

# Decision Support Information System For Provision of Assistance Street Vendors Using Business Facilities Simple Additive Weighting Method

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## Abstract

*The purpose of this study was to design a decision support system for providing business facilities for street vendors using the web-based Simple Additive Weighting method. The research method used in this study is a qualitative method with a descriptive approach. Data collection techniques used are by observation, literature study and interviews that have a close relationship with the main problem and the system development method used is the waterfall system development method. From the results of the research conducted found that the subjectivity of decision making assistance is only determined based on the evaluation of the data that is owned and does not have definite criteria, so that decision making assistance has not found maximum results. Decision support system for providing business facilities for street vendors using the Simple Additive Weighting method produces sub-criteria aspects and sub-criteria values, namely aspects of residence, income aspects and aspects of dependents of school children, each criterion has an attribute to be used as a reference for granting assessment help.*

**Keywords:** *Decision support system, Street vendors, Simple Additive Weighting method*

## 1. Introduction

Human life in modern times has depended on information systems. An agency no longer sees computer technology as a tool for process automation only. Computer technology has been seen as important, combining information technology with a selection strategy to gain a competitive advantage is very important for an agency. So that without realizing it, agencies will increasingly rely on information technology. The Office of Industry & Trade of Kebumen Regency is the implementing element of government affairs in the industrial and trade sectors which is the regional authority. This agency has the task of assisting the Regent in carrying out government affairs in the industrial and trade sectors which are under regional authority as well as assistance tasks given to the regions. One of the duties of the Industry Service is to guide, empower, develop and improve the welfare of street vendors by providing assistance with business facilities such as carts and tents to street vendors who are included in the data collection of the Kebumen Regency Industry & Trade Service. Providing business facilities assistance to street vendors is a tangible manifestation of the Kebumen Regency Industry and Trade Service for the welfare of street vendors in Kebumen Regency. However, currently the provision of business facilities to street vendors is not yet fully effective because the subjectivity of the decision making of assistance is only determined based on an evaluation of the data held by the Kebumen Regency Industry & Trade Office and does not yet have definite criteria, so in decision making who getting assistance is still not finding the maximum results.

To be able to make decisions in terms of receiving assistance so that targets are met, a system is needed to assist the Office of Industry & Trade of Kebumen Regency in making decisions to provide assistance to prospective recipients of assistance. A decision support

system using the Simple Additive Weighting method is needed to facilitate decision making. This Simple Additive Weighting method was chosen because it can determine the weight value for each attribute, then proceed with a ranking process that will select the best alternative from a number of alternatives, in this case the alternative in question is the one who is entitled to receive assistance based on the specified criteria. With this ranking method, it is hoped that the assessment will be more precise because it is based on the criteria and weight values that have been determined so that more accurate results will be obtained on who will receive the assistance.

## 2. Research Methodology

### 2.1. Data Collection Techniques

#### a) Observation

Observation is a daily activity in which humans use the five senses of the eye as the main aid in addition to the other five senses. Therefore, observing is a person's ability to use his observations through the work of his five senses, namely by observing and systematically recording the symptoms that are studied in depth about something in depth from a problem in the hope that these findings can explain why these problems can occur.

#### b) Literature Study

Literature study is a data collection technique to collect information that is relevant to the subject matter to be studied, namely by conducting study reviewers and searching and studying various kinds of literature or information sources related to the problem being solved and the system to be built.

#### c) Interview / Interview Method

Ask directly the employees at the Kebumen Regency Trade and Industry Service concerned as data collection materials.

### 2.2. Software Development Methods

The system development method used in this research is the waterfall method. Waterfall model is a simple classical model with a linear system flow. The output of each stage is the input for the next stage (Kristanto, A. 2004). The steps that must be taken in the Waterfall methodology are as follows:

- a) Software Requirements Analysis
- b) Design
- c) Code
- d) Testing
- e) Maintenance

## 3. Results and Discussion

### 3.1. Description of the Procedure

#### a) Use Case Diagram of the Current System

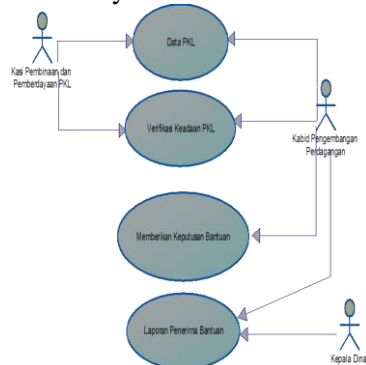
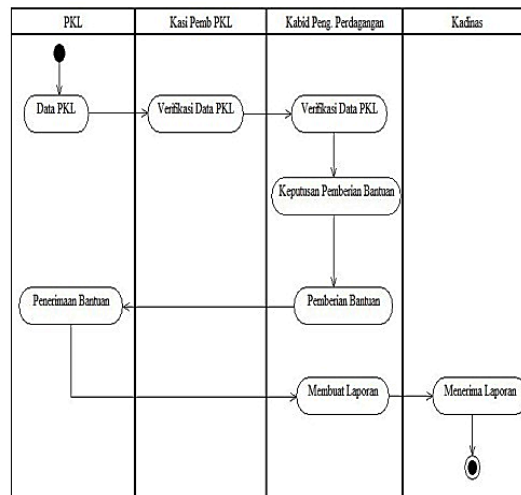


Figure 1. Use Case Diagram of the Current System

## b) Activity Diagram of the Current System



**Figure 2. Activity Diagram of the Current System**

## 3.2. Conclusion of Analysis Results

From the results of the analysis that has been carried out, it can be concluded that the provision of business facilities assistance to street vendors has not been fully effective because:

- The criteria used as a reference for beneficiaries are still not accurate.
- The decision to provide assistance is currently still subjective based on the decision of the Head of Trade Development Section.
- Decision-making on who will receive assistance has not yet found maximum results.

After identifying the problems that exist in the old system, then an analysis is carried out on the system that is running with the system to be created or developed, namely:

- The new system will clarify the criteria that support the provision of business facilities for street vendors at the Industry and Trade Office of Kebumen Regency.
- In the new system, the assessment will be more precise because it is based on predetermined criteria and weight values.
- The results obtained in providing street vendors business assistance will be more accurate and right on target.

## 4. Conclusion

Designing a Decision Support System for Providing Business Facilities for Street Vendors Using the Web-Based Simple Additive Weighting Method at the Office of Industry and Trade of Kebumen Regency is a development of the existing system. Various problems that arise are expected to be handled with the existence of this new system, there are conclusions that can be drawn, among others:

- Decision making in the provision of assistance that is currently running is subjective and only determined based on an evaluation of the data held by the Office of Industry and Trade of Kebumen Regency and has no definite criteria.
- There are no criteria that are used as a basic reference for decision making in providing assistance, so that in decision making who is currently receiving assistance has not found the maximum result, it is necessary for a decision support system to provide assistance for street vendors using the method Additive Weighting web based.
- The existence of a decision support system for providing street vendor business facilities using the Simple Additive Weighting method produces several aspects

of sub-criteria and sub-criteria values such as aspects of residence, aspects of income and aspects of dependents of school children, each of which criteria has attributes for used as a reference for assessing the provision of assistance so that it can assist in decision making in the selection of aid distribution to be right on target.

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