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PROTOTYPE OF DECISION SUPPORT SYSTEM DEVELOPMENT IN DETERMINING RASKIN RECIPIENTS CANDIDATE

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Abstract

Decision-making support systems for beneficiaries deserving of the poor are a decision support system that can be used as a tool for assessing the feasibility of providing assistance. The established system only knows the rankings of the population proposals, the population data that has not been stored in the population database, the population data that has not been integrated with the data category, the criteria data, and value data so it requires the process of data input. In the process of data collection methods used are Interviews, Observation, Documentation, Literature Review while the software development methodology used is Prototype. The process of making software by using Macromedia Dreamweaver, language programming used is PHP, Javascript, HTML, and Cascading Style Sheet (CSS). This research aims 1) Make the development of decision support system in giving assistance for the poor in Cekok Ponorogo. 2) Conduct the mapping for proposed poor family and received assistance in graphic form. The conclusions of the development of decision support systems are; 1) Population data stored in the form of data base that facilitate the process of searching data. 2) The Recorded of the proposed data and who received assistance for each hamlet in Kelurahan Cekok Ponorogo in the form of a graph. 3) Reduce errors in the submission the proposed data of potential beneficiaries.

Keywords: Decision Support System, Database, Prototype, PHP

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INTRODUCTION

Implementation of the program in the cutting down of poverty has not been able to

achieve the expected goals, because in processing the data base of poor still overlaps so that in processing the data of poor family is still difficult to support decision maker. The

available data information of poor family data is still in the form of files that have not been saved as the format of flat table (Microsoft Excel) which is the result of the survey in the Cekok village.

The previous research of Desriyanti and Munirah (2015) the data generated has been known who are proposed to receive yet it has not detected who has ever received the assistance so that the submission can occur repeatedly, in the decision support system there is no database of all families in Kelurahan Cekok where divided into 3 Krajan, Sidomulyo, Jambean. The aims of this study are: 1) Make the development of decision support system of the poor in the Cekok Village Ponorogo. 2) Conduct the mapping for proposed poor family and received assistance in graphic form. The problems to be solved by using the application of decision support system is how to find out the number of poor families in cekok sub-district, especially based on the criteria in previous research which are: house condition, consumption level and household expenditure, occupation type and last education of patriarch, number of family member, income level and family aset. According to Gorry and Scott Morton, DSS is an interactive computer-based system, which helps decision makers to use a variety of data models to solve unstructured problems (Aronson, Liang, & Turban, 2007)

One of the models in the DSS is the Multi Attribute Decision Making Model (MADM), and one of the methods is the SAW (Simple Addictive Weight) which is used in this study. The MADM error ends with the ranking process to get the best alternative which is obtained based on the overall value of references given by Kusumadewi, Hartati, Harjoko, & Wardoyo (2006). According to Daihani (2001), the concept of Decision Support System (DSS) was first

introduced in the early 1970s by Michael S.Scott morton explained that "Decision Support System is a computer-based system that is performed to assist decision makers in utilizing data and certain models to solve unstructured problems. According to Krishnamuti (2008) in his book entitled developing a work in the Process Tracking System Via a Decision Support System. Decision Support System is an information system that has characteristic as a support system in making decisions to solve a problem and to make decisions based on information.

Information is the most important in collecting a data. The definition of information is: "The data which is processed into a form that is more useful and more meaningful for those who receive it." (Jogianto, 2005). The previous research which is used as a reference in research development are : a) Kaswidjanti, Sabihaini, Gusaptono, & Aribowo, (2015) entitled Research Development of Decision Application Support System of poverty eradication program in Bantul District, by software development methodology used is prototyping with the result a list of poor families that have been selected based on user criteria. b) Setyanto (2014) entitled Research Development of Decision Application Supporting System of employee permormance by SAW method (case study PT Harrison and Gil-Java Semarang). Research methodology used research and development approach model, in developing used water fall system with the result a list of the best employees and deserved to get achievement appreciation and decent benefits for outstanding employees. c) Fatona (2013) entitled Research Development of Inventory Decision Support System and quantity of goods purchase using EOQ (Economic Order Quantity) methodology, this research methodology was using Research and

Development / R&D method, with water fall development model, with the result decision support system can control inventory and purchase quantities of goods by using EOQ can assist decision makers in controlling stock provision and amount of goods purchased at the company. The results of these three references can be concluded that decision support system can be one solution by using the appropriate method as required. The interpretation of system according to Taufiq (2013), a system is "a collection of sub-systems both abstract and physical that are integrated and collaborate to achieve certain goals". According to Sutarman (2009) "a system is a collection of elements that are interconnected and interacted in one unit to run a process of achieving a major goal".

