UNIVERSITI TEKNOLOGI MARA

SUMMER ELDERCARE WEB-BASED MANAGEMENT INFORMATION SYSTEM USING EARLY WARNING THEORY

NAZURAH ALISA BINTI ROSLI

BACHELOR OF INFORMATION SYSTEMS
(HONS.) BUSINESS COMPUTING

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ABSTRACT

The growing elderly population has increased the demand for efficient elderly care management. However, many eldercare centres still relied on manual record-keeping practices, making it difficult to monitor residents' health conditions, promptly identify abnormal health readings, maintain centralized health records, and facilitate effective communication among administrators, staff, and family members. To address these challenges, this project aimed to design and develop the Summer Eldercare Web-Based Management Information System based on the Early Warning Theory to enhance resident management, health monitoring, and communication through a centralized digital platform. The system enabled administrators and staff to manage resident information, record health data, automatically detect abnormal health conditions, generate timely alerts and notifications, and facilitate appropriate follow-up actions, while allowing family members to monitor residents' health information and receive important updates. The system was developed using the Adapted Waterfall Model, comprising the Planning, Analysis, Design, Implementation, Testing, and Documentation phases. It was then evaluated using system testing, three experts, and user acceptance testing with thirty respondents, which was measured with a Likert scale of five points. The results of the evaluation showed that all the functions of the system worked successfully and fulfilled the required functions. The system achieved an overall mean score of 4.69 with a standard deviation of 0.52, equivalent to an overall usability score of 93.8%, indicating a high level of user satisfaction, effectiveness, and efficiency. Overall, the system had a positive impact on the management of elderly care services, as it helped to streamline the management of records, monitor health conditions and provide timely alerts, while also improving the communication between administrators, staff, and family members. The system could be further enhanced by integrating Internet of Things (IoT)-based health monitoring devices, a mobile application, and predictive analytics to enable continuous real-time health monitoring, facilitate the early detection of potential health risks, and improve the quality of elderly care services.