

ABSTRACT

In today's digital era, authentication system security is crucial. Authentication systems using usernames and passwords are vulnerable to attacks, so increased security is needed. Blockchain offers a solution by providing a distributed database that cannot be manipulated. This technology is used to strengthen the security of authentication systems.

Certifichain is a certification platform that utilizes blockchain technology. However, this platform has shortcomings that need to be improved. This research focuses on improving the login verification process in Certifichain using blockchain. The goal is to increase the security and credibility of the system, especially in the field of education and professional certification.

This research addresses the problems of vulnerable QR codes, lack of certification processes, and manual verification of participants. The methodology includes literature review, user requirement identification, conceptual design, product development, functional and security testing, user evaluation, and maintenance. This research contributes to the improvement of authentication and security systems, as well as user experience in the realm of digital certification.

Keywords: Authentication System Security, Blockchain, Certifichain, Encryption, QR Code