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INFORMATION AND POPULATION SERVICE SYSTEM IN SLAWI WETAN VILLAGE

Cucu Ika Agustyaningrum[1], Haryani[2], Yosep Tajul Arifin[3], Warjiyono[4]

[1234]Department of Engineering & Informatics,
Universitas Bina Sarana Informatika Jakarta, Indonesia

Email: cucu.cuk@bsi.ac.id, haryani.hyi@bsi.ac.id, yoseph.ypa@bsi.ac.id, warjiyono.wrj@bsi.ac.id

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ABSTRACT

Slawi Wetan Village really needs an information system that supports and provides satisfactory services for its citizens. For this reason, the author tries to make a final project on service and population information systems in Slawi Wetan Village, which until now has not been computerized. The existing system in Slawi Wetan Village is still done manually, starting from the service for covering letters of ID cards, family cards, and transfer letters to those relating to population services, population data errors, and making reports. It is possible that during the process there is an error in recording, less accurate information exists. The best solution to solving problems at the Slawi Wetan sub-district office is a computerized system. An effective and efficient activity can be achieved in supporting activities in the kelurahan. In this information system, the method used is waterfall, and in its implementation it uses the PHP programming language and MySQL as the database. Based on the results of the study, it can be concluded several things, namely: this software can be used to handle the population service process, information about the village, and knowing population data, this system can also provide print reports of village cover letters.

1. Introduction

Data management is one of the advantages of information technology, especially in the field of computers. Since the development of the era, computers have penetrated into all kinds of institutions, both universities, offices, and companies. “Institutions and companies always need a system that can manage, collect, store, and view data and distribute information. In accordance with National Policies and Strategies for the Development of E-Government or Governance, in relation to improving public services, advances in information technology must be utilized by the government to improve the ability to manage, process, distribute, and distribute information” [1]. Villages have the right to access information through the Village Information System developed by the Regency/City Government. The Regional Government is obliged to develop a village information system and rural area development plan[2] . Population data management is still manual in Slawi Wetan Village Office, Slawi District, Tegal Regency. The problems that occur are population data errors, loss of population data, and the making of the report takes a long time. In addition, the results of an interview with the head of Slawi Wetan Village, namely Mr. Burhanuddin, SH, wanted to make a village website.

Websites have become a trend in today's technologically-paced modern era. Those who do not have a website are considered outdated and less able to compete because the website is also a medium for promotion and expansion of information to increase village competitiveness [3]. Village websites are needed at this time, so that information is conveyed more quickly and accurately, services are maximized, and information and data transparency are achieved so that the website functions as village information management and facilitates the occurrence of more effective, efficient, and integrated information in improving village

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services [4]. The website becomes the face of the village in cyberspace by providing information to the public, promoting village potential, and creating community service interactions with village officials without barriers of place and time. These service factors have a very large influence on the success of an e-government [5]. This latest population data and village information provide a solution that "this latest population data and village information is mandatory data that must be owned and paid attention to by the village office as village master data, which will later be used as a control tool to know population growth and development." [6].

Based on the identification of the problems above, the formulation of the problem in this research is how to create an information system that can assist in managing population data and information in Slawi Wetan Village, so that the management of population data and information becomes more effective, efficient, and integrated.

2. Literature Review

2.1 Information Systems

The system is a collection of people who work together with the provisions of systematic rules While the notion of "information is data that is processed to be more useful and meaningful for the recipient, as well as to reduce uncertainty in the decision-making process regarding a situation". So it can be concluded that "an information system is an organized combination of people, hardware, software, communication networks, and data resources that collects, transforms, and disseminates information within an organization" [7].

2.2 Website

A website is a collection of pages that are used to display information, text, images, still or motion, animation, sound, and or a combination of all of them, both static and dynamic, primary if the value in a column always has the same value for a primary key value. the same [8].

