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Design and Implementation of a Smart and Secure Collaborative Platform for Managing Medical cases.

A Thesis

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Abstract

This project presents the design and implementation of a smart and secure collaborative platform for managing medical cases within a clinical environment. The proposed system aims to enhance the efficiency and organization of healthcare services by providing an integrated, web-based solution for managing patients, appointments, diagnoses, laboratory results, and medical prescriptions.

The system is developed using modern web technologies and is supported by a structured relational database designed with primary and foreign keys to ensure data integrity and consistency. It replaces traditional paper-based processes, reducing human errors, improving data accessibility, and accelerating information retrieval.

Additionally, the platform incorporates secure user authentication and role-based access control to protect sensitive medical data. Functional and performance testing demonstrated that the system operates reliably, with accurate data handling and efficient workflow management.

The results indicate that the proposed system significantly improves clinical operations, enhances data organization, and supports better decision-making in healthcare environments.

Keywords:

Health Management System, Medical Case Management, Web-Based System, Electronic Medical Records, Database Design, Healthcare Technology, System Security, Appointment Scheduling