

RESEARCH ARTICLE

Designing a Public Information Management System Application for Case Studies at the Website-Based Witness and Victim Protection Agency (LPSK)

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Abstract

Requests for public information at the PPID Witness and Victim Protection Agency (LPSK) are currently still being carried out through a direct registration process at the PPID office. The current system requires manual input of applicant data and data storage in offline applications, making it difficult to manage archives and create reports. This research aims to develop a website-based Public Information Request Information System for PPID LPSK, in order to simplify the process of requesting information, archive management, and making reports to leadership. The development method used is Waterfall, with design analysis tools such as Data Flow Diagrams (DFD) and Entity Relationship Diagrams (ERD). Implementation was carried out using the Hypertext Preprocessor (PHP) programming language and MySQL database, as well as system testing using the Blackbox testing method. It is hoped that this system can increase the efficiency and effectiveness of PPID services in processing public information requests.

Keywords

Public Application Information System; Waterfall Method; PHP; MySQL; Blackbox Testing.

1 | INTRODUCTION

The right to obtain information is one of the fundamental human rights, as regulated in the 1945 Constitution of the Republic of Indonesia Article 28 F. This right confirms that every individual has the right to communicate, obtain and store information for personal and environmental development. social. In the context of open state administration, this right is an important foundation that enables better transparency and accountability. The existence of the public's right to obtain public information appropriately in accordance with legal provisions enables public participation in the public decision-making process, which is a key element of a healthy democracy. Every public agency has the responsibility to provide access to public information relevant to its activities and programs, in accordance with the principles regulated in the State Revenue and Expenditure Budget (APBN)/Regional Revenue and Expenditure Budget (APBD). The scope of this public body includes various executive, judicial and legislative institutions, as well as various non-governmental organizations that obtain funding from various sources, including the APBN/APBD, public donations and foreign funds. Laws that regulate information disclosure, such as Law Number 14 of 2008 concerning Openness of Public Information (UU KIP), are important instruments in guaranteeing every individual's right to obtain information fairly and transparently.

One significant example of the implementation of the right to obtain public information is within the Witness and Victim Protection Agency (LPSK), which has an important role in providing protection and other rights to witnesses and/or victims. In this context, public access to information is key in ensuring accountability and optimal service for the community. Along with the rapid development of technology and information, the need for fast and accurate access to information is becoming increasingly urgent. The use of information technology, such as websites and online-based applications, has become an effective solution in meeting these needs in various sectors, including government, banking, trade and national defense. Openness of public information not only creates the basis for a strong democracy, but is also an important instrument in maintaining national sovereignty. The implementation of laws regulating information disclosure has provided a strong legal foundation for every public body to provide public information services efficiently and on time. However, in reality, there are still challenges in implementing the right to obtain public information, especially related to the process of registering information requests, managing archives, and presenting reports to leadership.

In the context of the PPID Witness and Victim Protection Agency (LPSK), there are challenges in carrying out the process of registering information requests, managing archives and presenting reports efficiently. The registration process which is carried out conventionally by coming directly to the PPID office hampers the effectiveness and efficiency of public information services. Apart from that, archive management still uses a manual system and presentation of reports takes a long time, making it difficult for leaders to obtain the necessary information. Therefore, this research aims to overcome these challenges through the development of a website-based public information request information system, in order to increase the efficiency and effectiveness of public information services at PPID LPSK. In identifying problems, the author pays attention in detail to several important aspects related to the PPID of the Witness and Victim Protection Agency (LPSK). This includes communication strategies to the public, public information services to applicants quickly and easily, availability of resources to implement information disclosure, and bureaucratic structure in PPID LPSK. In determining problem boundaries, focus is given to the mechanism for submitting public information requests, obtaining information related to LPSK, and developing a website-based public information request system. The problem formulation presented is how to create a website-based public application information system for PPID LPSK. The purpose of writing this report is to understand PPID LPSK's communication strategy to the public, analyze the bureaucratic structure that supports openness of public information, assess the availability of resources at LPSK, and build a system that facilitates access and speeds up the process of requesting public information at PPID LPSK.

