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40181 700982

icar2023@kuptm.edu.my

RESEARCH GRANT MANAGEMENT SYSTEM: SYSTEM DESIGN AND DEVELOPMENT

Harlinawati Abdul Kadir, Shima Sabri, Zurina Jusoh, Aslimariah Ahmad and Roslinda Murad
Faculty of Computing and Multimedia
Universiti Poly-Tech Malaysia

ABSTRACT

The evolution of new technology has found many changes in our daily life and continues to reshape our world. From year to year, technology evolves to provide the best solutions to problems faced by humans. Once the technology is generally accepted by the community, they may have new experiences and approach that suits their needs. Universiti Poly-Tech Malaysia (UPTM) offers research grants to lecturers twice a year. These grants are provided to fund specific projects and encourage lecturers to conduct new experiments and design new instruments. Therefore, especially the principal investigator is facing problems in managing and storing information and calculating all fund data including budgets and expenses. Furthermore, they need a good management system because data is important. Without a good system, confidential data can be misplaced, lost, and received by unauthorized persons. The system should also be able to function as a centralized system with several functions such as storing the principal investigator information, co-investigator information, fund account management, and keeping important files in one place. The Agile Software Development Model is used to aid the development process and can carry out the development process in a short period. Development requirements involve a web-based framework and Firebase Real-Time Database. Consequently, a Research Grant Management System is the anticipated result. This web-based system is developed to assist principal investigators in managing research grant information and can produce progress reports and final reports. In addition, the implementation of the system has improved current management processes and resolved all issues identified in the problem statement.

Keywords: *research grant, management system, web-based, system design, Firebase Real-Time Database*

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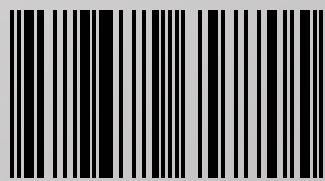## INTERNATIONAL CONFERENCE ON CROSS-DISCIPLINARY ACADEMIC RESEARCH 2023

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