STUDENT DIPLOMA FILE ENCRYPTION APPLICATION USING THE ADVANCED ENCRYPTION STANDARD (AES) ALGORITHM

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ABSTRACT

Security in storing data in information technology is currently very important and necessary. Currently, SMPN 11 Bintan has not implemented a security system to secure student diploma score data. Anyone can access the computer that is being used, so it is very risky if someone irresponsible accesses sensitive information. Another possibility is that the elements contained in it change which can result in changes to the student's diploma score data. This research method uses the AES method in the data encryption and decryption process. The data in this research was taken from SMPN 11 Bintan in *.xls form. The first step in this research was observation, followed by literature study, data collection, design, implementation, and ending with testing. The results of the research created a system that applies the AES algorithm to be able to encrypt diploma grade data files and store them in the form of encrypted files, then the encrypted data can be described again in its original file form. Based on the results of the research conducted, it can be concluded that with the existence of a data security system for student diploma grades using the AES method, it can secure student data at SMPN 11 Bintan which previously did not have data security.

Keywords: Security, Student data, Encryption, Decryption, AES