DEVELOPMENT OF MANAGEMENT INFORMATION SYSTEM HUMAN RESOURCES IN PT. KANVAS MULIA PADALARANG

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ABSTRAK

*PT. Kanvas Mulia was established in 1962 which is located on Orion street 461 Kertajaya Padalarang village. This company centralized in textile production. Their products are clothes, bag raw materials, canvas material, and almost all types of tarpaulin or set bag. PT supplies almost all tarpaulin or set bag in Indonesia.Based on interview with Mr. Mochammad Nadjib as Personnel Manager at PT.Kanvas Mulia stated that they are getting some difficulties in recruitment process. Recruitment process is measured and matched in accordance with company criteria.*This resulted in the Personnel Manager takes more time for decision-making, then the vacancy of the position which resulted in the loss for the company that is the slowness of operational activities. *Mr. Hafidz M as the Manager of the related Division at PT. Kanvas Mulia stated that there is a problem in the performance appraisal process which is still doubtful because the result of the assessment does not have the criteria standard.Assessment currently only by looking at the attendance data and daily activity employees. It causes hindrance in employee performance appraisal evaluation. The method which will be used to determine the performance appraisal is Simple Additive Weighting.Based on the results of black-box testing and beta, it can be concluded that the system can help Personnel Manager and Division Manager to support in handling the recruitment, decision making in conducting performance appraisal.*

Keywords: *Management Information System, Human Resources, Simple Additive Weighting Method.*

1. INTRODUCTION

PT. Kanvas Mulia Padalarang is a company engaged in textile production which was established in 1962 which is located on Jl. Orion No. 461 villages Kertajaya Padalarang. Products manufactured by PT. Kanvas Mulia Padalarang from bag materials, canvas cloth, and almost all kinds of tarpaulin, PT. Kanvas Mulia Padalarang meets almost all the needs of tarpaulins in Indonesia.

Based on the results of the interview with Mr. Nadjib as the personnel Manager Mochammad PT. Kanvas Mulia that still have difficulties in the recruitment process, particularly in the process of selecting which applicants will be accepted in the company. The process of recruitment is measured and matched in accordance with predetermined criteria of the company. This resulted in the Personnel Manager takes a longer time for decision making, because often for employees who have received already work elsewhere, then there are some positions or positions in the company is empty. Because, the vacancy of office resulted in losses for the company that is the slowness of operational activities. Other problems also have problems in the process of employee performance appraisal. Assessment of employee performance at PT.Kanvas Mulia is still done by the related Division Manager. In the process of performance appraisal of employees was still doubtful results because the assessment process has not yet had the standard of other criteria, for the current assessment only by looking at the data and attendance at the daily life of employees only. This shows that in conducting performance appraisal there are still difficulties which consequently will hinder the evaluation of employee performance appraisal. Looking at the problems that have been exposed, it is necessary to have a human resource management information system at PT. Kanvas Mulia Padalarang. The method that will be used

to know the performance appraisal is Simple Additive Weighting (SAW).

The intent of the research conducted was to build a management information system of human resources in PT. Kanvas Mulia Padalarang. While the purpose of this research is as follows :

1. *Make it easier for Personnel Managers in decision making in selecting applicants, in order to obtain the decisions directly, so the information decision can be directly communicated to the applicants.*
2. *Ease Division Manager part in giving employee performance appraisal objectively to determine promotion on employees at PT. Kanvas Mulia.*

2. RESEARCH CONTENTS

2.1 Management Information System

System management information system (SIM) is one of the five main subsystems CBIS. The purpose is to meet the needs of public information within the company or the Manager of Rukan in company organizational subunits. Subunits can be based on functional area or management level. SIM provides information for users in the form of output and solidify a range of simulation of mathematical model. SIM reflect an attitude of executives who want to have all the computers available for Troubleshooter Rukan company. When SIM while in place and functioning as desired, SIM can help managers and other users inside and outside the company to identify and understand the problem. [1]