2 | BACKGROUND THEORY

Designing a public information management system application is a process that involves the development of a computerized information system (Hasanah *et al.*, 2021). This process aims to assist officers or cashiers in managing service processes and managing information that runs in an entity, such as a laundry house (Hasanah *et al.*, 2021). In the context of public information management, the problems faced are often related to inventory data management which still uses a semi-computerized system which is considered less efficient (Kusumajaya, 2021). Therefore, developing a management information system for managing inventory data by applying grounded research methods is important to increase efficiency in managing public information (Kusumajaya, 2021). Apart from that, designing information system applications can also focus on data management in various entities, such as internet programming laboratories (Sanjaya *et al.*, 2022), schools (Riyanto, 2022), sub-district offices (Vendyansyah *et al.*, 2022), social institutions (Elvionita & Sari, 2021), and villages (Atmajaya & Wirata, 2021). In

this context, the use of design methods that are based on facts, empirical and theory development is crucial in producing effective applications (Aswari *et al.*, 2020). Apart from that, the application of design theory is also important in the visual design of applications, such as in designing the UI display for smartphone games Lengkong *et al.* (2021) and gallon delivery applications (Haeruddin *et al.*, 2020). Development of information system applications can also involve the use of the latest technology, such as the Internet of Things (IoT) for monitoring FNU hydroponic gardens (2022) and the use of facial recognition in student attendance systems (Satwikayana *et al.*, 2021). Apart from that, the application of Enterprise Architecture (EA) can also be the basis for designing information systems, especially in terms of planning, design and management of information systems (Fanani & Setiawan, 2022). So it can be seen that designing public information management system applications involves various methods, theories and technologies which aim to improve efficiency, accuracy and quality of service in managing public information.

Website-based application design is a process that involves designing, developing and implementing information systems that can be accessed via the web (Voutama, 2022). This process aims to make it easier for users to access information, register, order, manage data, and monitor various entities, such as car wash services, new student registration, social care services, coffee product marketing, catering orders, staff management, inventory management, rental vehicles, sales of waste recycling, land administration, public information, search for ART services, honorarium management, and others. In the context of designing website-based applications, the use of Unified Modeling Language (UML) is important in modeling application system design (Voutama, 2022). Apart from that, developing website-based applications can also involve the use of various technologies and methods, such as the BruteForce algorithm, JavaScript, HTML, PHP, CSS, and MySQL, Figma (Suprpto *et al.*, 2020), Laravel (Elvionita & Sari, 2021), Agile Feature Driven Development, Unified Software Development Process (USDP), and Design Sprint (Yulistina & Arianti, 2019). Apart from that, the use of heuristic evaluation methods can also be applied to evaluate website-based application interfaces (Randi, 2021). From various existing studies, it can be concluded that designing website-based applications involves various methods, technologies and objectives aimed at improving accessibility, efficiency and service quality in various contexts of information management and public services.

The design of a public information management application for the Witness and Victim Protection Agency (LPSK) based on a website can benefit from various studies. Leveraging website favicon to detect phishing websites can enhance the security of the application, ensuring the protection of sensitive information. Additionally, the study on the application of managing archive letters in the local government office can provide insights into efficient data management, which is crucial for public information systems. Moreover, the development of a website-based information management system for a social care institution can offer valuable perspectives on managing public information related to social services. Furthermore, understanding the role of E-Government in improving public service quality in a local context can guide the integration of government services within the application to enhance its effectiveness.

From the various studies that have been carried out, it can be concluded that the design of a website-based public information management system application for the Witness and Victim Protection Agency (LPSK) can benefit from various research. Utilizing website favicon to detect phishing sites can improve application security, thereby maintaining the security of sensitive information. In addition, a study of archival letter management applications in local government offices can provide insight into efficient data management, which is important in public information systems. Furthermore, the development of website-based information management systems for social care institutions can provide a valuable perspective on the management of public information related to social services. Finally, an understanding of the role of E-Government in improving the quality of public services in local contexts can guide the integration of government services in applications to increase their effectiveness. By utilizing existing research, public information management system applications for LPSK can be better developed to provide more efficient, safe and quality services to the community.

3 | METHOD

This research was conducted at the office of the Witness and Victim Protection Agency (LPSK), specifically in the Public Relations Department. The selection of this research location was based on the author's desire to understand the extent of the information and document management system (PPID) as well as system development in services and provision of public information at LPSK. Location of the study in the office was also made easier by the fact that it was the author's workplace, which allowed for more efficient data collection. The research was carried out from 03 October 2022 to 31 January 2022. The office address of the Witness and Victim Protection Agency (LPSK) is JL.

