International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 09 Issue: 03 | March - 2025 SJIF Rating: 8.586 ISSN: 2582-3930

A Web-Based Academic Project Management and Evaluation System

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Abstract - A Web-Based Academic project management and evaluation system refered as ThesisIT is a responsive web-based platform designed to streamline project submission and evaluation for final-year and third-year students. This system enables students to submit their projects digitally, while faculty members can evaluate them online through a role-based authentication system that categorizes users into students, project guides, and administrators. Additionally, ThesisIT introduces features such as Project Refinery and Project Hub for enhanced project organization and accessibility. This paper presents the design, implementation, and evaluation of ThesisIT, highlighting its efficiency, usability, and potential impact on academic project management. The system is expected to improve the workflow of project handling, reduce administrative burden, and ensure secure storage of academic work, preventing loss or tampering of crucial research data.

Keywords: Digital thesis, Role-based authentication, Project repository, Student project management system, Web development, CSS, Node Js, Express Js, ThesisIT

1.INTRODUCTION

ThesisIT is designed to address inefficiencies in project submission and evaluation in academic institutions. Traditional methods involve physical documentation, which is often misplaced or damaged, causing issues for both students and faculty. Moreover, faculty members struggle with tracking multiple projects and ensuring evaluations are done systematically. Students, on the other hand, find it challenging to access past projects for reference and improvement. With the increasing need for digitalization in education, ThesisIT serves as a web-based thesis storage vault that allows students to submit projects electronically while enabling faculty to conduct seamless digital evaluations.

In academic institutions, project submission and evaluation are crucial components of a student's academic journey. However, traditional methods involving paper-based submissions are often inefficient, leading to issues such as misplaced documents, delays in evaluation, and lack of accessibility to past projects for reference. Faculty members also face challenges in tracking multiple submissions, managing evaluations systematically, and ensuring fairness in grading. With the increasing adoption of digital solutions in education, there is a pressing need for a secure, centralized, and user-friendly system that streamlines project management and enhances collaboration between students and faculty.

ThesisIT is a web-based platform designed to modernize and digitize the process of project submission, evaluation, and storage. It provides a structured, role-based authentication system that categorizes users into students, project guides, and administrators, ensuring secure and efficient handling of academic work. By enabling online submissions, ThesisIT eliminates the risks associated with physical documentation, making the process more convenient and transparent. Faculty members can evaluate projects digitally, providing timely feedback while reducing the administrative burden associated with traditional methods.

One of the key challenges in academic project management is the lack of a structured repository for past projects. Many students struggle to find reference materials, limiting their ability to learn from previous research. ThesisIT addresses this issue through its "Project Hub" feature, which acts as a centralized digital repository where students, faculty, and alumni can access previously submitted projects. This not only fosters knowledge sharing but also helps students improve their work by building upon existing research.

To further enhance the quality of submissions, ThesisIT introduces "Project Refinery,"a feature that allows students to refine their projects before final submission. This ensures that projects meet academic standards, leading to better research quality and innovation. Additionally, automated notifications and tracking mechanisms help students stay updated on submission deadlines and evaluation statuses, improving efficiency and reducing last-minute hassles.

Security is another critical aspect of project management in educational institutions. Unauthorized access or data loss can compromise academic integrity. ThesisIT implements robust security measures, including role-based authentication and encryption, ensuring that only authorized users can access, submit, and evaluate projects. Regular backups prevent data loss, providing a reliable and secure storage solution.

By addressing inefficiencies in project submission, evaluation, and storage, ThesisIT aims to revolutionize academic project management. The system not only reduces administrative workload but also enhances accessibility, transparency, and security. With features designed to improve the student and faculty experience, ThesisIT represents a

significant step toward the digital transformation of academic project handling.

1.1 Problem Statement

Managing project submissions and evaluations in academic institutions presents multiple challenges. Traditional paper-based submissions are inefficient, prone to damage, and difficult to track. Faculty members often face difficulties in organizing and evaluating projects systematically, leading to delays and inconsistencies. Additionally, students lack a centralized system to access past projects for reference, limiting their ability to build upon existing research. The absence of a structured repository also results in a disconnect between alumni and current students, reducing knowledge sharing and mentorship opportunities.

