Population Management Information System And Social Assistance At The UKM And Trade Cooperative In The City Of Pematangsiantar

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ABSTRACT (10 PT)

At the Office of Cooperatives, Small and Medium Enterprises and Trade in Pematangsiantar, the existing forms of Population Management and Recipient Data Management still use manual concepts in the form of paper leaflets that are stored manually and are not properly documented with computer technology. This form of management that has not been computerized like this will certainly cause various problems if it is continued, considering the large amount of population data to be managed which must be adjusted to their respective regions. Therefore, we need a system that functions to assist Population Data Management, as well as manage data on residents who receive assistance from the government so that the data is in accordance with the area and in accordance with the assistance received.It is hoped that the Population Management System and Social Assistance can alleviate and assist the work carried out by all employees continuously every day, with the aim of increasing convenience and efficiency at the Office of the Office of Cooperatives, Small and Medium Enterprises and Trade in the City of Pematangsiantar.

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1. INTRODUCTION

In the present Information Technology (IT) is very developed. In everyday life everything is completely computerized. Such as in schools, offices, shopping centers, and others that have used computerized systems[1]. With the emergence of this computerized system, it is hoped that it will make it easier for us in all aspects of life. With today's technological advances, now some people are trying to process a good and easy-to-use computerized system to help human work. The existence of a wide network and easy and fast. With the development of this computerized system, every company wants to change the old system to the new system so that it is not left behind from the others[2].

Basically, in a government agency it is supposed to carry out appropriate state services and based on the Indonesian Republic Law No. 25 of 2009 concerning State Services. Where, the law seeks to treat citizens as residents (citizens), not customers or clients and is oriented towards the interests of state services[3].

Management information systems are interconnected component units that collect, process, store, and distribute information to support decision-making and management within an enterprise. Management information systems play a strategic role in today's free competition[4]. Integration of information systems and information technology with other components such as processes, procedures, human resources, management and related components to create a reliable management information system, is one of the keys to company success[5].

Population data information systems have been developed to fulfill government services to the community. Various media have been used in its development, ranging from web, desktop and others to be applied to population data information systems. Population data collection is an important part of the State's population, this aims to build the best possible population administration and aims to provide benefits in improving governance and development[6].

The UKM and Trade Cooperative Service or commonly referred to as DISKOPERINDAG is one of the fields engaged in several fields of obtaining business permit licensing letters of recommendation for registration of copyrights and trademark rights, industrial business licenses, cooperative saving and loan business licenses, and so on.

In managing beneficiaries from the Cooperative Service and other assistance it is still in paper form and there is also digitalization that is not so complete that sometimes there is data from residents or names of recipients that do not match their area. It is still less effective and still time consuming. The problem with the Office of Cooperatives, Small and Medium Enterprises and Trade in the City of Pematangsiantar is how to prevent recipient data from entering the wrong area and can be checked easily. Because, if there is recipient data that is not in accordance with the area, then it will take a long time to find and even re-enter data that is not inputted or does not match the area. With the problems described above, a system was created, namely a web-based activity management information system using the waterfall method.

SDLC or Software Development Life Cycle or often called the System Development Life Cycle is the process of developing or changing a software system using models and methodologies that people use to develop previous software systems (based on best practices or methods well tested[7]. The waterfall method is a model developed for software development[8]. This waterfall model proposes an approach to software development, starting with the overall level of system progress from analysis, design, coding, testing, and maintenance[9]. From several previous studies it is known that the waterfall method is considered to be able to provide convenience in the software development process because this method is done sequentially without having to go through one previous stage[10]. Then in software modeling the author uses UML modeling because of the flexibility of UML modeling and the many and varied UML diagrams[11]. The waterfall method is a thing that describes a systematic and sequential approach (step by step) in a software development. Stages with the specification of user requirements then proceeds through the planning stages, namely planning, modeling, construction, a system and delivery of the system to users, support for complete software that is generated[12].

