Student Exam Result and Transcript Management System for Hinthada University

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Abstract. The Student Exam Result and Transcript Management System (SERTMS) is a web-based program designed to manage and track students' academic records efficiently. The system is implemented using PHP as the server-side language, with MySQL as the backend database, and HTML, CSS, and JavaScript for the frontend. SERTMS automates the management of examination results for the First and Second Semesters of the 2024–2025 Academic Year at Hinthada University. It simplifies and accelerates the result preparation and administration by reducing manual work and optimizing processes, ensuring that the students and administrators can securely access results. The purpose of SERTMS is to provide a reliable computerized method for storing, retrieving, and presenting students' results, including credit units (CU), grades, and academic status, along with transcript generation. The system enhances accuracy, security, and efficiency, offering a dependable long-term solution for exam record management.

Keywords: Academic record, Credit Unit, Grade, Major, Specialization, Semester, Student exam result, Transcript generation

INTRODUCTION

The Student Exam Result and Transcript Management System (SERTMS) is a technological solution designed for schools, colleges, and universities seeking a secure, simple, and efficient alternative to conventional paper-based examination result evaluation, reporting, and distribution. Like other software applications, SERTMS has both advantages and limitations; however, it significantly streamlines and accelerates the result management process by offering structured templates and a secure database system for storing and publishing transcripts. These transcripts include essential academic details such as credit units, grades, and students' academic status, all accessible online. The system also enables students to conveniently view their examination results anytime through a web platform.

The primary goal is to employ a computerized system to enhance and automate the management and declaration of student marks, and to provide accurate and timely exam results to students. Within the system, information related to announcements, students, majors, specialized subjects, and examination results for both the First and Second Semesters of the 2024–2025 Academic Year is managed. The system is designed to generate detailed reports on a student's academic performance, covering both current and past semesters. Furthermore, faculty members can use the platform to analyze results, thereby supporting both administrative efficiency and academic decision-making.

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PROBLEM

In many educational institutions, including colleges and universities, students' academic records are managed through traditional paper-based systems, and the results are typically announced on notice boards. When students request their exam result certificates, departmental staff must manually search through records, verify academic year, major, and specialization, and then prepare the certificate. This process is time-consuming, labor-intensive, and requires significant storage space for recordkeeping. To address these issues, the SERTMS has been developed to minimize manual effort and save time. The system allows students to directly register, request, and access their exam results through an online platform. By delivering accurate result certificates in a short period, the system enhances accessibility and reduces administrative workload in result management.

