

ABSTRACT

DESIGN AND DEVELOPMENT OF THE FITACADEMY APPLICATION AS A MICROLEARNING-BASED LEARNING PLATFORM USING SCRUM METHODOLOGY

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In the pursuit of achieving a better and more sustainable life in accordance with SDG Goal 4 "Quality Education," education serves as a fundamental pillar that not only strengthens knowledge but also shapes character and the ability to adapt to contemporary challenges. This research aims to develop the FitAcademy application, a mobile application based on microlearning using the Flutter framework and Dart programming language. FitAcademy is designed to address the issue of prolonged digital learning durations by presenting learning content in small, easily digestible segments. The Scrum development method is chosen to ensure a smooth process and the final quality of the application, with black-box testing employed to assess functionality from the user's perspective. This research contributes to achieving SDG Goal 4 by providing an accessible, efficient learning platform that aligns with individual learning styles, and serves as a reference for the development of similar applications in the future. The results of the black-box testing indicate that the application has fully met functional feasibility with a 100% success rate. Furthermore, expert testing results show that the application successfully implements the microlearning concept effectively through visual and auditory approaches.

Keywords: Quality Education, SDG Goal 4, Microlearning, Mobile Application, Flutter, Scrum, Black-box Testing.