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Islamic Cemetery Tracking and Management System Using User-Centered Design (UCD)

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ABSTRACT

The information and data on graves and burials is largely contained in the existing iPusara System but post-burial service requests, monitoring progress and documenting the tasks are not as developed. Hence, this project created Islamic Cemetery Tracking and Management System (ICTMS) with User-Centered Design (UCD) approach, which aims to improve the Islamic cemetery services delivered by Majlis Bandaraya Shah Alam. The goals of the project were to analyse the current business processes and issues, design and build the proposed solution and test and evaluate usability and functionality. ICTMS was created with the PHP, MySQL, HTML, CSS and JavaScript programming languages, following the Adapted Waterfall Model. There are four roles in the system, Public User, Administrator, Cemetery Division Officer and Field Operation Officer. It offers key functions such as grave searching, applications for burial, requests for services after burial, online payments, task assignment and tracking, notifications, cemetery plot management and reporting. Normal, alternative and exception scenarios were applied in functionality test. User testing was carried out with 30 users and expert evaluation with 3 experts. ICTMS had a mean score of 71.07 on the System Usability Scale (SUS) with 28 complete responses; the mean score was higher than the benchmark of 68. The overall UCD evaluation score was 4.33 of 5.00. The results show that the system was generally easy to comprehend, accessible and easy to navigate and was acceptable in terms of usability. Improvements for future include cemetery map management by authorised officers, special burial requests, urgent burial requests, and graphical user guidance and adaptation for other Islamic cemeteries.