Raya Bogor KM.24 No.47-49 RT.06 RW.01, Susukan Village, Ciracas District, East Jakarta City, DKI Jakarta 13750. To ensure the development of a good system, research scheduling was carried out carefully. Research activities began in September, with the first week of November designated for adjustment to conditions and situations at the research location. The communication phase with PPID staff began in the second and third weeks of November. This stage includes direct communication with PPID officials as well as data collection, especially regarding the research object. In the next stage, namely the planning stage, an analysis of the running system, existing problems and system users is carried out. The planning stage lasts for three weeks, starting from the second week of December to the last week of December. Then, the modeling stage is carried out to analyze the system to be developed, create a system process design, and design the interface and database. The modeling stage takes place from the fourth week of December to the second week of January. The construction phase, which involved coding and testing the system, took place in the second to last week of January. After these four stages are completed, the delivery stage is carried out. For more details regarding system scheduling.

In analyzing system requirements in LPSK, there are two aspects that need to be considered, namely functional and non-functional requirements. Functional requirements refer to the technical functions performed by the system, such as information request management, data processing, and others. Meanwhile, non-functional requirements relate to additional specifications that are not directly related to system function, but are important to ensure overall system usability and performance. The functional specification of the information and document management system (PPID) is to enable applicants to search for and submit information, as well as provide decisions to users regarding the application. This specification also includes ongoing system analysis, problem identification, and user profiles. Non-functional requirements include specifications of the hardware and software used, such as specifications for laptops, monitors, and software such as PHP, Sublime Text, Xampp, and MySQL.

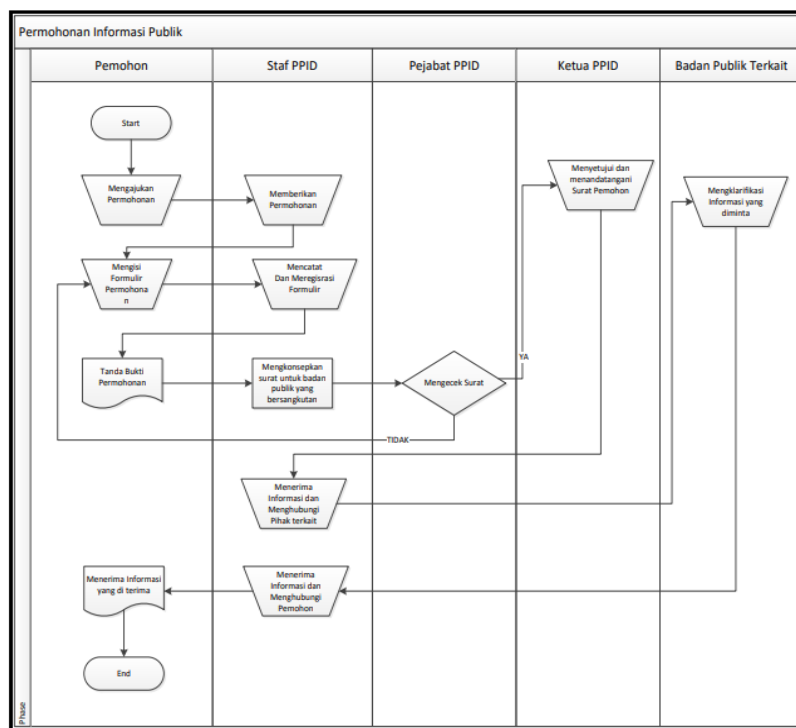


Figure 1. PPID LPSK System Analyst Flowchart

The appearance design of the application is created to ensure an effective and user-friendly user interface. It includes several main pages that information requesters will access. The applicant's home page displays main menus such as request information, profile, PPID regulations, public information, service standards, and others. Users can also view the total number of information service requests, accepted and rejected service requests. The applicant login page and applicant registration page are designed to be easy to use and allow users to access the system smoothly. Apart from that, there are also pages for a list of information requests, a list of objections, and accessibility. Each view is designed keeping in mind user needs and maintaining consistency in interface design. Flowcharts are also included to provide a visual overview of the system processes currently running on PPID LPSK.

4 | RESULT

The Public Service System is an important part of running good and transparent government. In the context of the Witness and Victim Protection Agency (LPSK), designing an efficient and effective system in providing public information services is a necessity. For this reason, system design is carried out which involves various stages starting from identifying functional requirements to detailed system modeling. At the system design stage, the functional requirements of the system are identified through the PPID LPSK website flow diagram and Use Case Diagram. Website flow diagrams and Use Case Diagrams are used to understand the overall interaction process between applicants and the PPID LPSK information system. In this case, the system is designed as a means to make it easier for applicants to find the disclosure information they need through the Information and Documentation Management Officer.