APPROACH

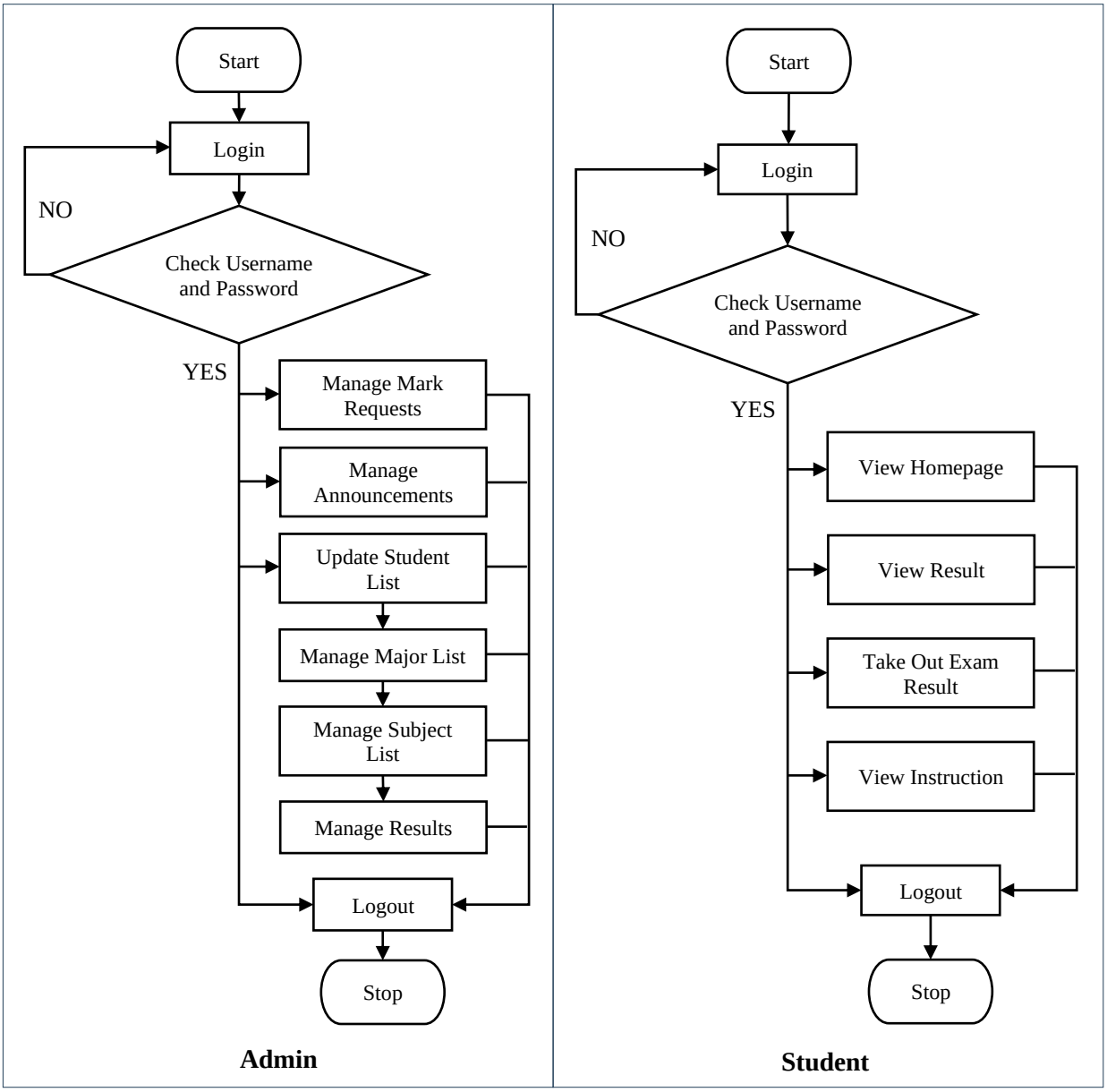

Figure 1: System Flow Diagrams for Admin and Student

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The SERTMS is designed with two main user roles: Administrator (Admin) and Student. On the Admin side, the administrator accesses the system through a secure login panel. The admin is responsible for managing exam result requests, handling announcements, updating student records, maintaining the lists of majors and subjects, and managing examination results. On the Student side, the users who do not yet have an account can register through a dedicated registration form accessible from the homepage. Once registered, students can update their personal profile, and view academic details by year, and request access to their examination results. The system provides students with official result certificates containing details such as grades, CU, and academic status.

