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1 Web-Based Thesis Title Submission Information System Using CodeIgniter Framework Case Study At STMIK Mardira Indonesia

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2 ABSTRACT

This research aims to develop a web-based information system that streamlines the thesis title submission process for students using the CodeIgniter framework. In higher education, submitting a thesis title is an essential preliminary step for students to fulfill their academic programs. This process is frequently executed conventionally and manually, resulting in delays and inefficiencies in administrative procedures. This project utilizes the CodeIgniter framework to develop and implement a web application that enables students to submit their thesis titles online.

The programme offers an intuitive interface for supervisors and thesis coordinators to evaluate, approve, or reject thesis title submissions. A web-based approach offers enhanced accessibility and flexibility in the submission process, consequently accelerating workflows and minimising administrative obstacles. The employed software development methodology is the iterative development paradigm. The needs analysis step entails collecting information from several stakeholders, including students, supervisors, and thesis coordinators. The interface design and application functionalities are developed based on the analysis results.

The implementation employs CodeIgniter's functionality, including database administration, routing, and responsive views. The result of this research is a web-based method for submitting thesis titles that has undergone testing and evaluation. The evaluation included students, supervisors, and thesis coordinators who offered favourable feedback on the system's performance and functionality. The implementation of this information system is anticipated to enhance the efficiency, transparency, and oversight of the thesis title submission procedure. Moreover, the utilization of web technologies and the CodeIgniter

framework enhances the user experience in handling academic activities in a more contemporary and integrated fashion.

Keywords: Information System, Submission Of Thesis Title, Framework Codeigniter

INTRODUCTION

The thesis submission procedure is a vital component of higher education, marking the initial step for students in fulfilling their academic programs. Sumarno & Zulhipni Reno Saputra Elsi (2022) asserts that efficient learning processes necessitate practical experience and relevance, a principle that extends to the context of thesis submission. Dewey emphasizes the importance of "learning by doing," wherein students actively engage in the educational process through firsthand experience. A system that streamlines thesis submissions enables students to readily access information and adhere to requisite protocols, hence enhancing their likelihood of completing their final projects.

A system is required that controls student thesis submissions while simultaneously engaging academic personnel and programme heads. PUTRA et al., (2020) asserts that effective organisations are those capable of rapid learning and adaptation. Senge presents the notion of a "learning organisation," whose entities continually enhance their ability to achieve desired results. An integrated system facilitates enhanced collaboration among all participants in the submission process, reducing errors and accelerating administrative procedures.

The technology will facilitate access via a website, where all submission data will be securely archived in a database. This aligns with the perspective of media expert (Al-Ayyubi & Maulana, 2023; Hermawan et al., 2024), who asserts that digital technology can enhance transparency and accountability in critical processes. The Internet's potential to revolutionise governance by enhancing transparency and fostering citizen engagement (Al-Ayyubi & Maulana, 2023; Hermawan et al., 2024). Utilising this technology enables students and academic administrators to more efficiently track submission statuses and mitigate obstacles associated with manual processes.

The introduction ¹ of a web-based thesis submission system at STMIK Mardira Indonesia is anticipated to enhance the efficiency and efficacy of thesis management. (Nugraha et al., 2023) asserts that appropriate educational technology can enhance the learning experience and foster stronger relationships between students and instructors. Bates underscores the significance of effective instructional design in the digital era (Simanjuntak et al., 2025). This system aims to facilitate a more efficient, transparent, and organised thesis submission procedure, consequently assisting students in attaining their academic objectives.

Information Systems

Muharromah et al., (2024) asserts in the journal "Web-Based Final Project/Thesis Integration System" that an information system comprises a series of interconnected subsystems that collectively constitute a framework involving input, process, and output pertinent to data processing into information, thereby enhancing its utility for users. This system offers a portal that enables students to submit thesis proposals and monitor the status of their thesis title submissions.