METHOD

The design of this study is a continuous of the previous system, where the problems that arise with no population database which will be able to record the data of people who apply and receive assistance for each year. In the early stages of this research development, it began by collecting the data by interview and survey techniques to the location, so that the data on the system can be added and identified the needs. Population database and interface design was the next step. At the stage of this research, the researchers had already have a plan of what designing applications is needed. The addition of application features can already be designed at this stage. The research location of this research is in Jl. Sunan Kalijaga, Cekok sub-district, Babadan Ponorogo. Cekok is one of the villages in Ponorogo Regency located in the eastern part of the city center. It is divided into 3 area namely Krajan, Sidomulyo, Jambean.

Cekok has 24 neighborhoods, which is each of it consisting of 1674 families. Data Collection Techniques in this study were conducted with a) Interviews. The researcher collected the data by conducting direct interview with chief and staffs of Cekok sub-district, related to the research. In this step, the researchers had been obtained the overall data population, data population for each area, and other supporting data. b) Observation. Observation is a way or technique used in collecting data with direct observation of the object to be examined. This method is used to search factual information. The observation was conducted by researchers in the research location, Cekok Babadan Ponorogo. c) Documentation. Documentation is to documentate the obtained data from the rest techniques. The method of System development method can be seen in figure 1.

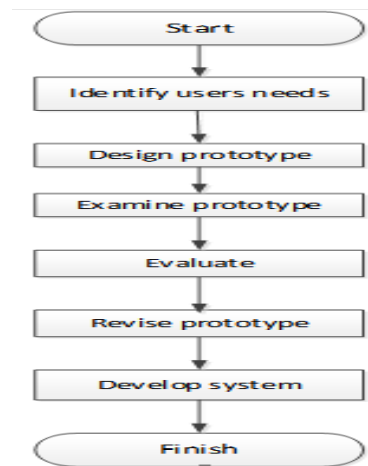


Figure 1. System Development Flow

RESULT AND DISCUSSION

The result of data processed on the system, in this case the process will start from login for admin. The menu on the rest of the system that can input were data, data processing, result, report and result of its statistics were:

homepage, population, proposed data, recapitulation data, statistic, sub-district data, assistance data, data categories, data criteria, value data, user data. In the building system, admin input the data of the population which was appropriate in dukuh, they were; Jambean,

Krajan and Sidomulyo, data assistance, data categories, data criteria, proposed data. While the menu of decision makers in this study was the headman; population, proposed data and data recapitulation.