ThesisIT aims to address these issues by providing a web-based platform where students can securely submit their projects, faculty can evaluate them using predefined rubrics, and juniors can access past projects in a readable format. The system also integrates features like automated notifications, project tracking, and data security to enhance the efficiency and transparency of the evaluation process.

1.2 Objectives

The primary objectives of ThesisIT are:

- To develop a secure and centralized web-based platform for project submission and evaluation.
- To provide a structured and transparent evaluation process using predefined rubrics.
- To create a **Project Hub** where completed projects are stored for future reference by students, faculty, and alumni.
- To implement **Project Refinery**, allowing students to refine and improve their submissions before final evaluation.
- To ensure role-based authentication for students, faculty, and administrators, enhancing security and user management.
- To facilitate faculty scheduling and notification systems for streamlined evaluations.
- To enable alumni engagement by maintaining project creator information for continued mentorship and industry connections.

By achieving these objectives, ThesisIT will significantly improve academic project management, ensuring efficiency, accessibility, and knowledge continuity in institutions. Managing project submissions and evaluations in academic institutions poses several challenges, including inefficiency, data mismanagement, and lack of standardization. Traditionally, project handling relies on physical documentation, which is prone to loss or damage. Additionally, students often face difficulties in tracking their submission status, while faculty members struggle with organizing and evaluating multiple projects effectively. ThesisIT addresses these challenges by providing a web-based thesis storage vault that enables students to submit projects online while allowing faculty members to conduct digital evaluations seamlessly. By integrating automated workflow management, the system ensures a streamlined process from submission to final evaluation, reducing manual intervention and improving transparency.

2.MEHODOLOGY

ThesisIT follows a structured methodology for development, implementation, and evaluation. The methodology is divided into multiple stages to ensure a comprehensive approach to system design and execution. The study employs a mixed-method approach, including:

- **Surveys and Interviews:** Conducted with students and faculty to understand the challenges in project submission and evaluation.
- **Case Studies:** Examined institutions implementing digital submission platforms to evaluate the effectiveness of web-based project management.
- **Usability Testing**: Performed through real-time simulations where users interact with ThesisIT to assess system efficiency and ease of use.
- **System Performance Analysis**: Evaluated through stress testing and security audits to ensure data integrity and resilience against potential cyber threats.

2.1 System Design and Development

The system architecture of ThesisIT is designed to provide a seamless experience for students, faculty, and administrators. The platform follows a modular architecture consisting of:

- **Frontend**: Developed using modern web technologies to ensure an intuitive user interface.
- **Backend**: A robust database-driven backend that manages project submissions, user roles, and evaluations.
- **Security Measures**: Implementing role-based authentication and encryption to ensure data integrity and privacy.
- **Scalability**: Designed to support future enhancements such as AI-driven analytics and integration with external academic databases.

2.2 Implementation of ThesisIT

The implementation phase focuses on deploying ThesisIT in an academic environment, ensuring smooth adoption by all stakeholders. Key implementation steps include:

- **System Deployment**: Hosting the platform on a secure server with cloud-based backup solutions.
- **User Training**: Conducting workshops for students and faculty to familiarize them with the platform.

- **Testing and Debugging**: Running usability tests, security audits, and performance evaluations to ensure the system runs efficiently.
- **Continuous Monitoring**: Gathering feedback from users to refine and enhance system functionality.