2.2 POAC

Management is the achievement of the objectives that have been set in advance using other people's activity consists of planning actions (planning), organizing (organizing), penggerakan (actuating), and control (controlling) [2]. As for the POAC management functions are as follows :

1. *Planning is an activity that is related to the selection of the alternative-alternative, wisdom-wisdom, procedures, and programs as an effort to reach the goals you want to achieve.*
2. *Organizing (organizing) is an act or activity incorporates the entire potential of all parts within a group of people or entities or organizations to work together in order to achieve the goal.*
3. *Implementation or application (actuating) Is the implementation of planning and organizing, where all the components are in one system and one of the organization work together in accordance with their respective fields in order to realize the goal.*
4. *Surveillance (controlling) is controlling all activities from the process of planning, organizing and implementation of all such activities, whether it delivers effective and efficient*

2.3 Method Simple Additive Weighting

SAW method is one of the methods used to solve the problem of Fuzzy Multiple Attribute Decision Making (FMADM) is the Simple Additive Weighting method (SAW) which is a method used to find the optimal alternative from a number of alternatives with certain criteria. Often also known terms weighted summing method. The basic concept of the SAW method is to find the weighted sum of performance ratings on each alternative on all attributes. This method requires the process of normalizing the X decision matrix to a scale comparable to all existing alternative ratings.[3]

SAW Settlement Steps as follows:

1. *Determine the criteria that will be used as reference in decision-making, that Ci.*
2. *Determine the suitability of each alternative rating on each criterion.*
3. *Making decisions based on criteria matrix (Ci), then do the normalization based on matrix equations are tailored to the type of the attribute (attribute attribute or benefit cost) so that the matrix obtained ternormalisasi R.*
4. *The final result of the ranking process is the sum of the normalized matrix multiplication R with the weight vector so as to produce the largest selected as the best alternative (Ai) as the solution. Formula for doing normalization can be seen in the Parallels 2.1. [3]*

$$rij = \begin{cases} \frac{x_{ij}}{max\, x_i} & \text{Jika j adalah atribut keuntungan (benefit)} \\ \frac{min\, x_i}{x_{ij}} & \text{Jika j adalah attribute biaya (cost)} \end{cases} \quad \textbf{(2.1)}$$

Description :
Rij = rating the performance of ternormalisasi
Maxij = the maximum value of each row and column
Minij = the minimum value of each row and column
Xij = the rows and columns of a matrix
Where rij is rating the performance of ternormalisasi of alternative Ai on Cj attributes;

I = 1,2, ... m and j = 1,2, ..., n. Value of preference for each alternative (Vi) given as a: [3]

$$V_i = \sum_{j=1}^{n} w_j \, r_{ij} \qquad \textbf{(2.2)}$$

Description :
Vi = The final value of the alternative
wj = Weights have been determined
rij = The normalization of the matrix

2.4 Analysis Of Workforce Planning Based On the Vacancy Position

1. *Planning*

This stage is the planning stage of human resource needs by regulating the number of employees required which will be done recruitment and selection of employees after obtaining approval from the Director. The Personnel Manager checks how many vacancies exist in the related Division and how much work the company needs. Here are the number of employees in each division at PT. Kanvas Mulia

Table 1. Monitoring of vacancy at the Marketing Division

Division	*Position*	*Number of employees*	*Filled*	*Empty*
Marketing	*Personnel Manager*	*1*	*1*	*0*
Marketing	*Staff*	*14*	*13*	*1*

It can be seen from the table above there is a void at the position of the marketing staff. Of vacancies the position of Manager of Marketing Division will apply to the Personnel Manager of the workforce. Personnel managers and directors. If the application already approved directors and Personnel Managers then will open the job by specifying the terms of the marketing part of the criteria. The following table to fill in the blanks a marketing staff..

Table 2. Terms of Position

Criteria	*Terms of Position*
Level of education	*S1*
Experience	*1 year*
Majors	*Marketing*
Age	*<30*

2. *Organizing*

This stage is the stage of organizing the planning needs and the number of criteria are in accordance with the policy of PT.Kanvas Mulia before making the application form of labor, where the Manager of the relevant Division will provide the application of manpower to the Personnel Manager and Director.