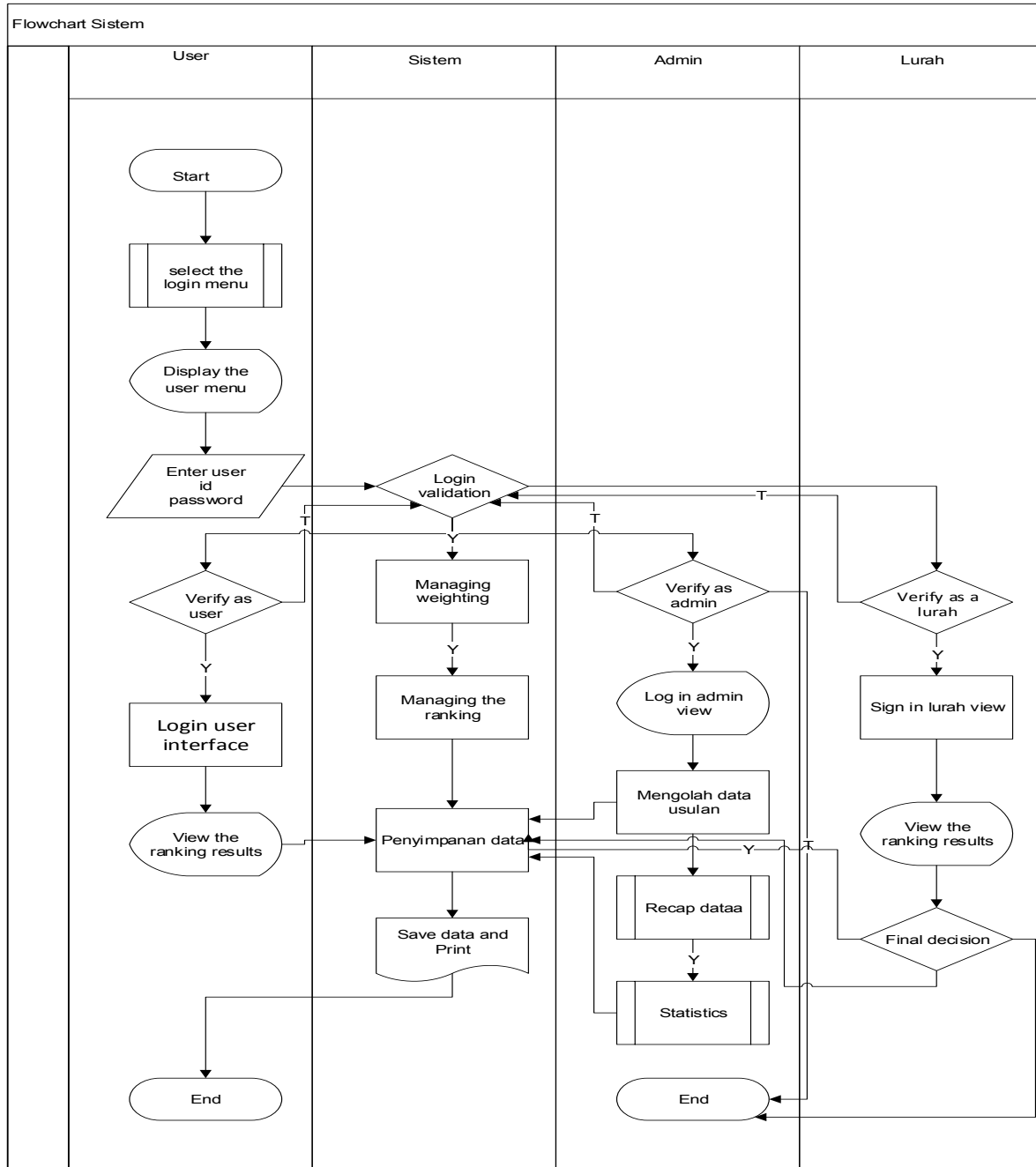


Figure 2. Flowchart System

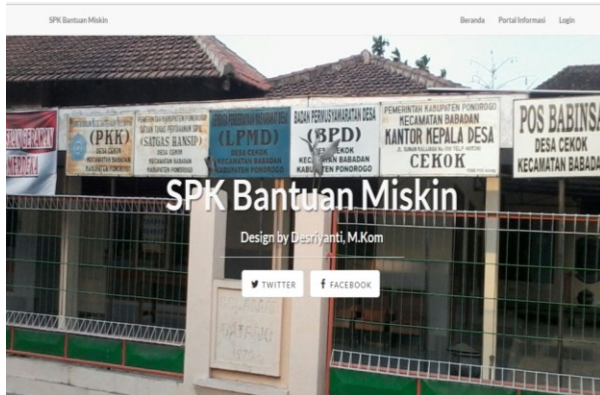


Figure 3. Front view

The admin menu will load population, proposed data, data recapitulation, statistics, sub-district data, assistance data, data categories, data criteria, data value, user data can be seen in Figure 4.

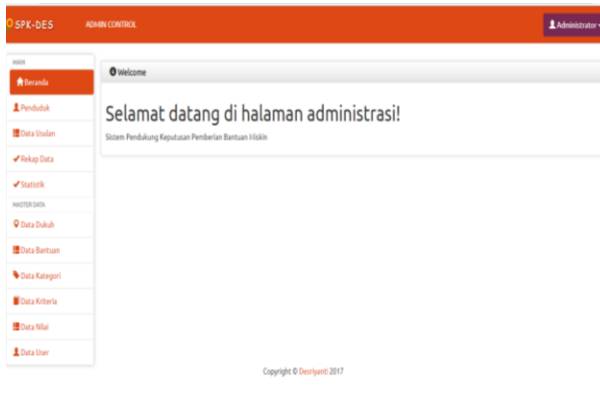


Figure 4. Display on the admin page

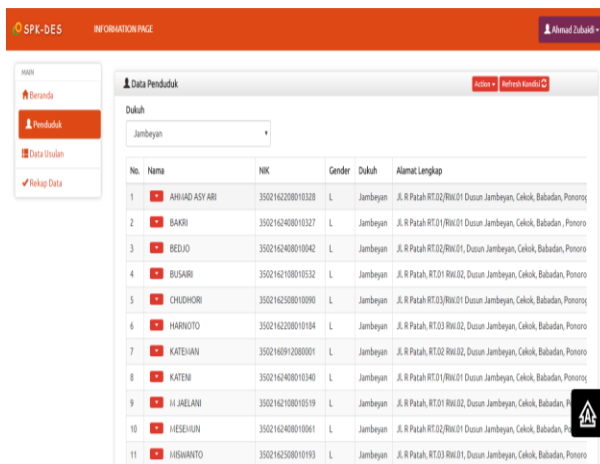


Figure 5. Population Data

The data population menu contains each sub-district name; Krajan, Jambeyan, Si-domulyo. Can be seen in Figure 6.