Web-Based Information System

An internet-based information system is an information system that is planned, produced, and operated using online technologies. This information system utilizes network communications and web browsers to efficiently access and manage data (Lidjang et al., 2024; Saputra et al., 2021).

Framework Codeigniter

A framework serves as the foundational basis for constructing a website. This structure reduces the time needed to develop a website and enhances the potential for changes (Elmunyah et al., 2024). CodeIgniter is a web application framework that uses the PHP programming language.

METHOD

This study utilises an iterative software development methodology to construct a web-based information system that streamlines the thesis title submission procedure. In the preliminary stage, a needs assessment is performed by collecting data from many stakeholders, including students, supervisors, and thesis coordinators. The data collection methods comprise interviews and questionnaires, designed to elucidate the issues encountered in the traditional title submission procedure. The results of this research provide the basis for developing the application's interface and functionalities that fulfil user requirements.

Following the needs analysis, the next phase involves developing the application's interface and functionalities using the CodeIgniter framework. This framework is selected for its ability to offer essential tools for database management, routing, and responsive design. The development process transpires in phases, with each iteration concentrating on incorporating new features and enhancements derived from user feedback. This method enables the system to be perpetually enhanced until it attains the requisite level of capability.

Upon completion of development, the system undergoes testing and evaluation by students, supervisors, and thesis coordinators to determine its performance and functionality. This testing seeks to discover and rectify any flaws that emerge, ensuring the system aligns with user expectations. The favourable assessment from this study suggests that the deployment of this information system is anticipated to improve efficiency, transparency, and supervision in the thesis title submission procedure, while also enhancing the user experience in managing academic activities.

DISCUSSION

System Analysis and Design

a) Business Process Analysis

The process of submitting a thesis title begins when students consult with prospective supervisors to discuss their areas of interest. Upon subject approval, students complete a thesis title submission form and email it to their designated supervisor. The supervisor evaluates the thesis title and offers input. Upon acceptance, students compile requisite supporting documents and submit them to

the academic department for validation and formal endorsement.

b) Document Analysis

The thesis title submission process entails the inclusion of various papers, such as:

- Thesis Title Submission Form: Utilised by students to present their thesis title to their supervisor.
- Thesis Title Submission Criteria: A compilation of prerequisites that students must fulfil prior to submitting their thesis title.
- Supervisor Approval Letter: An official correspondence from the supervisor indicating their endorsement of the student's suggested thesis title.
- Academic Affairs Approval Letter: An official correspondence from the academic affairs department confirming their endorsement of the student's thesis title.