3. *Actuating*

Actuating stage is the stage of implementation, where after the organizing stage the Director will take the decision to approve the application for labor. As in the table below.

Table 3. Approval of Labor Request

Document	*Proposed*	*Menyetujui*	*Keputusan*
Demand for labor marketing staff	*Manager Divisi pemasaran*	*Director*	✓

Once approved, the Director of Personnel Managers will open job vacancies for the needs of the workforce.

4. *Controlling*

This stage is the stage to conduct supervision of submission of application for labor. The Personnel Manager will adjust according to the existing manpower planning procedures at PT. Kanvas Mulia. Upon approval of the Director, Personnel Manager will undertake the process of hiring new employees.

2.5 Analysis of recruitment of new employees

1. *Planning*

This stage is the stage of planning the recruitment and selection of employees, where he did the recruitment and selection of employees if there is a vacancy or a need for additional manpower in the company. At this stage the Personnel Manager will open job vacancies and determine the requisite criteria and their weighting value. Here are the criteria for the recruitment and selection of employees. Can be seen in the table below.

Table 4. Employee Recruitment and Selection Criteria

Criteria	*Initials*
Communication Skills	*KT1*
Interpersonal Skills	*KT2*
Technical Skills	*KT3*
Propesional Skills	*KT4*
Initiatives And Potential To Go Forward	*KT5*
Motivation	*KT6*
Cooperative Attitude	*KT7*
Politeness	*KT8*

2. *Organizing*

The next stage is the stage of checking criteria that has been created, checked against

the vacancy or a need for additional manpower. This phase also checks whether each applicant is already qualified with the criteria that the company on marketing division, if it qualified only then can ketahap next stage of selection assessment of applicants.

3. *Actuating*

This stage is the stage to carry out the recruitment and selection of pre-planned applicants. The Personnel Manager has determined the requirements of the applicant's selection criteria and selection, there are four applicants who apply for the job to be placed on the marketing division of the staff department in need of additional employees with the required amount of an employee. Prior to the assessment phase of the interview will be examined on the suitability of the applicant's file with the position requirement.

Table 5. Checking The Files Of Applicants With The Requisite Position

Name	Level of education	Experience	Majors	Age	Ket
Malik Vajar	S1	1	Marketing	24	According
Siska Damayanti	S1	1	Marketing	25	According
Ardiansyah Ritonga	S1	0	Marketing	23	not appropriate
Muhammad Ilham	S1	2	Marketing	27	According

After administration of the test undertaken phase passes the interview by two appraisers namely Personnel Manager and Manager of the Division. Following are the results from the interviews conducted by the associated Division Manager and Personnel Manager.

Table 6. Interview Assessment Results

Name	Assessment Of Division Managers	Assessment Of Personnel Managers	Total Value
Malik vajar	24	26	50
Siska Damayanti	21	20	41
Muhammad Ilham	27	25	52

4. *Controlling*

This stage is the stage of the examination of the results of selection among applicants who already assessed which one would be the best option for selected and accepted to be employees by the company. The results of the perangkingan obtained from the values of each of the applicants can be seen in the table below.

Table 7. Number Of Rankings

Name Of Employee	Total Value	Ratings
Malik vajar	50	II
Siska Damayanti	41	III
Muhammad Ilham	52	I

Based on the above table, then obtained an alternative employee who has the greatest value is Muhammad Ilham was chosen to be the best choice to fill the vacant position of marketing staff at PT.Kanvas Mulia..

2.6 Analysis Of Employee Performance Appraisal

1. *Planning*

This stage is the stage of employee performance appraisal planning by determining criteria and sub criteria. Performance appraisal for permanent employees is conducted for promotion of position to the employee with the best assessment results and conduct training and supervision to employees who have less satisfactory assessment. The classification of values and the follow-up plan for performance appraisal for employees is as shown in the table below.