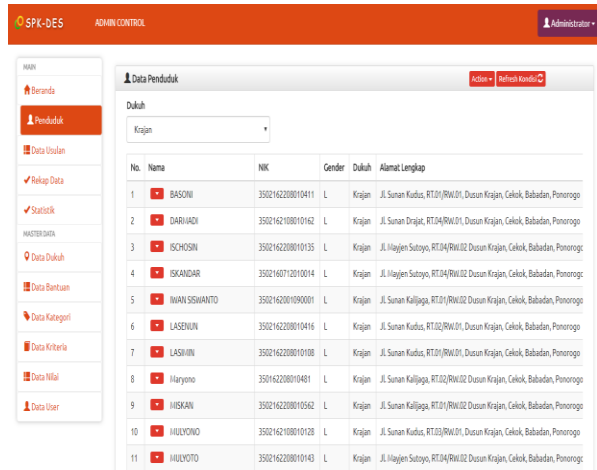


Figure 6. Records of population data

After the data of each sub-district was already input, it can be continued on the menu of proposed data, where the names of candidates who have been ranked can be proposed. As in Figure 7.

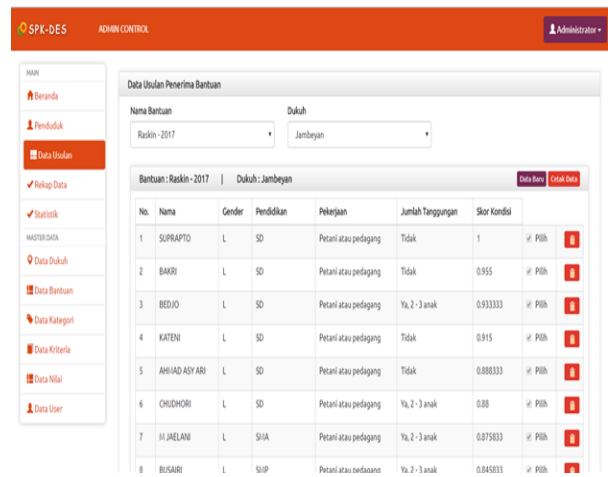


Figure 7. Data on proposed beneficiaries

Next, the proposed data of the proposal will enter to the decision maker's yard, that was the headman. Seen in Figure 8.



Figure 8. Lurah Login

The decision maker's front page contains of menu; population, proposed data, data recapitulation, which can be seen in Figure 9.



Figure 9. Front View of The Decision Maker

Population data that have been input can be seen by the Lurah, as in Figure 10

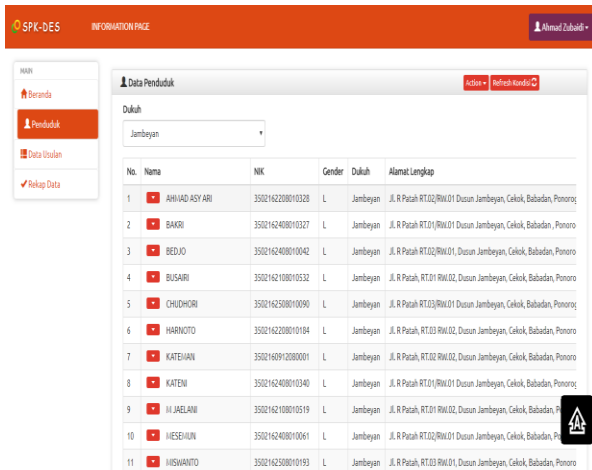


Figure 10. Records of Population

Once the proposed population data was already existed, then the chief can choose who was eligible to get assistance, where the result of processed data and proposed data will appear the scored and ranked automatically, which can be seen in Figure 11.