1) Internet
   The Internet, which stands for interconnection networking or what has become international networking, is a network that connects computers around the world without being limited by the number of units into a network that accesses In general, the internet can be interpreted as an exchange of information and communication [9].
2) Web Server
   A web server is a computer that consists of hardware and software. It is also frequently interpreted as a data service on a web browser [10].
3) E-Government
   Electronic government is the use of information technology by government agencies, such as Wide Area Network (WAN) internet mobile phones, which can be used to build relationships with the public, business world, and other government agencies [11].

2.3 Language for programming

The programming languages used in this research are:

1) HTML
   HTML stands for Hypertext Markup Language and is the standard language used to display web documents [9] .
2) PHP
   PHP is a programming language that can be used for general purposes just like any other programming language: C, C++, Pascal, Python, Perl, Ruby, and so on [9].
3) CSS
   CSS (Cascading StyleSheet) is a collection of sequential and interconnected codes to set the format or appearance of an HTML page [9].

2.4 Database

Database (database) is a collection of logically related data and their descriptions, which are used together and designed to meet information needs in one place [12]. The program used to process and manage the database is MySQL, which has a collection of procedures and structures in such a way that makes it easier to store, organize, and display data. "MySQL (My Structure Query Language) is one of the Database Management Systems (DBMS) of many DBMS such as Oracle, Microsoft SQL, Postgre SQL, and others. MySQL functions to process databases using the SQL language [13].

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2.5 Coding

Coding is an arrangement of digits (numbers), letters, and special characters that can be designed in code form [14].

2.6 Web Implementation and Testing

Software testing is an element of a broad topic that is often associated with verification and validation (V & V). One of the validation tests is Black Box Testing. "Black Box Testing" is testing software in terms of functional specifications without testing the design and program code. Testing is intended to determine whether the input and output functions of the software are in accordance with the required specifications [15].

3. Method

SDLC model waterfall (waterfall) is often called a linear sequential model (linear sequential) or classical life cycle (classic life cycle). The waterfall model provides a sequential or sequential software lifeflow approach starting from the analysis, design, coding, testing, and support stages. Here is the explanation [16].

3.1 Analysis of software requirements

The process of gathering requirements is carried out intensively to specify software requirements so that users can understand what kind of software is needed by the user.

3.2 Design

Software design is a multi-step process that focuses on software program design, interface representation, and coding procedures. This stage translates software requirements from the requirements analysis stage to the design representation so that they can be implemented as a program at a later stage.

3.3 Program Code Generation

The design must be translated into a software program. The result of this stage is a computer program according to the design that has been made at the design stage.

3.4 Testing

Testing focuses on the software logically and functionally and ensures that all parts have been tested. This is used to minimize errors and ensure the resulting output is as desired.

3.5 Support or Maintenance.

It is possible for software to experience changes when it has been sent to the user. Changes occur because of errors that appear and are not detected during testing, or the software must adapt to a new environment. The support or maintenance phase can repeat the development process from analyzing specifications to changes to existing software, but not to creating new software.

4. Results and discussion

4.1 Needs analysis

At the requirements analysis stage, we are trying to analyze two needs, namely functional requirements and non-functional requirements.

In the analysis of functional requirements, there is an analysis of user requirements and an analysis of system requirements. To analyze user needs, there are three users who interact with each other in the system environment, namely: admin, user, and visitor. The three users have different interaction characteristics with different systems and have different information needs. Meanwhile, the analysis of system requirements provides registration forms, information, and user services.

In non-functional requirements for a web of information and population service systems in the Slawi Wetan village, namely a computer system in the form of hardware and software.

4.2 Interface Design

The interface design is an explanation of the descriptions of the population service information system program in the Slawi Wetan sub-district that will be displayed.