Table 8. Classification of Employee Values

Value	Value Classification	Description
0,95 – 1	very good	Getting Rewards & Promotion Recommendations
0,85 - < 0,95	Good	Get A Reward
0,75 - < 0,85	Medium	Following The Training
0,65 - < 0,75	Bad	Following Training
< 0,65	Very Bad	Following the training and supervision

Table 9. Employee Assessment Criteria

No	Assessment Criteria	Sub-criteria	Inisials	weight (%)
1	Technical Jobs	Effectiveness and work efficiency	CT1	15,0%
		Timeliness in completing tasks	CT2	25,0%
		Ability to achieve the target / company standard	CT3	20,0%
		Concern for the quality of work	CT4	15,0%
2	Personality and behavior	Honesty	CT5	2,5%
		Discipline and loyalty	CT6	2,5%
		Obedience to the work	CT7	5,0%

No	Assessment Criteria	Sub-criteria	Inisials	weight (%)
		instructions of superiors		
		Presence	CT8	2,5%
3	Communication within the team	Cooperation	CT9	5,0%
		Communication	CT10	5,0%
		Work attitude	CT11	2,5%

Table 10. Weight Rating

The weight of the criteria and sub-criteria assessment		Assessment weight for attendance sub-criteria	
Value	**Description**	**Value**	**Description**
1	Very less	1	50-60
2	Less	2	61-70
3	Good enough	3	71-80
4	Good	4	81-90
5	Very good	5	91-100

2. *Organizing*

This step is to organize the results of the determination of the weight of each criterion and the criterion that has been performed on stage before. Determination of weighting the results can be seen in the table below.

Table 11. List of Sub-Criteria Weight Value

No	Assessment Criteria	Inisials	Weight (%)	Bobot (in decimal)
1	Technical Jobs	CT1	15,0%	0,15
		CT2	25,0%	0,25
		CT3	20,0%	0,2
		CT4	15,0%	0,15
2	Personality and behavior	CT5	2,5%	0,025
		CT6	2,5%	0,025
		CT7	5,0%	0,05
		CT8	2,5%	0,025
3	Communication within the team	CT9	5,0%	0,05
		CT10	5,0%	0,05
		CT11	2,5%	0,025

3. *Actuating*

This stage is the stage of implementation of the pre-planned performance appraisal. Performance appraisal process using Simple Additive Weighting (SAW) Method. With range for giving 0-5 value and for range of result of assessment 0-1. Here is an alternative table of employees.

.***Table 12. Employee Alternatives***

Name Of Employee	CT 1	CT2	CT 3	CT 4	CT 5	CT 6	CT 7	CT 8	CT 9	CT 10	CT 11
Asep Suryana	2	3	1	5	4	3	4	4	3	2	2
Astrid	2	5	4	3	2	3	4	5	5	4	3
Angga Saputra, SE	1	3	2	1	1	3	4	2	2	4	2
Sugiono	3	3	4	3	4	5	2	3	2	2	5
Amat	4	2	3	3	2	1	4	3	5	4	2
Aming	2	3	5	3	5	5	5	5	4	3	2
Anah Rohanah	5	5	5	5	5	3	3	4	5	5	2
Agung supnadi	3	2	5	3	4	3	4	5	4	3	4
Asep Waluyo	5	5	2	5	4	5	3	4	5	5	4
Amung	5	4	4	3	3	5	2	2	4	5	5

From the table above further formed the matrix of decisions as follows.