With the existence of an activity management information system, it is hoped that it can help activities or activities in the trade sector such as cheap market activities, checking for dangerous food ingredients, checking goods worth selling, controlling prices, implementing promotions, monitoring prices, monitoring cigarette excise and others[13]. The aim is to make it easier for employees, especially in the field of trade, to check the schedule of activities to be carried out at this time[14].

2.　RESEARCH METHOD

2.1. Software Developments Methods

The model used in the development of this software using the waterfall model[15] which is divided into five stages, namely:

a. Software requirements analysis

At this stage the researcher conducted surveys and investigations regarding the Activity system and data on several activities in the trade sector to obtain information and be able to find out what is needed by the activity management system.

b. Design

The process of designing this system begins with the creation of databases such as the current system flowmap, follow-up system flowmap, Unified Modeling Language (UML), use case diagrams, sequence diagrams, database design and continued with system implementation.

c. Program code generation

At this stage is the creation of the program code used in translating the previous stages. The program code used is visual studio code as a text editor, PHP programming language and MySQL and Xampp for the database.

d. Testing

System testing that has been integrated is tested with an interface that is has been made so that this test can find out directlyhow the software can work normally before used by users.

e. Support and Maintenance

By doing unit testing on the form, which consists of the login form, the form, the activity location data section, and the activity schedule data section.
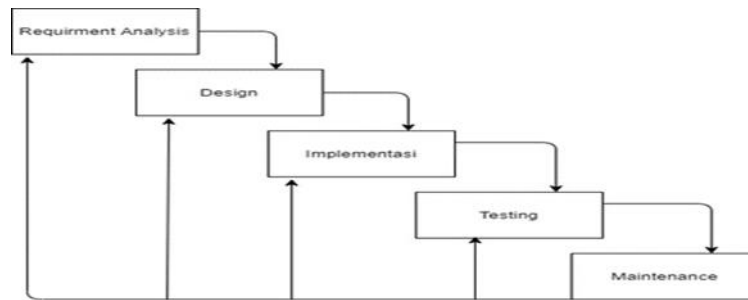
Figure 1. Waterfall Method

2.2. Method Of Collecting Data

The methods used for get information and data required are as follows[16]:

a.   Observation

According to Supriyati (2011) The definition of observation is a way to collect research data by having a naturalistic nature that takes place in a natural context, the perpetrator participates fairly in interactions[17]. According to Basrowi (2012) Observation is defined as a technique that is carried out by conducting researched observations and systematic recording[18]. In this case the researcher collects data by directly observing the process of activities carried out by employees of the trade sector at the Office of UKM cooperatives in Pematangsiantar City, for example participating in the search for data on residents who receive assistance.

b.   Interview

According to Anas Sudijono (2012) Interviews are a way of gathering information material which is carried out by conducting oral debriefing unilaterally, face to face, and with a predetermined direction and purpose. The researcher conducted interviews with employees in the trade sector at the Office of Cooperatives for UKM and trade in Pematangsiantar City[19].

c.   Literature Review

The research was conducted by collecting data and information based on book reference sources from libraries and the internet related to activity management information systems[8].

3.   RESULTS AND DISCUSSION

3.1. Flowmap

A flowmap is a mixture of a map and a flowchart, which shows the movement of things from one location to another, such as the number of people in a migration, the number of goods traded, or the number of packets in a network. Flowmap helps analysts and programmers to solve problems into smaller segments and helps in analyzing other alternatives in operation[20]. The Website Flowmap can be seen below :
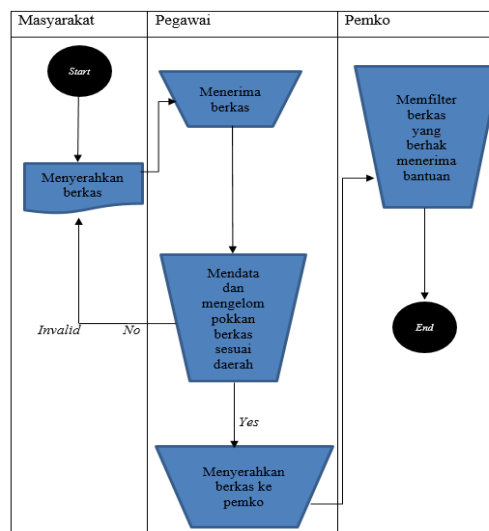
1.   Running system flowmap

