

ABSTRACT

Financial technology (fintech) is an innovation in financial services that utilizes information technology as a tool to make financial transactions more effective and efficient. One of the platforms offered by fintech services is peer-to-peer lending, enabling borrowers in need of funds to obtain financing from lenders who act as investors. Conventional fintech platforms often involve interest (riba) in the form of high fluctuating interest rates, limited funding repayment periods (up to 12 months), and the risk of customer data leaks. Many cases have arisen where fintech companies operate without proper licenses, resulting in financial losses for users who borrow through these illegal platforms.

To address these challenges, a backend application that aligns with online lending principles, particularly based on Sharia values, is required. The development approach used in this research is Agile, with the Test-Driven Development (TDD) method. TDD involves setting goals for the program before writing any code, enabling developers to design and develop APIs according to predefined tests. The research involved integration API testing and load testing to evaluate its performance under various user scenarios. The results show that the used method is effective in reducing API bugs as they are immediately detected during the development process. Additionally, load testing with concurrent user loads ranging from 50 to 300 did not cause errors, and the average response time ranged from 138 milliseconds to 1420 milliseconds, which is acceptable and provides users with a seamless experience.

Keywords: Fintech, API, P2P Lending, P2P Lending Syariah, Test Driven Development, Online Loans