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WEB-BASED E-PORTFOLIO SYSTEM FOR THE COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY

Rationale

The College of Engineering and Information Technology is a dynamic institution committed to academic excellence (Smith, 2023). As the institution strives to align itself with global benchmarks, the imperative for technological innovation becomes increasingly apparent. The Sustainable Development Goal (SDG) of "Industry, Innovation, and Infrastructure" underscores the importance of technological advancements in fostering growth and progress (United Nations, 2022). Specifically, the indicator related to upgrading the technological capabilities of industrial sectors resonates with the College's mission to embrace innovation within its academic ecosystem (Jones & Ahmed, 2022).

In the context of Information Technology (IT), a critical thematic area, the focus shifts to developing a sophisticated e-portfolio system (Lee & Chen, 2021). This system aims to revolutionize the way academic records and documents are managed within the College. The impetus for this initiative arises from the need to enhance the technological capabilities of the academic sector, aligning with broader SDG objectives. By transitioning from manual, paper-based processes to a web-based platform, the system will improve document management, accessibility, and collaboration among faculty members and secretaries.

Significance of the Study

The development of an e-portfolio system will bring numerous benefits to the College of Engineering and Information Technology. Faculty members will experience a streamlined approach to managing academic records, reducing reliance on physical documents while ensuring easy access to important files. The system will provide an organized digital repository for essential academic records, such as syllabi, student attendance records, and final assessments. This will lead to improved efficiency and better collaboration between faculty members and secretaries.

For secretaries, the system will simplify administrative processes by enabling real-time tracking and retrieval of academic documents. Instead of relying on email or physical paperwork, faculty members can submit documents electronically, and secretaries can manage these submissions through a structured digital workflow. The inclusion of search functionality will further enhance efficiency by allowing quick retrieval of specific records using keywords or file names. Additionally, document version history will provide transparency, allowing faculty members to track changes over time.

Beyond administrative improvements, the e-portfolio system aligns with the College's commitment to embracing technology and digital transformation. It will serve as a reference model for future advancements in academic document management, contributing to broader institutional efforts to modernize education through technology.

Scope and Limitations

This study focuses on the development of a web-based e-portfolio system for faculty members and secretaries at the College of Engineering and Information Technology. The system will include key modules that facilitate document management, security, and accessibility. The following modules will be implemented:

The **User Management Module** will provide secure authentication and access controls for faculty members and secretaries. Each user will have assigned roles and permissions that determine their level of access and actions within the system. This ensures confidentiality and protects academic records from unauthorized modifications.

The **Document Management Module** will enable faculty members to upload, categorize, and manage academic records, including syllabi, attendance sheets, and student assessments. Faculty members can organize documents into folders for easy retrieval, while secretaries will be able to track and approve document submissions as needed.

The **Search and Retrieval Module** will incorporate an advanced search functionality that allows users to locate specific documents based on keywords or file names. Additionally, the system will feature a version history function, enabling users to track document changes over time and restore previous versions if necessary.

The **Faculty Profile Module** will serve as a personalized space where faculty members can display information such as their department, contact details, expertise, and professional achievements. This will enhance faculty visibility and facilitate collaboration among colleagues.

The **Administrative Workflow Module** will streamline document submission and approval processes. Faculty members will be able to submit academic documents electronically, while secretaries can monitor, review, and manage these submissions within the system. This feature will eliminate manual paperwork delays and enhance communication efficiency between faculty members and administrative staff.

However, this study does not cover integration with university-wide systems, student access portals, or mobile compatibility. Additionally, the migration of legacy academic records will not be included in the initial implementation. The focus is on core document and records management functionalities within the College's existing infrastructure.

Objectives

The general objective of this study is to develop and deploy an e-portfolio system to digitize academic records management for the College of Engineering and Information Technology. The system will enable faculty members to securely upload, organize, share, and manage academic records and documents.

Specifically, this study aims to:

- Analyze the current processes and requirements related to documents and records management through surveys with faculty members.

- Design the system architecture and interface prototypes that meet the identified user and system requirements.
    - Create user roles and permissions for faculty members and secretaries.
    - Develop document upload, storage, and sharing features.
    - Build profile pages for faculty members.
    - Incorporate tracking for document submissions.
    - Implement search and filtering for easy document retrieval.
- Develop the system using Hypertext Preprocessor (PHP), MySQL, Apache, and other relevant technologies.
- Test and refine the system based on usability studies and user feedback.
- Evaluate the effectiveness and user experience of the system based on ISO 25010 quality standards.
- Prepare an implementation plan for the deployment of the project.

Expected Output

The study aims to develop and implement a web-based e-portfolio system to digitize academic records management for faculty members and secretaries at the College of Engineering and Information Technology (CEIT). The system will provide secure authentication, document upload and storage capabilities, organization tools, version history tracking, faculty profiles, administrative dashboards, notifications, and advanced search functionality.

By transitioning from manual paper-based processes to a centralized digital system, CEIT aims to achieve streamlined workflows, improved collaboration, and enhanced security in managing academic records. The system will serve as a structured repository for faculty documents, allowing for easier retrieval and long-term record management.

However, the study does not include the integration of student access portals, mobile applications, or automated grading features. The system will focus on its core objective of digitizing faculty document management while ensuring security and efficiency in academic records administration.

References

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