Figure 2. Running system flowmap

Explanation of figure 2 explains the analysis of the ongoing system which discusses the analysis of the Population Management System and Social Assistance that is currently running at the Office of Cooperatives, Small and Medium Enterprises and Trade in the City of Pematangsiantar. In practice, the process of filtering data on beneficiary population is still done manually, namely by only filtering recipient files and inputting them in Excel. Based on the brief description above, the author can conclude that the Population Management and Social Assistance system at the Office of Cooperatives, Small and Medium Enterprises and Trade in the City of Pematangsiantar uses a system that has not been computerized or can be said to be manual, so this causes several problems that arise including: takes a long time In data filtering, recipient data may be scrambled or misplaced and recipient files may be lost or corrupted[21].

2. Proposed system flowmap

Figure 3. Proposed system flowmap

3.2. Unified Modelling Language (UML)

The Unified Modeling Language (UML) is the industry standard language for defining, visualizing, constructing, and documenting the artifacts of object-based software systems[22]. Can Simplify complex software design processes, create blueprints for construction. It is important to note that although UML brings structure to the process of modeling and diagramming a project, it is not a development methodology and does not provide any formal structure with regards to how diagramming techniques are used[23].

3.3. Activity Diagram

Activity Diagram is a diagram that describes a workflow or activity in the program being designed. This flow or activity can be in the form of menus or business processes contained in the systems[24], [25].
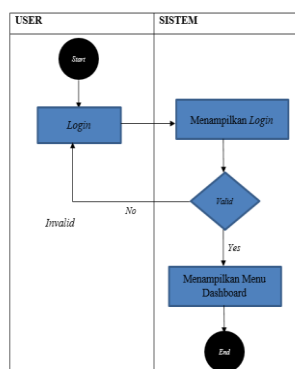
1. Login

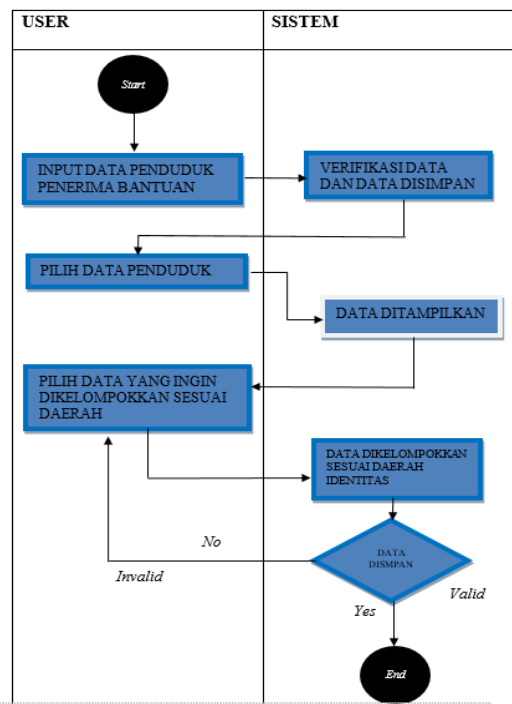Figure 4. Activity Diagram of Login

2. Populaton Management

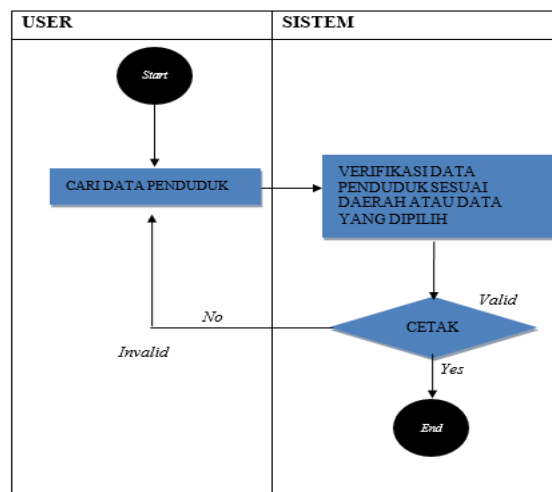Figure 5. Activity Diagram of Population Management

