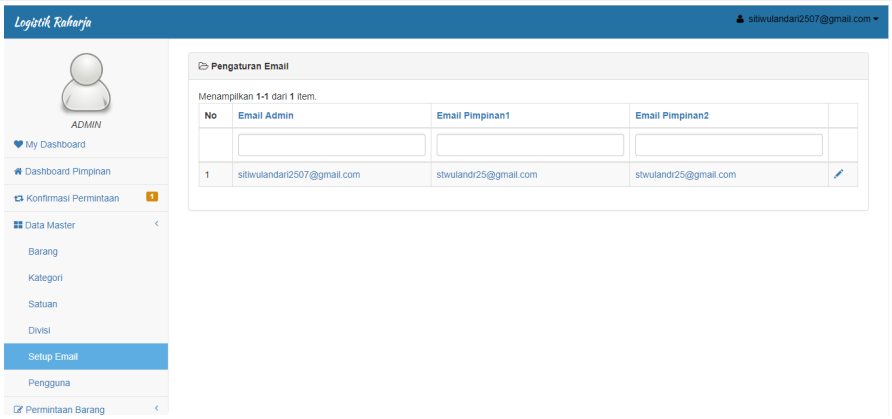


Figure 6 Email Setup Master Data Page View

7. Display of User Data Master Pages
   User master data page, which is easy for admin to update, edit and delete user data.

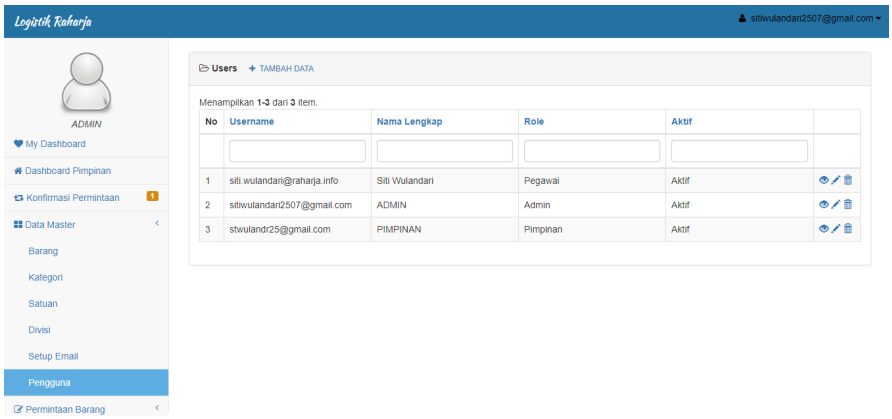


Figure 7Display of User Data Master Pages

8. Page Views of Approved Transaction Reports
   Transaction report page that is useful to find out the number of goods that will be used as a report every month

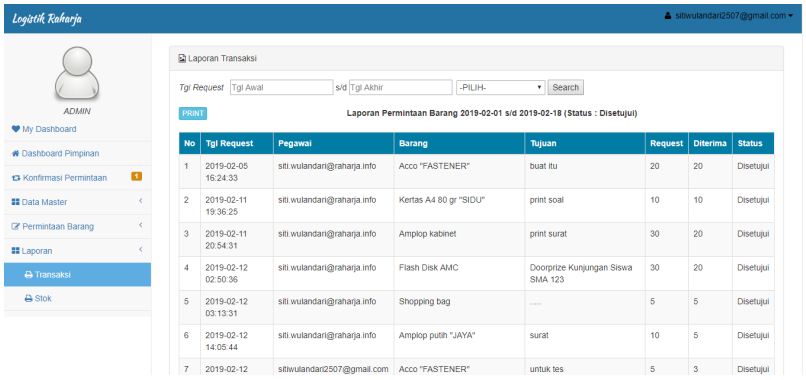


Figure 8 Page Views of Approved Transaction Reports

IV. CONCLUSION

The system of demand for goods in the logistics department of the raharja university that is currently running is still using a semi-computerized system, in inputting data the demand for goods is still using books, while in making inventory reports using card stock. After input into the report book and card stock, input back into Microsoft Excel. The current system has not been able to facilitate employees in obtaining updated information on inventory, this is because there is still a long process of searching and making reports, because of the many documents needed, so the decision making process is hampered. The frequent occurrence of human errors such as input data errors that have an impact on the quality of goods stock reports, as well as the logistics section often has difficulty in controlling the minimum stock of goods which results in the logistics department not knowing when to buy goods back

V. ACKNOWLEDGMENT

The author would like to thank the supervisor, friends who have helped and the university of raharja who have allowed to conduct research

REFERENCES

1. Agusli, Rachmat; Sutarman; Suhendri;. (2017). "Sistem Pakar Identifikasi Tipe Kepribadian Karyawan Menggunakan Metode Certainty Factor". *Jurnal SISFOTEK GLOBAL, Vol.7 No.1. ISSN : 2088-1762*.