4.3 ERD

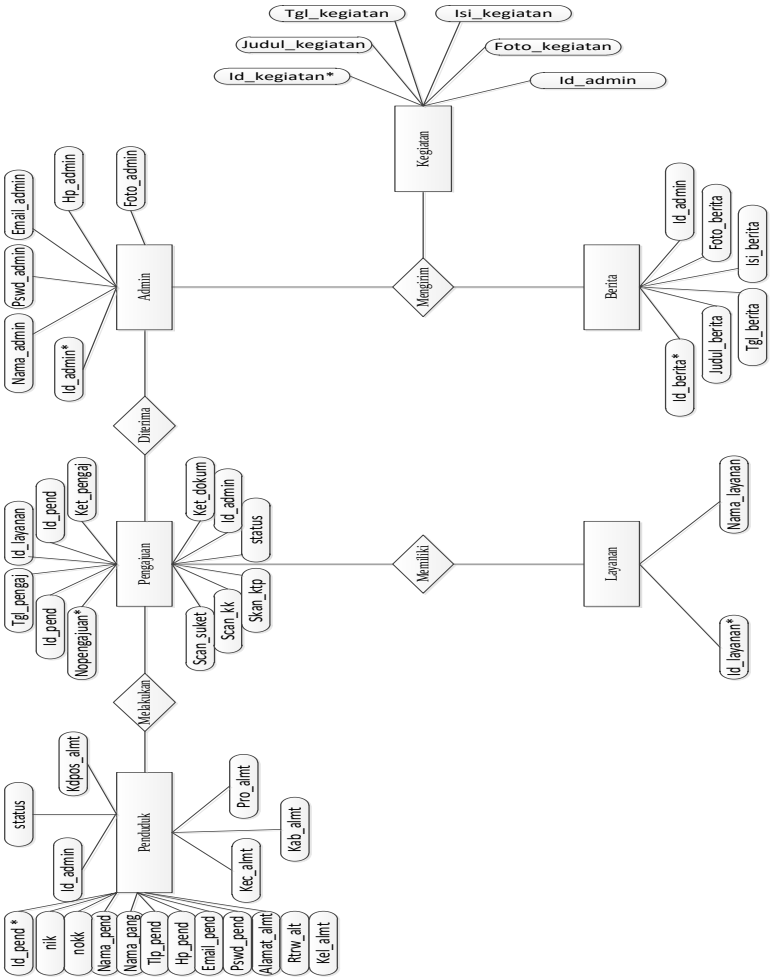

Image 1. ERD (*Entity Relatonship Diagram)*

4.4 LRS

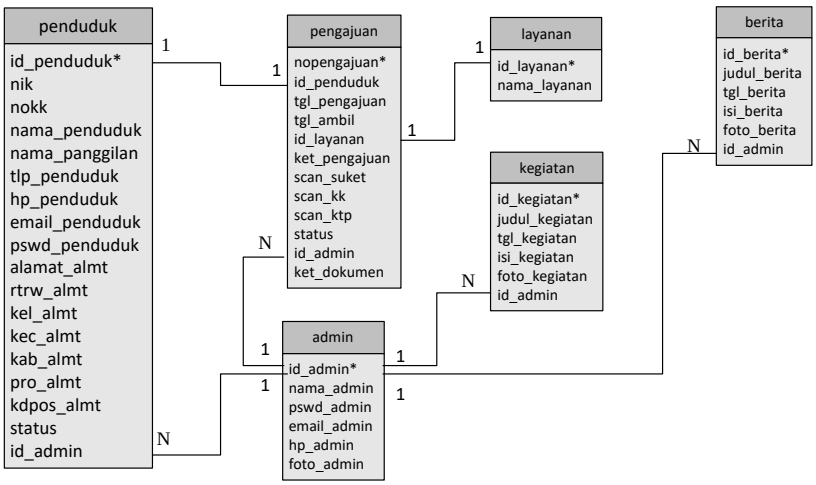

Image 2. LRS (Logical Record Structure)