3. SYSTEM DESIGN AND FEATURES

ThesisIT consists of the following key features:

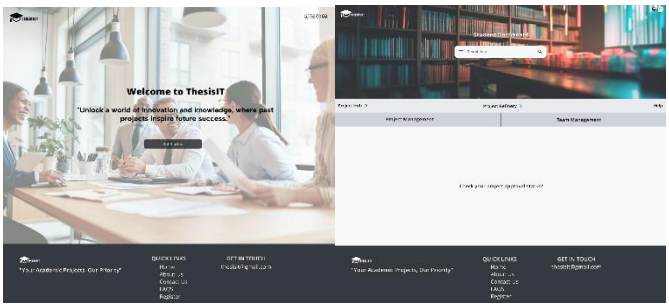
- **Role-Based Authentication**: Users are categorized as students, project guides, or administrators, each with specific access permissions to ensure secure handling of academic work.
- **Project Submission**: Final-year and third-year students can upload their projects securely through an intuitive user interface, ensuring easy access to project records.
- **Online Evaluation**: Faculty members can review, grade, and provide feedback digitally, streamlining the assessment process.
- **Project Refinery**: Allows students to refine and improve project submissions before final evaluation, ensuring higher quality work.
- **Project Hub**: A centralized repository where submitted projects are stored for future reference, allowing students and faculty to access past research works for knowledge enhancement.
- **Automated Notifications**: The system sends alerts to students and faculty regarding submission deadlines, evaluation status, and feedback availability.
- **Data Security and Backup**: Ensures that submitted projects are protected using encryption techniques and regular backups, preventing unauthorized modifications or data loss.

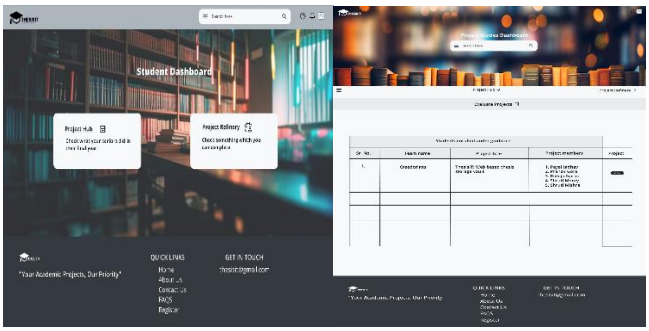
4. LITERATURE REVIEW

Sr. No.	Year and Author	Title	Finding	Limitation	Identified Gap
1.	2011- Awoyelu IO	A Web-Based Repository with Web Forum for Undergraduates' Final Year Projects in Higher Educational Institutions	Developed a repository for storing final-year projects with a web forum for student collaboration.	No structured project evaluation or feedback system.	Lacks project evaluation, refinement, and team management like ThesisIT.
2.	2024- Onwuegbuzie Innocent Uzougbo and Adu Michael Kolade	Development of a Web-Based Final-Year Project Repository System (FYPRS) for Nigerian Tertiary Institutions	Developed a centralized platform for project submission, evaluation, and storage using Laravel.	No project refinement, no structured feedback system, and no team management.	Lacks project refinement, readable past projects, and team management, which ThesisIT includes.
3.	2021- Sci. Int. (Lahore)	Thesis Management System with Automated Defense Scheduling	Introduced an automated system for thesis cycle tracking, including oral defense scheduling using a genetic algorithm.	Focused on scheduling rather than project submission, evaluation, and team collaboration.	ThesisIT does not require automated scheduling but includes project evaluation, feedback, and access to past projects.
4.	2023- XIPT Researchers	WebUPMS: A Web-Based Undergraduate Project Management System	A web-based system for project submission, assessment, and grading with improved efficiency.	No project refinement process or junior access to past projects.	Lacks project refinement, structured feedback system, and team management, which ThesisIT provides.
5.	2024- TetFund Researchers	Web-Based Student Project Management System	Automates project selection, supervision, evaluation, and storage while preventing duplication.	Lacks team management, project refinement, and access to past projects for learning.	ThesisIT enhances project quality through evaluation, refinement, and accessible past projects.

5. RESULT AND DISCUSSION

Preliminary findings indicate that ThesisIT significantly improves project management efficiency, reduces administrative workload, and enhances the digital evaluation process. The system received positive feedback regarding usability and functionality from both students and faculty. Survey results showed that 85% of students found the platform easier to use compared to traditional methods, and 90% of faculty members reported a reduction in workload related to project evaluation. Performance tests confirmed that the system can handle concurrent submissions efficiently without significant delays. The study also identified areas for improvement, such as incorporating AI-based plagiarism detection and advanced reporting tools for deeper project insights.