3. Print Report

Figure 6. Activity Diagram of Print Report

a. Database Design
   Database is a data storage system where data that has been inputted is stored in one storage system. Database systems have been widely used in many fields, not only in the field of technology, even now databases are used in companies from small to large, universities, offices, supermarkets and even homes[1].

4.4. System Implementation

The display below is the login page view. Which can be accessed by the admin especially for employess in the Office of Cooperatives, UKM and Trade in Pematangsiantar City. There is data that must be filled in first, namely by entering the Email and Password that have been registered.

Home Page
The following is the home menu where this menu is the initial menu when the application is accessed. This menu displays initial information about the Aid Recipients in Pematangsiantar City.

Figure 7. Home page view

Login
This application can only be accessed by admins or employees. Which to log in requires the username and password that has been provided. When already logged in, it will go to the dashboard menu.

Figure 8. Login Page View

Dashboard page
This menu displays the number of residents in each district. Also displayed are several menus such as population data, housing condition data, population classification, assistance classification and control panels.
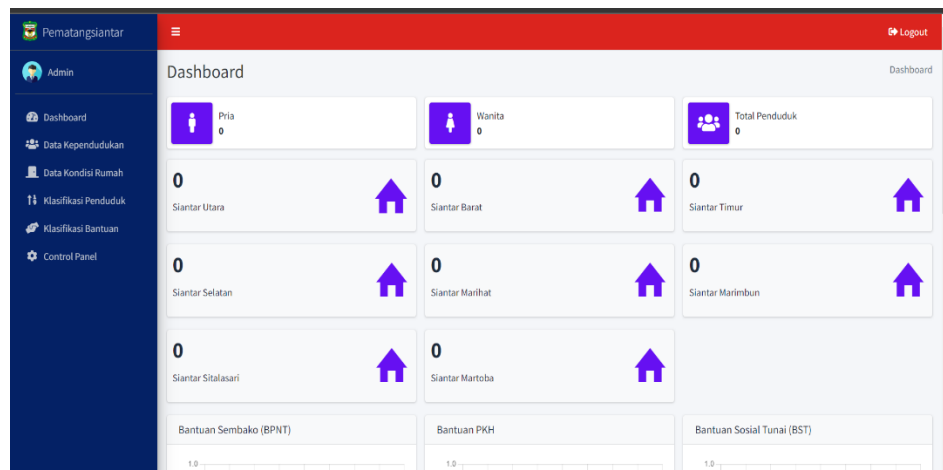
Figure 9. Dashboard Page View

- Population Data

  For this menu serves as a place where population data is stored. Where data will be inputted first and then stored in the menu in Figure 4.10. If you want to add new data, we can click the Population Data menu which is blue, after clicking it will be directed to the add/edit data menu as shown in figure 4.11 below. This population data can be printed if needed.
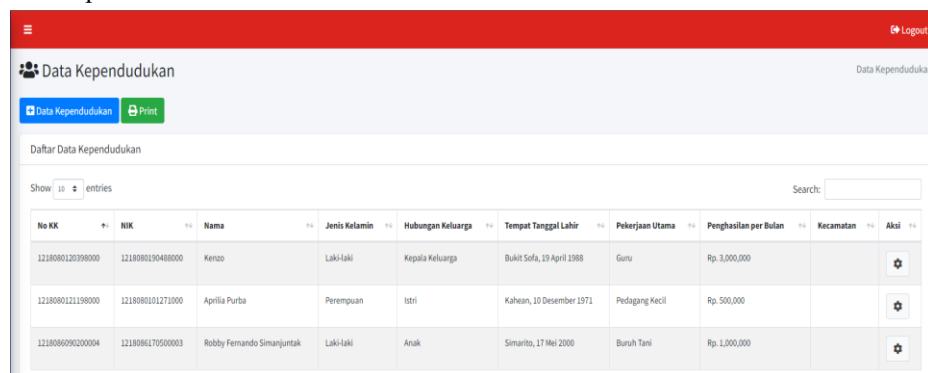