$$X = \begin{bmatrix} 2 & 3 & 1 & 5 & 4 & 3 & 4 & 4 & 3 & 2 & 2 \\ 2 & 5 & 4 & 3 & 2 & 3 & 4 & 5 & 5 & 4 & 3 \\ 1 & 3 & 2 & 1 & 1 & 3 & 4 & 2 & 2 & 4 & 2 \\ 3 & 3 & 4 & 3 & 4 & 5 & 2 & 3 & 2 & 2 & 5 \\ 4 & 2 & 3 & 3 & 2 & 1 & 4 & 3 & 5 & 4 & 2 \\ 2 & 3 & 5 & 3 & 5 & 5 & 5 & 5 & 4 & 3 & 2 \\ 5 & 5 & 5 & 5 & 5 & 3 & 3 & 4 & 5 & 5 & 2 \\ 3 & 2 & 5 & 3 & 4 & 3 & 4 & 5 & 4 & 3 & 4 \\ 5 & 5 & 2 & 5 & 4 & 5 & 3 & 4 & 5 & 5 & 4 \\ 5 & 4 & 4 & 3 & 3 & 5 & 2 & 2 & 4 & 5 & 5 \end{bmatrix}$$

Perform Normalization using the formula(2.1)

$$r_{ij} = \frac{Xij}{max\ Xij}$$

The calculations are as follows:

$R_{11} = \frac{2}{5} = 0,4$

$R_{12} = \frac{3}{5} = 0,6$

Here are the results of normalization:

R=

$$\begin{bmatrix} 0,4 & 0,6 & 0,2 & 1 & 0,8 & 0,6 & 0,8 & 0,8 & 0,6 & 0,4 & 0,4 \\ 0,4 & 1 & 0,8 & 0,6 & 0,4 & 0,6 & 0,8 & 1 & 1 & 0,8 & 0,6 \\ 0,2 & 0,6 & 0,4 & 0,2 & 0,2 & 0,6 & 0,8 & 0,4 & 0,4 & 0,8 & 0,4 \\ 0,6 & 0,6 & 0,8 & 0,6 & 0,8 & 1 & 0,4 & 0,6 & 0,4 & 0,4 & 1 \\ 0,8 & 0,4 & 0,6 & 0,6 & 0,4 & 0,2 & 0,8 & 0,6 & 1 & 0,8 & 0,4 \\ 0,4 & 0,6 & 1 & 0,6 & 1 & 1 & 1 & 1 & 0,8 & 0,6 & 0,4 \\ 1 & 1 & 1 & 1 & 1 & 0,6 & 0,6 & 0,8 & 1 & 1 & 0,4 \\ 0,6 & 0,4 & 1 & 0,6 & 0,8 & 0,6 & 0,8 & 1 & 0,8 & 0,6 & 0,8 \\ 1 & 1 & 0,4 & 1 & 0,8 & 1 & 0,6 & 0,8 & 1 & 1 & 0,8 \\ 1 & 0,8 & 0,8 & 0,6 & 0,6 & 1 & 0,4 & 0,4 & 0,8 & 1 & 1 \end{bmatrix}$$

The ranking process using the weights that have been given are:

W= [0,15 0,25 0,2 0,15 0,025 0,025 0,05 0,025 0,05 0,05 0,025]

The results obtained are as follows.

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*V1=(0,15*0,4)+(0,25*0,6)+(0,2*0,2)+(0,15*1)+(0,025*0,8)+(0,025*0,6)+(0,05*0,8)+(0,*

*025*0,8)+(0,05*0,6)+(0,05*0,4)+(0,025*0,4) =* ***0,555***

The following table results of performance appraisal of employees by taking samples of 10 employees

Table 13. Employee Assessment Results

No	*Name Of Employee*	*Division*	*Value (V)*
1	*Asep Suryana*	*Production*	*0.555*
2	*Astrid*	*Production*	*0.755*
3	*Angga Saputra, SE*	*Production*	*0.43*
4	*Sugiono*	*Production*	*0.635*
5	*Amat*	*Production*	*0.6*
6	*Aming*	*Production*	*0.705*
7	*Anah Rohanah*	*Production*	*0.95*
8	*Agung supnadi*	*Production*	*0.67*
9	*Asep Waluyo*	*Production*	*0.845*
10	*Amung*	*Production*	*0.785*

4. ***Controlling***

At this stage examination is done by checking the performance appraisal results obtained from each employee. Here are the results of ratings that have been ranked in accordance with the results of the highest to lowest score. Here are the results of employee performance appraisal decisions can be seen in the table below.