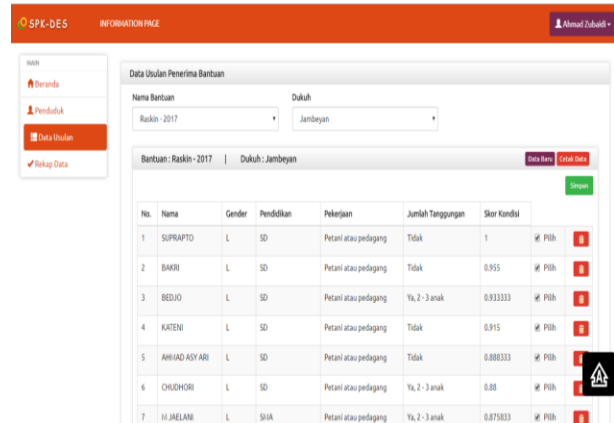


Figure 11. Data Decision by Lurah

After the data has been decided, it will be recorded in the data recapitulation in the form of a final report that can be printed as a written report of name that have been decided as recipients assistance in the village, which can be seen in Figure 12.

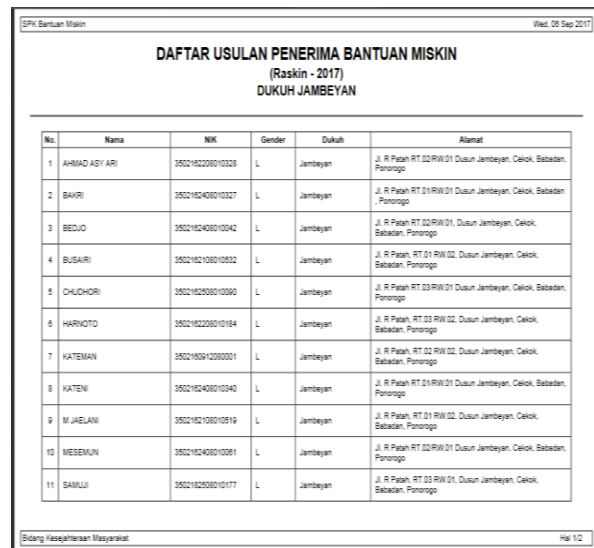


Figure 12. The Final Report of a List Name Who Will Recipients Assistance

For each sub-district, it can be seen how much data submitted, proposed data and beneficiary data in the form of a statistic display in the form of a picture diagram shown in Figure 13.

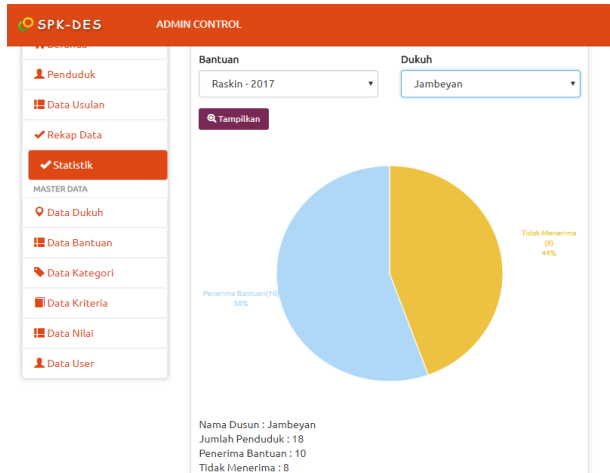


Figure 13. Sub-district Statistic Data

While the data for overall (district) can be seen in Figure 14.

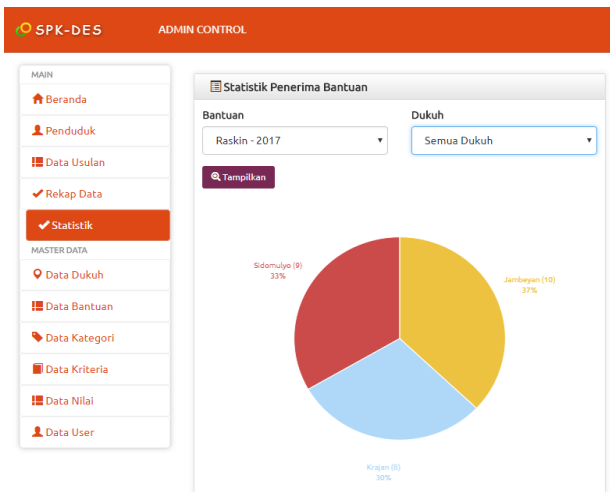


Figure 14 District Statistic Data

CONCLUSION

From the results of this research, it can be concluded that prototype system can be built

as a tool in deciding who is eligible to get assistance in accordance with the criteria that have been determined by the chief and staffs of village. The prototype of the built system can map the proposing, proposed and receiving population for each sub-district, so that the data can be determined by the percentage for each sub-district. The system built is local area network, where in its use was still in certain environment, so that can expand functionality by using internet by put a Public IP to be more effective

ACKNOWLEDGMENTS

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