

Title : Computer Science Department Internal Room Reservation System

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ABSTRACT

This independent study develops a room reservation system for internal use within the Department of Computer Science. The objective is to create a web-based application that improves the efficiency of classroom resource management in a systematic and accurate manner. The system enables convenient tracking of historical data, reduces paperwork, and shortens processing time for users.

The system is designed to support three main user roles: students, instructors, and administrators, each with different responsibilities and access permissions. Users can search for available rooms, check schedules, and submit reservation requests. In terms of technology, the backend is implemented using Go (Golang) for data processing and system management, while the frontend is developed with React and TypeScript. Tailwind CSS and DaisyUI are used to enhance usability and responsiveness across multiple devices. PostgreSQL is utilized for efficient data storage and database management.

System evaluation shows that the application operates correctly. All three user roles are able to search for rooms, submit booking requests, and view their own reservation records. Additionally, administrators can assign permissions to instructors and effectively manage room usage within the system.

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