IMPLEMENTATION OF BLOWFISH AND VIGENERE CIPHER ALGORITHM IN DATA ENCRYPTION AND DECRYPTION IN WEB-BASED STUDENT LEARNING EVALUATION APPLICATIONS

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ABSTRACT

Evaluation of student learning is a process of obtaining data and information needed to determine the extent to which students understand all the learning that has taken place. However, recording value data without encryption can potentially cause data leaks or data theft which could be misused. Based on these problems, researchers designed a web-based student learning evaluation application as a medium for recording grades which is equipped with database security using the Vigenere Cipher and Blowfish algorithms so that the data stored will be safer. Database security is carried out by encrypting data entering the database. Meanwhile, to read the data so that it can be read, decryption will be done by entering the key that has been set in the source code. Based on the testing and calculation of system performance tabulation which shows 100% results in the encryption and decryption process, then based on the test results and calculation of system performance tabulation, the Vigenere Cipher algorithm and the Blowfish algorithm can be used to secure student assessment data in the system database by encryption and decryption so that stored data is more secure.

Keywords*: learning evaluation, blowfish, vigenere, cryptography.*