Figure 10. Population Data Page View

In Figure 4.11 below, is the population data editing menu. In this menu, it functions as a menu for adding, editing citizen data. Here, we will fill in the data according to the files that have been submitted as submissions for assistance.

Figure 11. Population Data Edit View

- Home Condition Data
  This menu serves as a menu for beneficiaries. Which is the data on the condition of the house of the beneficiary. And in this menu you can add data on the condition of the house from the beneficiary by selecting the Blue House Condition Data menu and being directed directly to the added data menu as shown in Figure 4.13. This data can also be printed with the green print feature.

Figure 12. Home Condition Data Page View

In Figure 4.13 below, is the menu for editing data on the condition of the house. In this menu, we can add, edit data on the condition of the house which is intended as a condition for receiving social assistance that has been submitted previously.

Figure 13. Home Condition Data Edit Page View

- Population Classification

  Functions as a population data menu in each sub-district. How many districts will be displayed in this menu. The data in the table in this menu comes from data that has been added to the population data menu.

Figure 14. Population Classification Page View

- Aid Classification

  In this menu, there are several classification of assistance such as PKH, BPNT, BST and BLT Regional Assistance. Which is where this menu displays data on residents who receive assistance according to the assistance obtained. This data is obtained from citizen data that has been previously inputted according to the assistance received and can also be printed.

Figure 15. Aid Classification Page View

- Control Panel

  This menu functions to change city data or city profiles or office profiles. And this menu will also display the number of residents in each District. In this menu we can change data from the office and we can also add sub-district data in Pematangsiantar City.
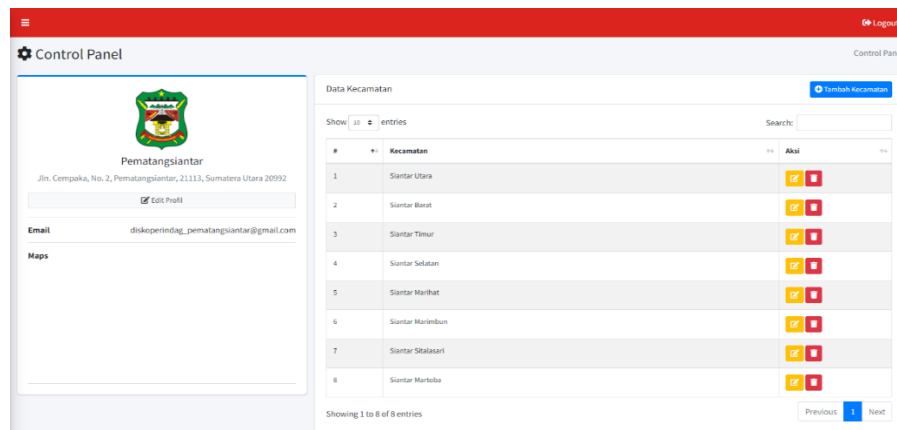
Figure 16. Control Panel Page View

4. CONCLUSION

The conclusions that can be drawn by the authors from the practical work report include that after creating a population management system and social assistance at the Pematangsiantar Small and Medium Enterprises Cooperative and Trade Service Office, all data processing activities and population data management and beneficiary data management have been computerized, organized , tidy, not too many mistakes that occur, effective and efficient in documentation. The Population Management and Social Assistance information system created can perform data searches, input data and can print data per area.

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