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4.5 Implementation

1) Admin Homepage

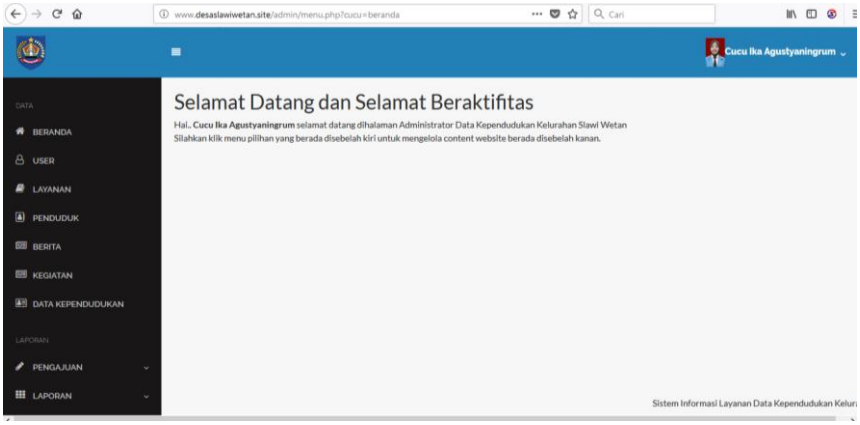

Image 3. Admin Homepage

This is an implementation of the admin home page, which first appears after the admin logs into the system.

2) Submission Data Display Page

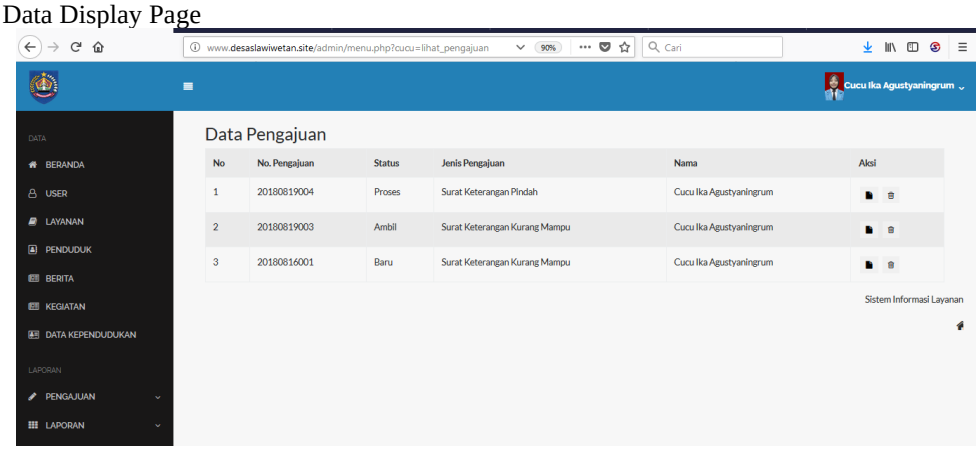

Image 4. Submission Data Display Page

This is the implementation of the submission display page that contains the data of the residents' submissions.