2. Arifin, M. Zainal;. (2015). Pengembangan Sistem Informasi Praktek Industri Jurusan Teknik Elektro Universitas Negeri Malang. *Prosiding SENTIA, Volume 7, ISSN: 2085-2347*.

3. Hayat, Abdul; Dkk;. (2015). “Prototipe Sistem Informasi Persediaan Barang Logistik Berbasis Web Dengan Pemodelan UML”. *Konferensi Nasional Sistem & Informatika 2015*.

4. Hendini, Ade;. (2016). “Pemodelan Uml Sistem Informasi Monitoring Penjualan Dan Stok Barang (Studi Kasus: Distro Zhezha Pontianak)”. *Jurnal Khatulistiwa Informatika, Vol 4 No 2*.

5. Karundeng, Angellica; David Saerang,; Hendrik Gamaliel;. (2017). “Analisis Perlakuan Akuntansi Atas Persediaan Barang Jadi Sesuai Dengan Psak No.14 Pada PT.Fortuna Inti Alam”. *Jurnal Riset Akuntansi Going Concern, Vol 12 No 1*.

FREQUENTLY ASKED QUESTION (FAQ)

NO	CRITERIA (MAXIMUM VALUE)	QR CODE
1	ABOUT	bit.ly/AboutAJRIV1N1
2	TEMPLATE	bit.ly/TemplateAJRIV1N1
3	SUBSCRIBE	bit.ly/SubscriberAJRIV1N1
4	ORDER JOURNAL	bit.ly/OrderJournalAJRI
5	CONTACT	bit.ly/ContactAJRIV1N1

6	E-CERTIFICATE	bit.ly/e-certificateAJRIV1N1
7	E-JOURNAL	bit.ly/EJOURNALAJRIV1N1

AJRI

ADI JOURNAL ON RECENT INNOVATION

ADI JOURNAL ON RECENT INNOVATION 2020

CALL FOR PAPER

AJRI Vol. 1 No. 2 MARCH 2020

ADI JOURNAL ON RECENT INNOVATION

We are pleased to announcement the call papers for ADI Journal on Recent Innovation (AJRI), published for Vol. 1 No. 2 2020. AJRI is a reputable Scientific Publication Media aim to foster research finding that concentrate towards recent innovation and creativity to support advancement in global civilization and humanity. AJRI Journal published two times a year (**March & September**) by Asosiasi Dosen Indonesia (ADI) Publisher. AJRI Journal invites all manuscripts on Multidisciplinary topics.

HTTP://BIT.LY/AJRIGUIDELINESS

HTTP://BIT.LY/AJRITEMPLATE

HTTP://BIT.LY/AJRIREGISTRATION

FACILITIES

FREE OF CHARGE FOR SUBMISSION PAPER

FREE TRANSLATION AND EDITING FOR THE FIRST EDITION

IMPORTANT DATES

AUTHOR NOTIFICATION: MARCH 22, 2020
FINAL SUBMISSION OF REVISED: MARCH 27, 2020
PUBLISHED IN OJS: MARCH 31, 2020

HTTPS://ADI-JOURNAL.ORG

+6282138053306 WA (Taqwa Hariguna)

publishing@adi-journal.org

AJRI

ADI JOURNAL ON RECENT INNOVATION

Certificate of Appreciation

NO. : ADI/CERTIFICATE/AJRI/V1N1/001/IX/2019

CALL FOR PAPER

THE 1ST EDITION VOL 1. NO 1. SEPTEMBER 2019

AWARDED TO

ARIS SURYADI
PURWANDITO TULUS ASMORO
AHMAD SOLIHIN

FOR PARTICIPATION AND CONTRIBUTION IN TRI DHARMA

AS

AUTHOR

TITTLE

HYBRID ELECTRIC POWER PLANT USING WIND TURBINE SAVONIUS HELIX AND SOLAR CELL AS AN ALTERNATIVE POWER SOURCE IN THE LIGHTNING TOWER AT FLASHING LIGHTS

SCAN ME

bit.ly/AJRIcertificateV1N1-001

HTTPS://DOI.ORG/10.34306/AJRI.V1I1.01

HTTPS://ADI-JOURNAL.ORG

PUBLISHING@ADI-JOURNAL.ORG

EDITOR IN CHIEF

PROF. JALEL BEN OTHMAN

Editor Address:
ADI Journal on Recent Innovation (AJRI)
Jl. Jenderal Sudirman No.40, Cikokol, Kec. Tangerang, Kota Tangerang,
Banten 15117, Indonesia.

9 772686 038004

P-ISSN 2685-9106

https://adi-journal.org

9 772685 910004

P-ISSN 2685-9106