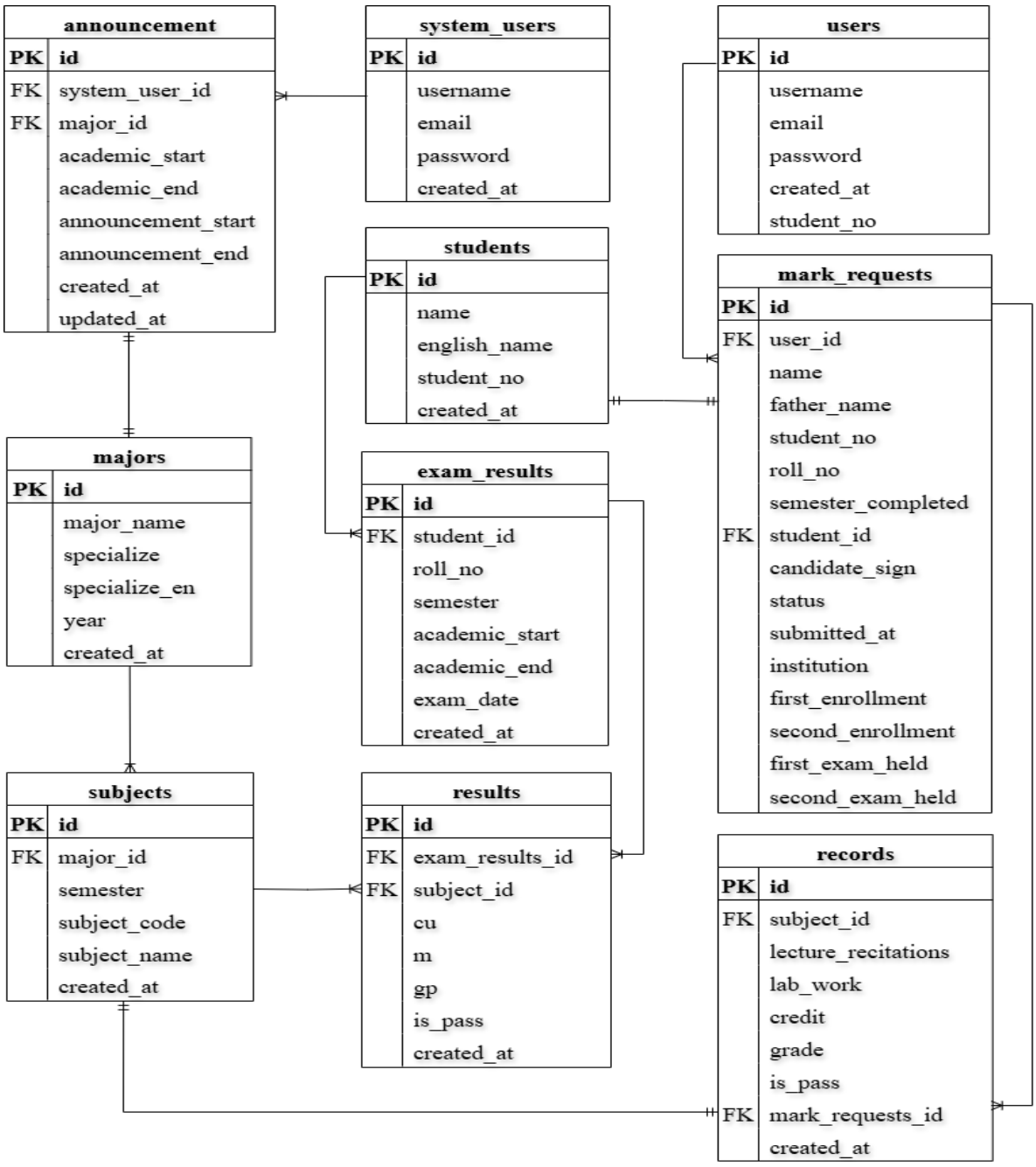

Figure 2: Entity-Relationship Diagram

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In the design of the SERTMS, the ER diagram is constructed to represent the relationships among the entities involved in the system. Primary keys ensure each record is unique, while foreign keys link related tables, and cardinality notations define the nature of relationships. The database schema is comprised of multiple interconnected tables, each serving specific functions to manage students' records and academic results. The schema includes students table which stores student information such as their ID, name (in both local and English), student number, and the date of creation. The exam_results table stores exam-related data like student ID, subject ID, semester, academic year, and result timestamps. Subject-related data is handled by the subjects table, which contains subject codes and names. Exam-specific details such as marks, grades, and pass/fail status are stored in results table. The administrative user data is managed in system_users table, containing information such as usernames, emails, and passwords. Academic programs are managed via the majors table, which lists major names, codes, and specialization areas. The mark_requests table captures student information, while records table stores records like lecture and lab work, grades, and credits. For announcements, the announcement table contains announcement texts, start/end times, and creation dates.

