HE ADVANCED ENCRYPTION STANDARD ALGORITHM (AES-256) IN DATA SECURITY MEDICAL RECORDS

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ABSTRACT

In the current era of digitalization, medical record data processing in hospitals and health centers is increasingly dependent on information technology. The use of this technology also carries significant security risks, such as data leaks that threaten patient privacy. To increase the security of medical record data and protect patient privacy at the Tombangkalua Community Health Center, by implementing the Advanced Encryption Standard (AES-256) algorithm in securing medical record data, it is hoped that medical record data can be properly encrypted so that it can only be accessed by authorized parties using a key. proper encryption and decryption. The test results show that the implementation of the AES-256 algorithm successfully encrypts medical record data stored in digital form with high encryption and decryption efficiency and can only be accessed by parties who have the correct encryption key. The conclusion of this research is that the implementation of the AES-256 algorithm can increase the security and confidentiality of medical record data, as well as protect patient privacy from unauthorized access or unwanted data leaks.

Keywords: Cryptography, Medical records, Encryption, Decryption, AES-256
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