6. CONCLUSION

ThesisIT is designed as a comprehensive platform to streamline the final-year and third-year project management process in academic institutions. The system provides a centralized repository for students to submit their projects, enabling faculty to evaluate submissions and provide feedback online. Additionally, it enhances accessibility by allowing juniors to view past projects in a readable format, fostering knowledge sharing and continuous learning. The inclusion of a team management feature enables students to efficiently form groups while maintaining academic guidelines. By eliminating manual inefficiencies, ThesisIT improves project tracking, evaluation transparency, and collaboration among students and faculty. The system's implementation represents a significant step toward modernizing project management in higher education, ensuring a more efficient, structured, and accessible workflow.

7. FUTURE WORK

1. **Cloud-Based Storage** – Implement secure and scalable cloud storage for easy project access and backup.

2. **E-Learning Module** – Develop an interactive learning section with resources on research methodologies and project writing.

3. **Plagiarism Detection** – Integrate a plagiarism-checking tool to ensure originality in submitted projects.

4. **Real-Time Collaboration** – Enable live chat, discussion forums, and file-sharing for better student-supervisor interaction.

5. **Mobile Accessibility** – Develop a mobile-friendly interface or app for convenient access to **ThesisIT** on different devices.

REFERENCES

1. **I. O. Awoyelu**, "A Web-Based Repository with Web Forum for Undergraduates' Final Year Projects in Higher Educational Institutions," 2011.

2. **Onwuegbuzie Innocent Uzougbo and Adu Michael Kolade,** "Development of a responsive web-based Final-Year Project Repository System (FYPRS) for Nigerian Tertiary Institutions", 2024. (https://doi.org/10.30574/wjaets.2024.12.1.0246)

3. ***Scientific International (Lahore),*** "Automated Thesis Cycle and Defense Scheduling using Genetic Algorithm,"2022.(https://www.researchgate.net/profile/Jc-Vanny-Mill-Saledaien/publication/374192375_THESISIT_WEB-BASED_UNIVERSITY_THESIS_MANAGEMENT_PORTAL_WITH_A_DEFENSE_SCHEDULING_SYSTEM/links/6517def6321ec5513c225e3d/THESISIT-WEB-BASED-UNIVERSITY-THESIS-MANAGEMENT-PORTAL-WITH-A-DEFENSE-SCHEDULING-SYSTEM.pdf)

4. **"WebUPMS:** A Web-Based Undergraduate Project Management System," XVan Institute of Post and Telecommunications (XIPT).(https://www.researchgate.net/publication/4301848_WebUPMS_A_Web-based_Undergraduate_Project_Management_System?utm_source)

5. "**Web-Based Student Project Management System,"** TetFund Sponsored Research Project.(https://ijcsrr.org/web-based-student-project-management-system-a-tetfund-institution-based-research-report/?utm_source)

6. **Raznida Isa, Shuhadah Othman, Adam Shukry Ali, Noraliza Azizan, John Ferguson**, "Prototype Development of Final Year Project Management System to Monitor Student's Performance", *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 2024. (https://doi.org/10.37934/araset.40.1.164173)

7. **M. R. Fachrizal, J. C. Wibawa, Z. Afifah**, "Web-Based Project Management Information System in Construction Projects", *IOP Conference Series: Materials Science and Engineering*, 2020. (https://doi.org/10.1088/1757-899X/879/1/012064)

8. **Fengjuan Sun, Yuhong Weng**, "An Interactive Web System for Group Project Management and Peer Evaluation", *Proceedings of the 2nd International Conference on Information System and Data Mining*, 2018. (https://doi.org/10.1145/3206098.3206115)

9. **Jeremy Bellah, Liang Chen, Chris Zimmer**, "Design and Implementation of a Web-based Project Management

Information System", *International Journal of Designs for Learning*, 2018. (https://doi.org/10.14434/ijdl.v9i1.23344)

10. **Shaik Ahmad Zhafir Shak Mohd Abdul**, "A Web-Based Project Management System", *Nanyang Technological University*, 2021. (https://dr.ntu.edu.sg/handle/10356/149000)