Table 14. The Results Of Performance Assessment Decisions For The Performance Evaluation Of Employees

Name Of Employee	*Final Value*	*Rank*	*Decision*
Anah Rohanah	*0.95*	*1*	*Getting Rewards & Promotion Recommendations*
Asep Waluyo	*0.845*	*2*	*Get A Reward*
Amung	*0.785*	*3*	*Get A Reward*
Astrid	*0.755*	*4*	*Get A Reward*
Aming	*0.705*	*5*	*Get A Reward*
Agung supnadi	*0.67*	*6*	*Get A Reward*
Sugiono	*0.635*	*7*	*Get A Reward*
Amat	*0.6*	*8*	*Get A Reward*
Asep Suryana	*0.555*	*9*	*Following Training*
Angga Saputra, SE	*0.43*	*10*	*Following the training and supervision*

2.7 Analysis of the Appointment of New Employees

1. ***Planning***

Planning is the planning stage by the Personnel Manager to determine the employee who will soon terminate his contract and be appointed to a permanent employee in accordance with the requirements set by the company. The process of appointment of permanent employees in accordance with the rules of the company by looking at the results of performance appraisal conducted by the relevant Division Manager. Rules of employee appointment are still done as in the table below.

Table 15. Rules of Employee Appointment

Contract	*Time*	*Status*			*Ket*
		Contract	*Extension*	*Dismissed*	
First	*1 year*	*1 year*			*Evaluation is good*
Second	*1 year*		*1 year*		*Evaluation is good*
Third	*1 year*		*1 year*		*Evaluation is good*

2. ***Organizing***

This stage is to organize the appointment of permanent employees whether it meets the requirements set in accordance with company rules in accordance with the planning phase. The Director will approve the appointment of contractual employees to remain. Division Manager and Personnel Manager who is responsible for the process of appointment of permanent employees who have been approved by the Director.

3. ***Actuating***

This stage is to organize the appointment of the company's rules in accordance with the planning phase. The Director will approve the appointment of contractual employees to remain. Division Manager and Personnel Manager who is responsible for the process of appointment of permanent employees who have been approved by the Director.

4. *Controlling*

The controlling stage is the evaluation stage of employee appointment that has been done by the Personnel Manager, whether the employee who will be appointed as permanent employee is appropriate or not with company rules. Based on the actuating stage, as long as the employee undergoes the first, second and third contract period does not resign and has a good performance evaluation result based on the valuation made by the relevant Division Manager, it is entitled to be appointed directly to PT.Kanvas Mulia employees with permanent employee status.

2.8 Analysis Of Filling A Furlough Employees

1. *Planning*

This stage is the stage of the planning done by the Personnel Manager to specify the rules on leave at the company. These rules can be seen in the table below.

Table 16. Types and Rules on leave

Name Of Leave	***Time***	***Description***
Annual leave	*12 day*	*The duration of annual leave is 12 (twelve) working days. Annual leave can only be taken by permanent employees. If there is still leave of absence can still be taken in the following years.*
Menstruation leave	*2 day*	*Female employees are exempt from the obligation to work on the first and second day of menstruation.*
Sick leave	*2 day*	*Employees who are ill during 1 (one) or 2 (two) days is entitled to sick leave.*
Family Leave Died	*2 day*	*Can be taken if there is a brother who died*
Maternity leave	*3 month*	*Female employees are entitled to rest for 1.5 (one and a half) months before the time of childbirth and 1.5 (one and a half) months after delivery.*
Miscarriage Leave	*1,5 month*	*Officials of the women who miscarry eligible content break 1.5 (and a half) months.*
Wedding Leave	*3 day*	*Leave of absence taken if employees are going to get married, if the married family then the number of furlough days 2*

2. *Organizing*

This stage is the stage of organizing a leave request, whether the maternity leave is qualified to take leave or not. The Personnel Manager is authorized to approve the submission of employee leave but is inseparable from the relevant Division Manager responsible for the taking of the leave.