3) Visitor View Page

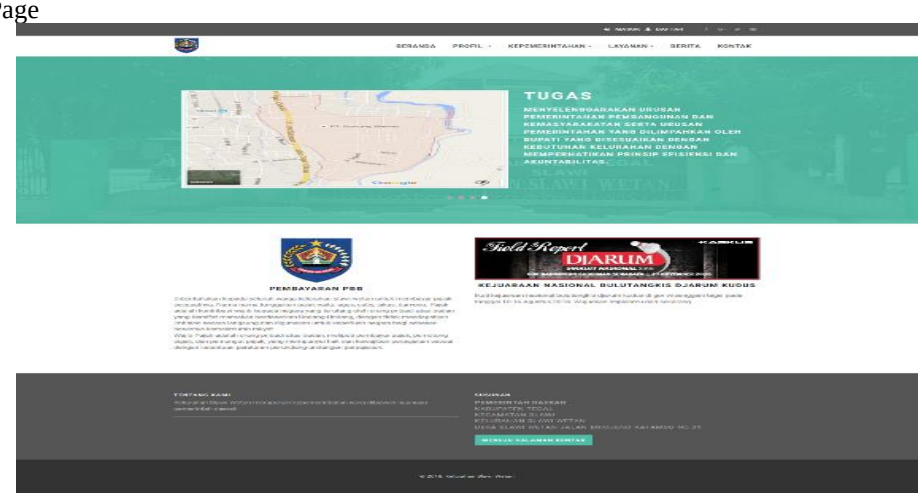

Image 5. Visitor View Page

This is the implementation of the main visitor display page, commonly called the index.

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4) My Account View Page

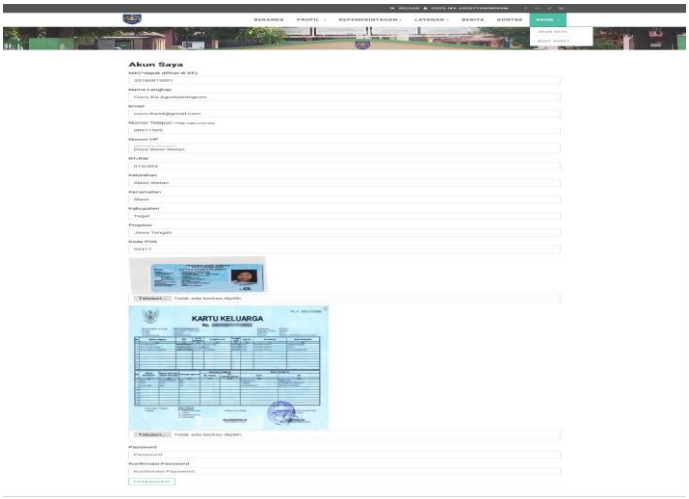

Image 6. My Account View Page

This is an implementation of my account display page, which contains resident account data.

5) Page View Create Application

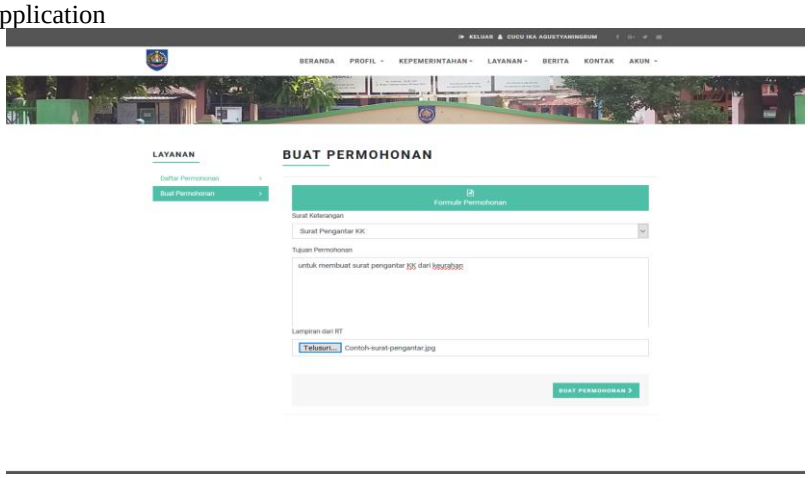

Image 7. Page View Create Application

This is the implementation of the application display page that serves to make requests for residents in the village.

4.6 Unit Test

This test is carried out to find out whether the results of the design of this village website are running well or not. It also functions to find the shortcomings in the system that has been put into place.

5. Conclusion

Based on the discussion of the information and population service systems in the Slawi Wetan sub-district, it can be concluded from the overall subject matter. This website-based service information system can simplify the process of service transactions, news information, village developments, and activities. The Slawi Wetan village website is an updated and trusted source of information and news. With the village website, we can equip the Slawi Wetan village with technology and keep up with the times. In the information system of this website, there are still many shortcomings, such as an unattractive appearance, village potential, etc.

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