

Decision Support System for Best Employee Selection at the Tourism Office Using Weighted Product Method

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Abstract:

The selection of the best employees is a fairly important aspect of performance management because it produces information that is useful for employee administrative decisions such as promotion, training, rewards, and other decisions. Carrying out the best employee selection is not only choosing and assigning the right employees, but also important for leaders to plan a policy that is mature in motivating and developing employees. The problem with selecting the best employee in the Tourism Office of West Sumatra Province is the difficulty of making decisions made by the Assessment Officer, namely the Head of Service, Secretary and Head of Subdivision in determining the best employees because of the large employee data, this causes long processing time in decision making. The decision support system for determining the best employee is done by using the Weighted Product (WP) method to determine the weight of each criterion, as well as the use of ranking alternatives in the form of employee data. This research resulted in a decision support system that could recommend the best employees to the Tourism Office of West Sumatra Province based on predetermined criteria, namely, service orientation, integrity, commitment, discipline, cooperation using the Weighted Product (WP) method. The research was conducted by looking for the weight values for each attribute by giving a questionnaire assessment team, then a cracking process was carried out that would determine the optimal alternative, namely employees with the best performance and employees with poor performance. The research proves that this application helps the West Sumatra Province Tourism Office in the process of selecting the best employees using the Weighted Product (WP) method, as well as providing the best employee information effectively and efficiently

Key Word: Decision Support System; Weighted Product; Performance, Tourism.

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I. Introduction

In determining the best employees, an obstacle often appears in the assessment from the decision makers. Constraints in the form of manual assessment methods, namely using paper as the medium, the completed assessment process is printed on multiple sheets of paper by a team of assessment teams, which is possible will be scattered or lost the assessment sheet and it takes a lot of time in the employee appraisal process due to the large number of employee data will be assessed. Therefore, it is necessary to have a decision support system that can assist the Department of Tourism in determining the assessment of employees, so that the information generated in the employee performance appraisal can be reported quickly, precisely and optimally. This conventional method also causes buildup archive, so it requires a special place to store it and information from the results of employee performance appraisals cannot be reported quickly and accurately. Based on these problems, it is necessary to have a system that can help the team appraiser in determining the assessment of employees. One system method decision support that is multicriteria is the Weighted Product (WP) which will be used as the weighting of each criterion in the field. Author's reason taking the Weighted Product (WP) method is a more computational process efficient, faster and the writer better understands and understands this method than with other methods such as the Simple Additive Weighting (SAW) method, Analytical Hierarchy Process (AHP), and Fuzzy Multiple Attribute Decision Making (FMADM). In this research, the writer will make a decision support system for selection of the best employees at the West Sumatra Provincial Tourism Office use the WP method which will make it easier to determine the best employee assessment based on performance, and conduct website-based employee performance appraisals to avoid loss of employee performance data, accumulation of records, and creating the process of employee performance appraisal at the West Sumatra Provincial Tourism Office becomes effective and efficient.

II. Material and Methods

The material used in the study was a questionnaire. The author takes data from various sources including through related journals title, conducted interviews at the West Sumatra Provincial Tourism Office and make direct observations into the field. In the author's research questionnaire Address to the head of the general subdivision and staffing staff who have questions regarding the problem of the decision support system for selecting the best employee Based on Performance Using the Web-Based Weighted Product (WP) Method at the West Sumatra Provincial Tourism Office.

The author's data collection is as follows:

a. Library Research

Is a research in getting data through books, journals and literature related to the topic and theme of this thesis, namely the best employee decision support system with the Weighted Product method (WP) so that there is a complex combination of one another. Too collect references both from the internet and from sources that are regarding the making of a decision support system application for employee selection this best by using a programming language related to decision support systems as well as seeking knowledge of methods used is the Weighted Product (WP) method.

b. Interview

Research carried out by interviewing (interview) is forget information about employee appraisal issues especially regarding employee data at the West Sumatra Provincial Tourism Office. Analysis This data begins by studying all the available data from a variety of sources, both interview data, observations that have been written in the notes field at the research location. The data analysis was carried out since the beginning of the research to the research location until the end of the study.

c. Questionnaire

This questionnaire is very useful for researchers as collecting material data in the form of questions, statements and assessments which include from employee characteristics and employee attitudes. The questionnaire was given to assessment team to obtain more accurate information about employees and problems in the Tourism Office

d. Field Research

Namely research conducted by directly visiting the place or the location which is used as a place of research is the Tourism Office. This research was conducted by direct observation by researchers and data collection using interview techniques. Personnel involved in this research is employees. After the data and information are collected then the authors observe the surrounding environment and obtain data in general by direct viewing, observing and recording one's system currently running at the West Sumatra Provincial Tourism Office.