3. *Actuating*

This stage is the stage of implementation, where employees who want to take leave will choose the type of leave to be taken. Division Manager will check the type of leave that has been taken and will approve it based on the requirements of the leave that has been set, if not in accordance with the requirements of leave then the application of leave is not accepted.

4. *Controlling*

This stage is the monitoring of the leave application. Division Manager will see how many employees are on leave, and how many appeals on leave are approved. So with the monitoring or control of vacancy position because the number of employees who take leave can be seen.

2.9 Employee Pension Rating Analysis

1. *Planning*

Stages of planning is the stages where the Personnel Manager will provide a pension to employees who have reached 55 years of age limits. the old days of the employees in accordance with the employee's work period. Following are the awarding of compensation days old as determined by the company. Manager of human resources will provide compensation.

Table 17. Employee Severance

Working Period	***Severance***
MK < 1 Year	*2x*
1 Tahun <= MK < 2 Year	*4x*
2 Year <= MK < 3 Year	*6x*

Working Period	*Severance*
3 Year <= MK < 4 Year	*10x*
4 Year <= MK < 5 Year	*12x*
5 Year <= MK < 6 Year	*14x*
6 Year <= MK < 7 Year	*17x*
7 Year <= MK < 8 Year	*19x*
8 Year <= MK < 9 Year	*21x*
9 Year <= MK < 10 Year	*22x*
10 Year <= MK < 11 Year	*22x*
11 Year <= MK < 12 Year	*22x*
12 Year <= MK < 13 Year	*23x*
13 Year <= MK < 14 Year	*23x*
14 Year <= MK < 15 Year	*23x*
15 Year <= MK < 16 Year	*24x*
16 Year <= MK < 17 Year	*24x*
17 Year <= MK < 18 Year	*24x*
18 Year <= MK < 19 Year	*25x*
19 Year <= MK < 20 Year	*25x*
20 Year <= MK < 21 Year	*25x*
21 Year <= MK < 22 Year	*26x*
22 Year <= MK < 23 Year	*26x*
23 Year <= MK < 24 Year	*26x*
MK => 24 Year	*28x*

2. *Organizing*

This stage is the stage of pengorganisiran long is the work of employees who already meet the rules of the pension with the expiration of the work since the age of 55 years was up. The Director will see the awarding of a pension and will approve based on rules already defined by the company. Personnel managers monitor 1 year before retirement he gave retirement employees are concerned, so that planning can be made to perform the acceptance of new employees.

3. *Actuating*

This stage is the stage of the implementation of the grant of a pension officer, where employees will be given a letter of retirement pensions of 1 year before the work ends.

4. *Controlling*

Controlling stage is the stage of evaluation of the grant of a pension, does retirement letter was given to employees is appropriate or not, as well as Personnel Manager will be responsible at this stage for the monitoring of the number of employees who retired with his tenure ended.

2.10 Analysis Of Non-Funcional Requirements

Analysis of non-functional requirements analysis is required to determine the need of specification of the system. This specification also covers that will be built up to the system to be implemented. This needs analysis also determines the required input specification system, the output will be generated and the system process that is needed for processing the input to produce a desired output.

2.10.1 Analysis Of Hardware

Hardware analysis is conducted to know the State of the hardware that exists today on the place of study and the hardware what is proposed to run the management information system of human resources at PT. Kanvas Mulia. Software development process management information systems human resources at PT. Kanvas Mulia takes some minimum hardware specifications that support the passing of this system.

1. *Prosecor dual core with speed 1,5 Ghz 3-4010u 1,7 Ghz Memory 1GB*
2. *Monitor LCD LG with a resolution of 17" (ichi)*
3. *RAM Visipro 2 GB*
4. *Harddisk 80 GB*
5. *PixelView GT 210 64Bit DDR3 512 MB*
6. *Network for internet access.*

2.10.2 Analysis Software

Software needs analysis conducted to know the State of the software that exists today on the place of study and the software in proposing to support the operation of the system.

