DESIGN OF INTELLECTUAL PROPERTY INFORMATION SYSTEM AT THE INTELLECTUAL PROPERTY RIGHT CENTRE OF LPPM UNIVERSITAS JENDERAL SOEDIRMAN

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Abstract. The Research and Community Service Institute (LPPM) at Jenderal Soedirman University (UNSOED) plays a key role in coordinating and managing research and community service efforts. One of its units, the Intellectual Property Rights (IPR) and Product Certification Center (Sentra HKI), bridges the gap between inventors and the Directorate General of Intellectual Property at the Ministry of Law and Human Rights. Currently, the system for managing IPR data is partially manual, leading to inefficiencies in communication with the academic community. This research aims to develop an integrated information system for managing IPR within UNSOED, utilizing single sign-on (SSO) for seamless access. The system will function as a centralized data warehouse, accessible to all academic staff. The project will be conducted over two years, with the first year focused on system design, development, and testing, and the second year focusing on monitoring and evaluation. The expected outcomes include a fully functional IPR management system, national publications, and potential international journal contributions.

Keywords: intellectual property right, information system,

A. Introduction

The rapid advancement of technology and the growing need for fast, centralized access to information have become essential for institutions. The LPPM at UNSOED oversees research and community service activities, with one of its units, the Sentra HKI, responsible for managing intellectual property and product certification data. Ideally, this data should be easily accessible to the academic community at UNSOED, but current conditions prevent that. Requests for information are often delayed due to scattered data, making retrieval time-consuming. To address this issue, a dedicated information system is needed to collect, transform, and present Intellectual Property (IP)-related data within UNSOED, allowing easier access either through LPPM administrators or independently.

The aim of this research is to develop an information system that can effectively manage and present IP data for the academic community at UNSOED, accessible both through the LPPM administrators and independently. Given the continuous growth of IP data at LPPM UNSOED, a reliable system is needed to handle the increasing volume of information. Another goal of the research is to provide stakeholders with insights into the trends of IP data at UNSOED, enabling them to develop strategies that improve the performance of the university's core functions (Tri Dharma) based on the IP developments.

This research addresses the challenges LPPM faces in managing IP data. As the institution responsible for overseeing both research and community service centers, LPPM is experiencing a growing amount of data over time. If this data is not well managed, it could have systemic consequences not only for LPPM but also for Universitas Jenderal Soedirman as a whole. Therefore, the study aims to implement a solution that ensures efficient data handling and prevents potential disruptions.

B. Methods

This research follows the Waterfall method, a structured approach to software engineering, and is divided into two phases. The first phase focuses on the development and testing of the information system in a development environment, with five sub-stages: Institutional Problem Analysis, Information System Requirements Determination, Database Design, System Development, and System Testing in the Development Environment. The outputs of this phase include a fully integrated information system ready for testing, along with publications in reputable national and international journals, conference presentations, and draft copyright submissions.