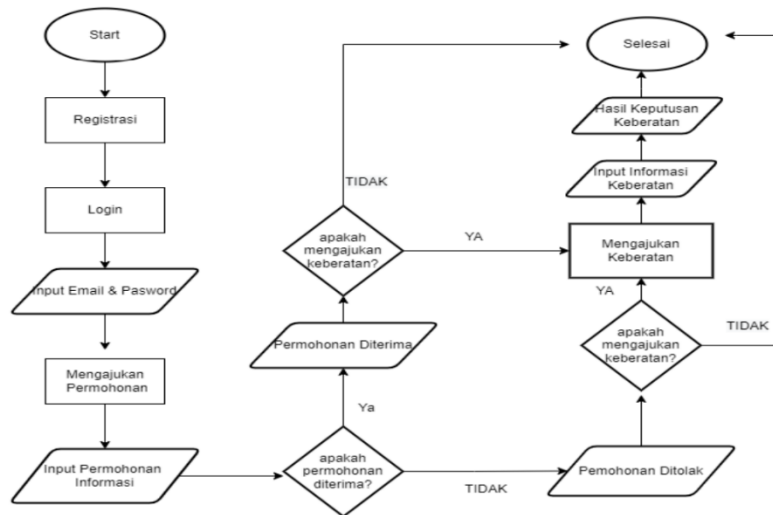


Figure 2. Flow diagram of the PPID LPSK website

After identifying functional requirements, process modeling (Process Modeling) is carried out to describe how the PPID LPSK business operates. It involves describing the activities performed in the system and the flow of data between those activities. The Context Diagram is then used to describe in more detail the process flow of the system to be created. In the Context Diagram, there are four main actors: Applicant, PPID Staff, PPID Officials, and Head of PPID who play a role in running the system. The next stage is DFD (Data Flow Diagram) modeling, which is divided into DFD Level 1 and DFD Level 2. DFD Level 1 provides a detailed description of the process from the context diagram, including the applicant registration process and PPID staff activities in managing information data. Meanwhile, DFD Level 2 provides further details regarding the flow of data between applicants, staff, officials and the PPID chairman. These processes are explained in detail in data flow diagrams, ensuring proper connectivity in information management.

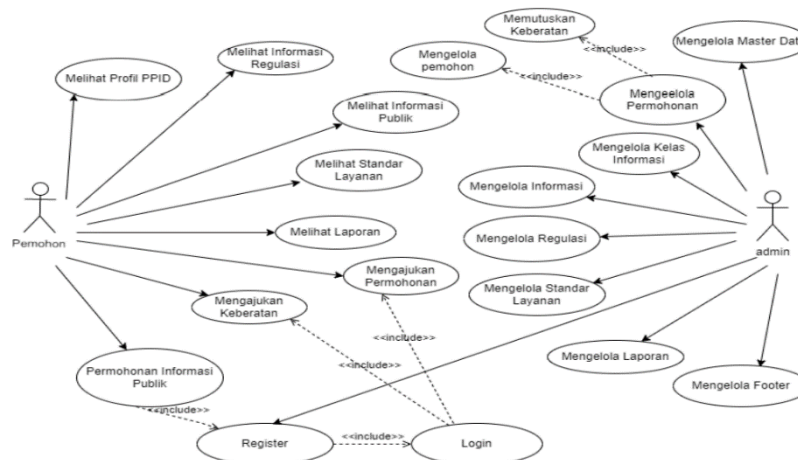


Figure 3. Use Case Diagram

accessibility features provided also provide a better user experience for all parties involved in using the PPID LPSK application.

5 | CONCLUSIONS

Based on the research and testing carried out, a Public Application Information System has been successfully developed for the Information and Documentation Management Officer (PPID) of the Witness and Victim Protection Agency (LPSK). This system is designed as a website using the Waterfall development method and the Hypertext Preprocessor (PHP) programming language, using a MySQL database and testing using the Blackbox method. The system built is capable of verifying the status of requests and objections to public information, allows checking the status of applicants and objections to information efficiently, and provides the ability to print public information reports. In addition, the system is also able to provide real-time information regarding the number of applicants and objections submitted, providing better transparency in the public information management process. With this system, it is hoped that it can increase efficiency and transparency in the application process and management of public information at LPSK. By adopting the Waterfall method, system development is carried out in a structured and sequential manner, ensuring that each development stage has been properly tested before moving on to the next stage. The use of the PHP programming language and MySQL database provides flexibility and reliability in data management and system performance. This system is expected to provide significant benefits for stakeholders involved in the public information management process, as well as the general public who use information services from LPSK. Thus, developing this information system is an important step in supporting efforts to increase the accessibility and accountability of public information in Indonesia.

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