

SCHOOL MANAGEMENT SYSTEM 2: AUTOMATED DEFENSE ROOM SCHEDULING SYSTEM WITH REAL-TIME AVAILABILITY AND CONFIRMATION FOR CENTER FOR RESEARCH AND DEVELOPMENT AT BESTLINK COLLEGE OF THE PHILIPPINES

ABSTRACT

AUTHORS

Rosever Cunanan
Cedrick Del Prado
Joseph Alfredo Pastores
Amina Sanson
Mark Joshua Trinidad

RESEARCH ADVISER

Ronald G. Roldan Jr..

AFFILIATION

Bestlink College of the
Philippines

DISCIPLINE

Information Systems

KEYWORDS

*automated defense room
scheduling system; real-time
room availability; scheduling
management; center for
research and development
(crad); scheduling conflict
reduction; agile scrum
methodology*

ARTICLE ID

AASGBCPJMRA-B41430

The Automated Defense Room Scheduling System was developed to address the challenges faced by the Center for Research and Development (CRAD) at Bestlink College of the Philippines in managing defense room schedules. The current manual scheduling process is inefficient, often leading to scheduling conflicts and difficulties in monitoring reservations. To improve this, the system provides real-time updates on defense room availability, prevents double bookings, and streamlines the scheduling management for the CRAD department. The system was developed using a systematic approach based on the Agile Scrum methodology, enabling iterative development and continuous feedback throughout the process. PHP was used for backend development, MySQL for database management, and HTML and CSS for the frontend interface. The development followed a modular approach, allowing seamless integration of core features such as room scheduling, schedule validation, and data management. Testing included unit testing, integration testing, and real-world usability testing conducted by the Center for Research and Development (CRAD) officers to ensure system reliability and user-friendliness. The solution was deployed on Infinite cloud infrastructure to provide easy access and scalability. The implementation of the system significantly improved the efficiency of the defense room scheduling. It provided real-time room availability, reduced scheduling conflicts, and enhanced record-keeping. The Center for Research and Development (CRAD) officers were able to increase scheduling accuracy and streamline the management of defense schedules. Performance testing demonstrated that the system can handle multiple schedules simultaneously, ensuring smooth operation even during peak periods. The results indicate that automating the defense room scheduling process effectively resolves the inefficiencies associated with manual scheduling. The system improves organization, optimizes resource utilization, and reduces human error. Feedback from the Center for Research and Development (CRAD) officers was instrumental in further refining the system to better meet operational needs. Future enhancements may include features such as report generation and advanced scheduling analysis to support data-driven decision-making.

RECOMMENDED CITATION

Cunanan, R., Del Prado, C., Pastores, J. A., Sanson, A., & Trinidad, M. J. (2025). School Management System 2: Automated Defense Room Scheduling System with Real-Time Availability and Confirmation for Center for Research and Development at Bestlink College of the Philippines. *Ascendens Asia Singapore – Bestlink College of the Philippines Journal of Multidisciplinary Research Abstracts*, 7(3), 52.