c) New System Proposal

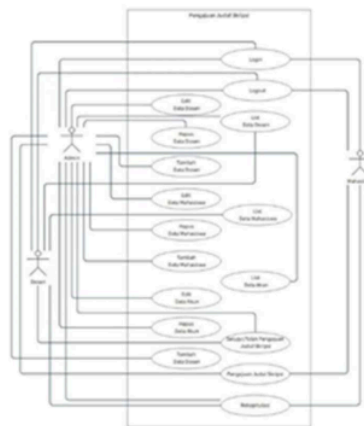


Figure 1. Usecase diagram

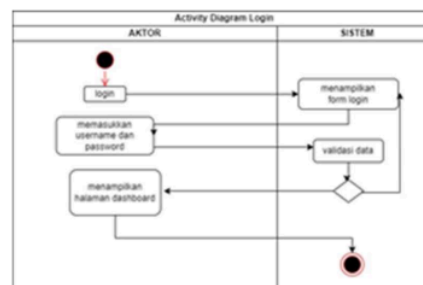


Figure 2. Activity diagram login

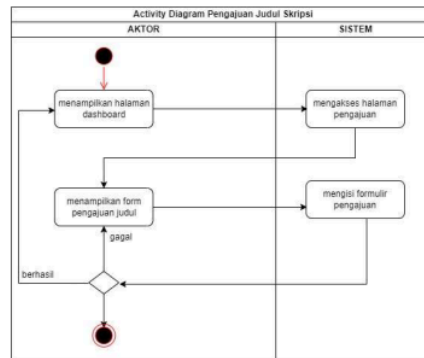


Figure 3. Activity diagram for submitting a thesis title



Figure 4. Student recap activity diagram

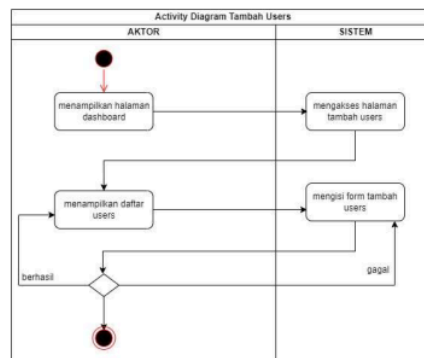
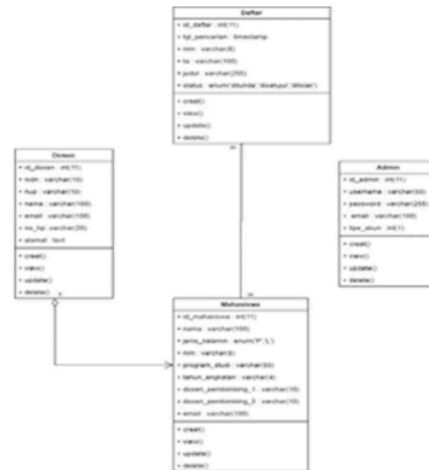


Figure 5. Activity diagram add users

d) System Design

i. Database Design



No	Field	Type	Size	Information
1	Id	Int	11	Primary
2	Username	Varchar	50	
3	Password	Varchar	255	
4	Email	Varchar	100	
5	Tipe_Akun	Int	1	Foreign Key

ii. Interface Design

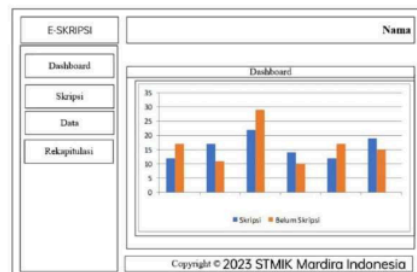


Figure 6. Interface Design

System Implementation

The system implementation phase involves detailing an application system to ensure its readiness for operation.

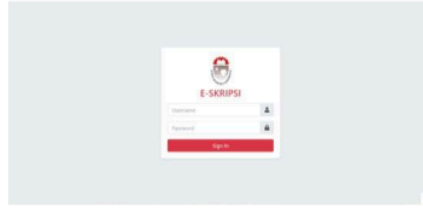


Figure 7. Login Page Display

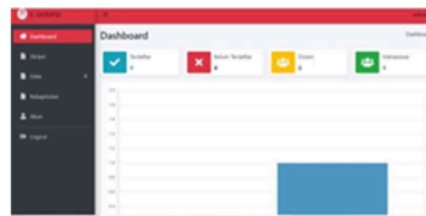


Figure 8. Home Page/Dashboard View



Figure 9. Display of the Thesis Title Submission Page

CONCLUSION

The findings of this research demonstrate that the deployed information system has facilitated easier submission of thesis titles by students via a web platform, while concurrently enhancing the organisation of thesis title administration by the institution. This approach ensures that students receive up-to-date information about available thesis titles and the progress of their submissions, thereby enhancing transparency between students and the university. The project employed the CodeIgniter framework to produce the web-based platform.

Future researchers are advised to consider enhancing the system with features such as automatic notifications regarding submission status, integration with the academic calendar, and a categorization-based search system for thesis titles. It is imperative to guarantee that the system possesses robust security protocols against cyberattacks and unauthorised access. Training students and administrators on system utilization will minimize errors, while consistent monitoring of system performance and user feedback will enable the identification of potential issues and improve the overall user experience.

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