

IMPLEMENTATION OF ADVANCED ENCRYPTION CRYPTOGRAPHY ALGORITHM SECURITY STANDARD NATIONAL EXAM QUESTIONS

(Case study: SD Negeri 5 Sungguminasa Makassar)

ABSTRACT

With the advancement of technology, information security is becoming increasingly important as more and more information is stored and transmitted electronically. In the digital world, encryption is used to secure data sent over a computer network or stored in electronic storage such as hard disks and flash drives. As one of the schools in Indonesia, SD Negeri 5 Sungguminasa Makassar also has the responsibility to maintain the security of national exam questions so that they do not leak. Therefore, a secure security method is needed to avoid this. One of the methods used in this study is cryptography using the Advanced Encryption Standard (AES) algorithm. Implementing the AES algorithm in the exam question security system and exam question security aims to ensure that exam questions remain safe and can only be accessed by authorized parties, with a focus on encryption of questions before they are distributed and decryption only by authorized parties. Testing is carried out by analyzing the encryption time, decryption, and size of the encrypted file to ensure its efficiency and security. The data used is the SD Negeri 5 Sungguminasa Makassar national exam question data. The implementation of the AES algorithm for this national exam question is built with the PHP and MySQL programming languages. The results of the study indicate that the implementation of the AES cryptographic algorithm can improve the security of national exam questions at SD Negeri 5 Sungguminasa Makassar and thus support the implementation of fair, transparent, and reliable exams. by preventing unauthorized access and reducing the risk of exam question leaks, This makes the AES algorithm a reliable solution to overcome the challenges of national exam question data security.

Keywords: Security, National Exam Questions, Advanced Encryption Standard (AES), Cryptography, Encryption.