UNIVERSITI TEKNOLOGI MARA

IMOMCARE: MANAGEMENT INFORMATION SYSTEM FOR SINGLE MOTHERS USING NIELSEN'S USABILITY HEURISTICS

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ABSTRACT

Currently, welfare programs for single mothers at Yayasan Pembangunan Keluarga Terengganu (YPKT) are being streamlined with manual documentation and communication systems like paper forms, Microsoft Excel, WhatsApp and Facebook, leading to lower efficiency in delivering information, keeping records duplicated, not having a centralised database, and the problem of administration in the welfare programme. To solve the above problems, iMomCare Management Information System was developed to digitalize and centralize the management of the information and welfare program of single mothers. The goal of this project was to Identify the business process and problems of YPKT, Design and Develop the iMomCare Management Information System based on Nielsen's Usability Heuristics and testing the functionality and usability of the developed system. The project was divided into the following phases: Planning, Analysis, Design, Implementation, Testing and Evaluation, and Documentation. The system was developed with the use of PHP, MySQL, HTML, CSS, JavaScript, Laragon, and Visual Studio Code. Functionality testing was carried out by the developer and an independent tester, followed by the expert evaluation by three experts, and evaluation by 43 respondents. Functionality test was completed by both evaluators successfully, and the expert evaluation confirmed that the system met the usability requirements with minor improvements recommended. Additionally, the user evaluation showed positive scores in all the parameters of the user evaluation including perceived usefulness, system satisfaction, functionality, interface, navigation and Nielsen's Usability Heuristics with the mean scores ranging from 4.42 to 4.56, which mean high acceptance and satisfaction of users with the system. Overall, all the project's objectives were successfully met effective upkeep of a functional, user friendly and centralized iMomCare Management Information System, which serves to enhance programme management, communication, application processing, attendance log, notification and announcement, and report generation for the YPKT. Additional improvements could involve the incorporation of real-time notifications, a mobile app, AI-powered support functions, and reporting features to boost system performance and achieve smoother user experience.