RESULTS

The SERTMS was successfully implemented operated through two main modules: Admin and Student. The Admin module allows administrators to manage academic information, publish and update examination results in the system. The Student module enables students to securely login, request and access their examination results through online. The database integration ensured secure storage and easy retrieval of academic information, minimizing errors in student records. The system ensures that students can conveniently obtain their results and transcripts without relying on manual processes. Overall, the system reduces administrative workload, and provides students with a secure and reliable platform for accessing their academic records.

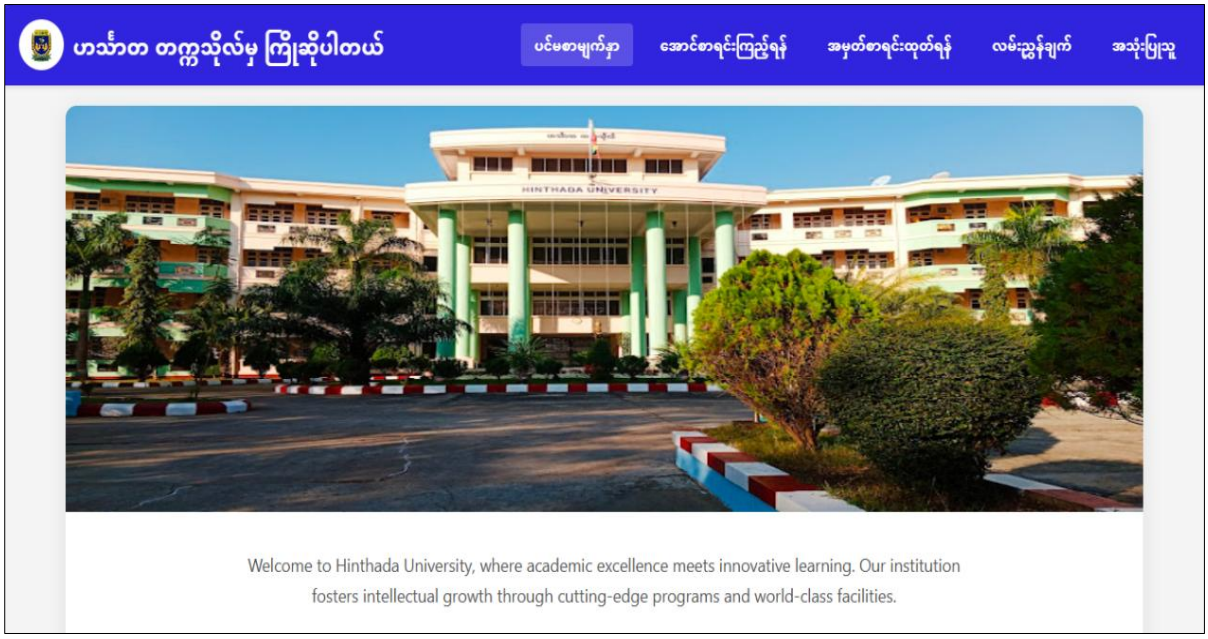

Figure 3: Welcome Page of SERTMS

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CONCLUSION

The Student Exam Result and Transcript Management System (SERTMS) was developed to modernize and simplify the management of student records, examination results, and transcripts for the 2024–2025 academic year. Implemented with PHP, MySQL, HTML, CSS, and JavaScript, and hosted locally, the system ensures accurate and efficient handling of academic data. The system reduces reliance on manual paperwork, minimizes errors, and significantly lowers administrative workload. Moreover, the user-friendly interface fosters seamless interaction between students and administrators, while its adaptable structure allows for long-term data storage from admission to transcript generation. Overall, SERTMS improves data accessibility, operational efficiency, and record security, making it a reliable tool to support modern academic administration and result management.

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