

IMPLEMENTATION OF DES (DATA ENCRYPTION STANDARD) METHOD FOR EMPLOYEE DATA SECURITY (CASE STUDY: EDUCATION AND CULTURE OFFICE OF KUTAI KARTANEGARA)

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ABSTRACT

The Office of Education and Culture of Kutai Kartanegara Regency, located in East Kalimantan Province, serves as a governmental entity tasked with providing public services in the education domain. Currently, the Office of Education in Kutai Kartanegara Regency has not established a security system for protecting employee data, including sensitive and confidential information. Consequently, there is a pressing need for enhanced security measures to secure the data. This setting very risky if someone who is not responsible accesses the data. Cryptography is an important aspect that is interrelated with the security system. In this study, employee data security was carried out using the Data Encryption Standard (DES) cryptographic algorithm to encrypt employee data. The stages of this research include data collection, analyzing the system currently used, then creating an employee data security system in the form of encryption results using the DES cryptographic algorithm in the form of file output that has been secured, while the decryption results are files that return to their original form. Based on the research conducted, it can be concluded that the encryption and decryption system can help secure employee data files.

Keywords: Office of Education and Culture, Employee Data, Security System, Cryptography, DES.