III. Result

The system is developed by following System Development Life Cycle (SDLC) as follow:

1. Analysis, namely analyzing the problems, needs and solutions will be used as a solution in the West Sumatra Provincial Tourism Office, not yet there is a decision support system for the best employee appraisal computerized which can be used to make monthly reports in the service tourism. Data storage media is needed by the Tourism Office for management in analyzing operational activities at the Tourism Office.
2. Design is a form of design of the system to be made. System which will be created is a decision support system for employee selection. The best use of the web serves as a media selection as well information. The design system uses the waterfall method, developed with a web-based PHP programming language and designed using Xampp as well as the MySQL database.
3. Coding, namely the implementation of system planning from Design real-world situations, using hardware and setups software. The steps taken must be in accordance with the flow, if an error occurs midway through the process, the results are obtained there is no. Starting from determining the number of alternatives or subjects. Then make the assessment criteria according to the agreement and determine the importance weight of each criterion. After giving weight of importance, then the weight is repaired using the formula in the Weighted Product (WP) method. Then do the multiplication vector S by means of matrix multiplication. The last process is finding vectors V by dividing each vector S by the overall result vector S to determine the value to be selected. The results of this stage is a computer program in accordance with the design that has been made on Design stage.
4. Testing is useful for determining whether the system is made to function well and can achieve the goal of making it. Testing too aims to eliminate and minimize system errors was built. By testing the system will be known can be used for real life interests or require improvement.

The analysis of the decision-making process consists of several stages, namely: determine the criteria and weight of the assessment. In determining the selection of employee the best at the West Sumatra Provincial

Tourism Office applies several criteria in the assessment. The assessment criteria applied by the Tourism Office West Sumatra Province can be seen in the table 1.

Table no 1 :Best Employee Criteria

No	Code	Criteria	Weight
1	K001	Service Oriented	4
2	K002	Integrity	5
3	K003	Commitment	4
4	K004	Discipline	3
5	K005	Teamwork	3

IV. Discussion

The system implemented as the following diagram.

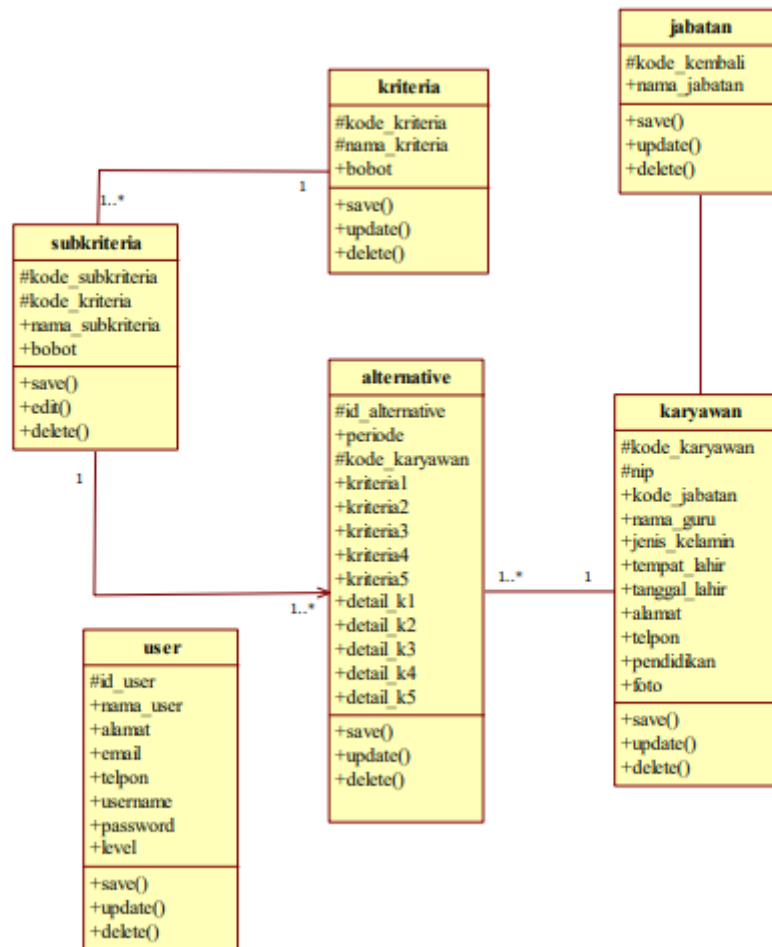


Figure 1. Class Diagram of Decision Support System

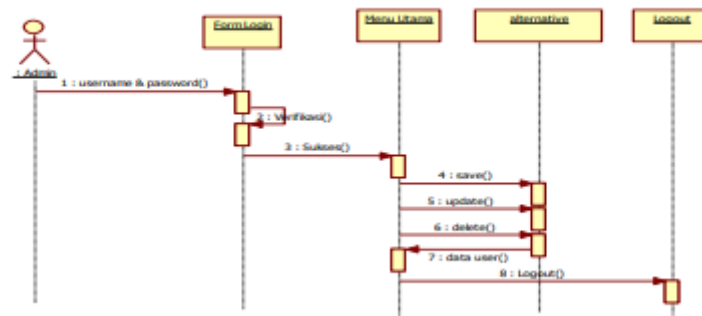


Figure 2. Activity Diagram of Decision Support System



Figure 3. Implementation of Web-Based Decision Support System

V. Conclusion

The conclusion that can be drawn from the implementation of the Weighted Product Algorithm in the Selection of the Best Employees at the West Sumatra Provincial Tourism office as follows:

- a. With the existence of the best employee performance appraisal decision support system this, no more data loss, because the data is stored securely inside system.
- b. With the decision support system for selecting the best employees, data processing is more effective and efficient, as well as employees who can be assessed see the results of employee performance appraisals quickly, precisely, and accurately.
- c. With this decision support system for selecting the best employees, can solve the best employee performance appraisal data archiving, because the data is saved directly to the system.

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