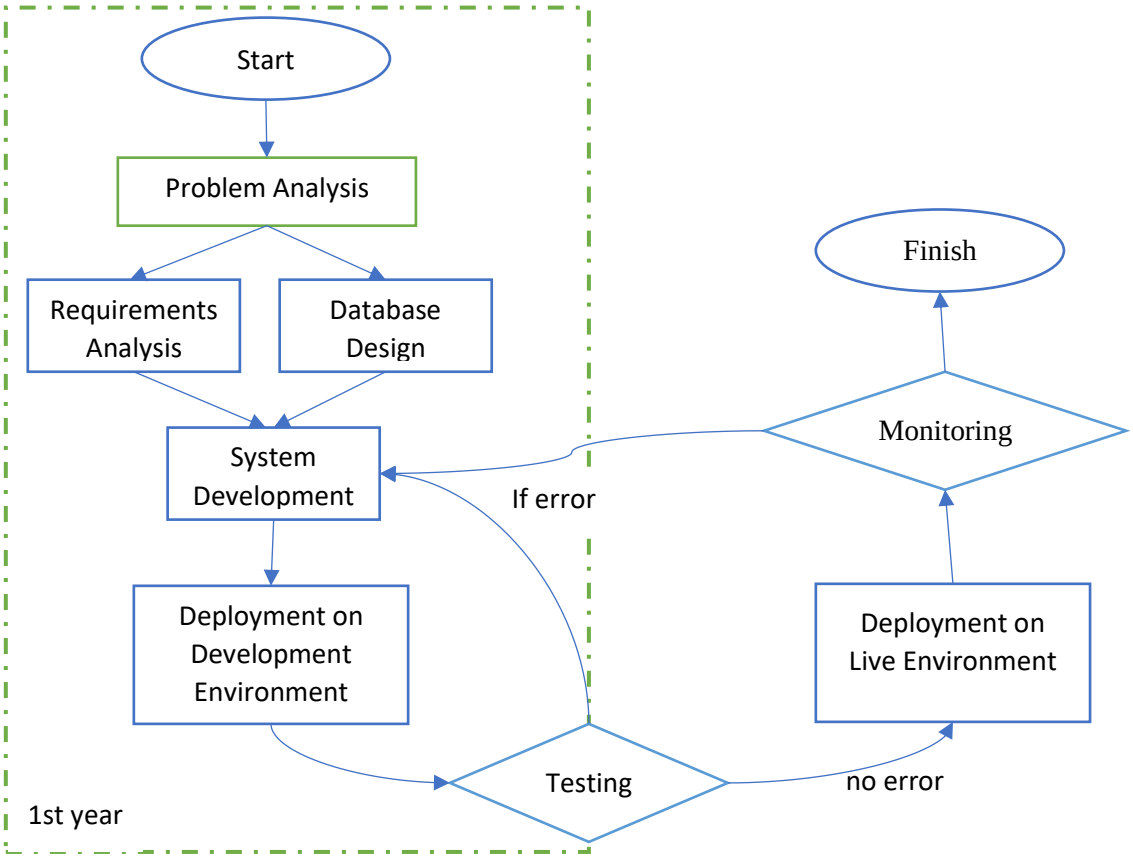

Figure 1. Research Roadmap

The second phase involves deploying the system in a live environment (production) and monitoring its performance. If any issues arise, the system will revert to the development phase for further refinement. The expected outcomes of this phase include a stable, error-free information system and confirmed publications in national and international journals, delivered conference presentations, and registered copyright submissions. The entire research will span two years, taking place over a total of 20 months at the Intellectual Property Rights and Product Certification Service Centre under the LPPM UNSOED.

C. Results And Discussion

Syaiful Aliim, Siswantoro, and Supriyanti redesigned the existing IP system at UNSOED because it did not meet the user requirements. Users needed a system to archive IP-related documents and manage new IP applications online, which the current system could not handle[1].

Handayani, Lutfiani, and Kristanti developed a web-based IP management system at Universitas Raharja. The previous system hindered information dissemination, so they created a web-based system accessible anytime and anywhere, using Strength, Weakness, Opportunity, and Threat analysis and a Content Management System (CMS)[2].

Nugraha, Sagirani, and Lemantara built an IP management system at Universitas Muhammadiyah Surabaya. The manual submission process lacks visibility for applicants. With their new system, the academic staff are now able to submit IP applications and track their progress online[3].

Aryani, Suratno, and Mauladi developed a web-based document management system for the Faculty of Science and Technology at Universitas Jambi. The manual storage system was inefficient, so they created a system using the Laravel framework to improve document accessibility and storage[4].

Molnar and Benzur, conducted research on document based information systems. This research is based on the modern system, where most content is semi-structured documents, with only a small portion transformed into database schemas. They developed a theoretical framework and method for structuring document-based systems to align with business processes and modern information system activities[5].

This institutional research project developed an information system to support the IP application process at LPPM UNSOED, addressing issues of the previous manual system. Where in the past manual system, it was difficult to track the status of an IP application, as they are not recorded by the system.

The newly developed system, called “Sistem HKI dan Paten (UNSOED)”, is built using the PHP programming language, with CodeIgniter as the web framework, Bootstrap 5.1.3 for the user interface, and MySQL for the database. It is integrated with Google authentication, allowing users to log in with their UNSOED email accounts. The system is available for the entire academic community at UNSOED, including faculty, staff, and students. The system can be accessed anywhere and anytime at https://siki.lppm.unsoed.ac.id/login.

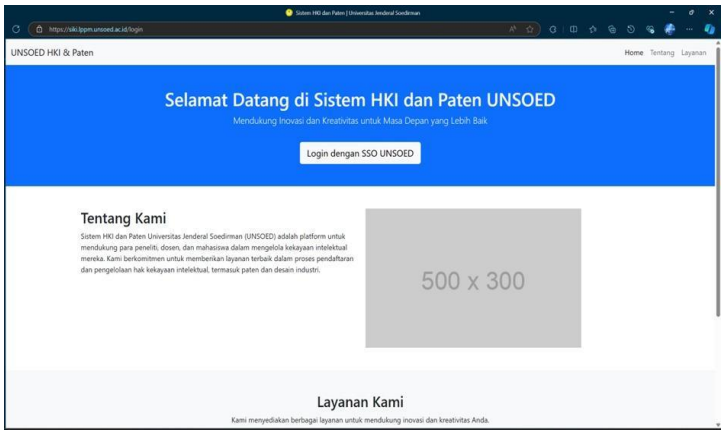

Figure 2. Home Page.

Figure 3. Insight Overview.

Currently, the system allows users to register copyrights, patents, and industrial designs. However, while the system is functional, the registration process is not fully online, as applicants need to submit physical, signed, and stamped documents to the Sentra HKI office. The system is still under development with ongoing feature improvements.

D. Conclusion

The application has been successfully developed, deployed, and tested, and is currently being used for online registrations of IPR such as copyrights and patents. However, it is still undergoing further development, as some functionalities are available but not yet fully operational.

E. Acknowledgement

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F. References

It contains only a list of related literature cited by the authors in the paper. The reference list should be written in Vancouver styles.,

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