

## ABSTRACT

*The implementation of the Capstone Design and project course in the Information Systems Study Program at Telkom University is a newly introduced course in 2024 and is still considered very new. However, this course faces challenges in management that have not been fully optimized. To address this issue, this research aims to develop a web-based application that can optimize the management of the course. The application is designed using the Extreme Programming methodology and built with the Laravel framework and MySQL as the database. Key features developed include the automation of student registration, multicultural team verification, project topic proposals, and tracking of mentoring up to the final report. In addition, the application provides an intuitive user interface, integrated data management, and support for more effective collaboration among stakeholders. The system is evaluated through user acceptance testing to measure its effectiveness and user comfort. The test results show that the efficiency of course management can be improved, errors can be reduced, and the user experience in executing the Capstone project can be enhanced.*

**Keywords:** *capstone design and project, course management, web-based application, extreme programming, laravel, user acceptance testing*