Analisis kebutuhan perangkat lunak yang dibutuhkan adalah :

1. *Operasi Sistem Minimal Windows 7 32 Bit*
2. *Aplikasi Perangkat Kerja Minimal Microsoft Office 2010 dan Foxit Reader*
3. *Web Browser Google Chorme dan Mozilla Firefox*

2.11 Analisis Kebutuhan Fungsional

Analisis kebutuhan fungsional merupakan analisis yang menjelaskan aliran data, informasi dan proses untuk menggambarkan , merencanakan elemen yang terpisah kedalam satu kesatuan yang berfungsi untuk mendefenisikan pembangunan perangkat lunak.

2.11.1 A Context Diagram

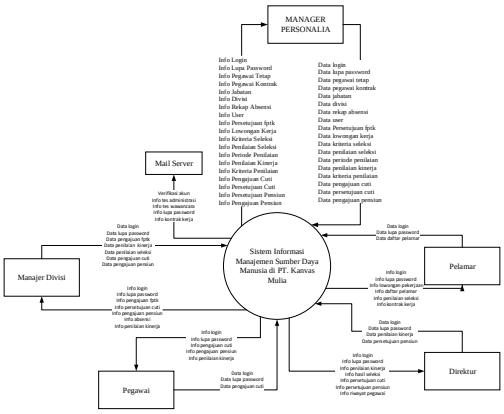


Figure 1. A Context Diagram

2.11.2 DFD Level 1

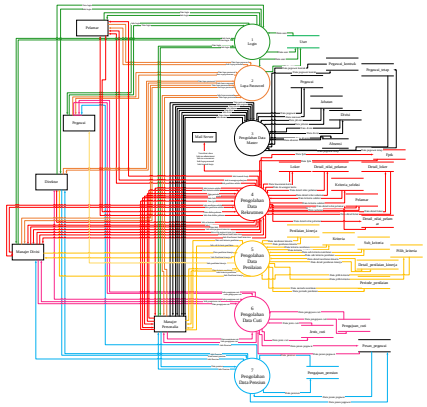


Figure 2 Level 1

2.12 Implementation and Testing

System implementation is the stage of the implementation of the results of the analysis and the design of the system. The implementation aims to confirm with the results of the design so that users of the system can provide input to the development of the system.

System testing is the most important thing that aims to find and fix the error as much as possible in the programme [5]. Testing to test the system using the method of testing, black box testing focuses on the functional requirements for information systems.

2.12.1 Blackbox Testing

Blackbox testing is focused on the functional requirements of the software being built.

2.12.2 Beta Testing

Based on the beta test above it can be concluded that.

1. *The system had enough help in conducting employee performance assessment criteria in accordance with the company.*
2. *The system helps in taking decisions from the results of performance assessment.*
3. *The system is quite helpful in controlling and monitoring the employee furlough leave more easily and quickly.*
4. *The system is quite menbantu in conducting employee the leave approval.*
5. *This system helps in the Office monitor is blank.*
6. *The system had enough help in conducting the recruitment and selection of employees in the administration of the test and the interview.*
7. *This system is quite helpful in conducting logging employees will be given a pension.*

3. CONCLUSION

In this section, describes the conclusions contains the results obtained after the research is done. The result is not a thing that is raw but made a reference and a reference in the future system improvements..

3.1 Conclusion

Based on the results obtained in the research and drafting of this thesis, then a conclusion can be drawn as follows.

1. *The system of human resource information system in PT. Kanvas Mulia, had enough Personnel assist Managers in taking recruitment decisions directly.*
2. *Human Resource Management Information System At PT. Kanvas Mulia, is enough to assist the Division Manager in conducting a performance assessment in accordance with PT. Kanvas Mulia.*

3.2 Recommendations

Based on the conclusions already outlined above, it is expected that future is so that Information Systems human resources management at PT. Kanvas Mulia can be developed more broadly and include other areas so that there is the possibility to synchronize data, so as to facilitate party PT. Kanvas Mulia in managing the company.

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