

DESIGN AND DEVELOPMENT OF WEB INFORMATION SYSTEM FOR INFORMATICS CREATIVITY AND INNOVATION FESTIVAL USING LARAVEL FRAMEWORK AND KANBAN METHOD

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ABSTRACT

The management of the Informatics Creativity and Innovation Festival (ICIF) at Politeknik Negeri Bengkalis is currently manual, and work documentation is only stored temporarily on social media. The novelty of this research lies in the integration of the Kanban method for managing academic system development, combined with Device Fingerprinting-based security to prevent vote manipulation without requiring a user login. The main problems identified in this study are administrative inefficiency, the risk of voting fraud, and the lack of permanent access to student innovation archives. As a solution, this research presents an integrated web-based platform developed using the Laravel Framework. The research objective is to design the ICIF information system to provide professional archiving, digital registration, and transparent voting mechanisms. The method employed is Kanban, focusing on workflow visualization and Work In Progress (WIP) limits implemented across five iterations. Research results indicate that the system was successfully implemented for four primary actors (Admin, Lecturer, Participant, and Visitor), with all features validated through Black Box Testing. The digital gallery effectively provides permanent archiving for student innovations. Furthermore, the UUID validation mechanism successfully prevents duplicate voting from the same device, while the application of the Kanban method significantly improved efficiency and transparency in development task management.

Keywords: *Black Box Testing, ICIF, Kanban Method, Laravel, Web Information System.*