

PENGEMBANGAN ALGORITMA *ADVANCED ENCRYPTION STANDARD* DAN *LEAST SIGNIFICANT BIT* UNTUK KEAMANAN DATA DIGITAL (STUDI KASUS DATA PEMESANAN *HOMESTAY GRIYA BANARAN*)

*DEVELOPMENT OF *ADVANCED ENCRYPTION STANDARD* AND *LEAST SIGNIFICANT BIT* ALGORITHM FOR DIGITAL DATA SECURITY (CASE STUDY OF *GRIYA BANARAN HOMESTAY BOOKING DATA*)*

Pembimbing (1 orang)

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ABSTRACT

Cryptography and steganography information system is an information system which designed and developed to secure digital documents by making document unreadable and inserting them into an image media. The cryptography and steganography information system uses Advanced Encryption Standard (AES) algorithm for file encryption and Least Significant Bit (LSB) algorithm as file insertion algorithm into an image. In the development of this information system using a case study of banaran homestay booking data in the form of an excel files. The purpose of this research is to develop a security system that makes it difficult to find and manipulate documents as well as see the comparison of input and output documents with quality changes testing and characteristics testing. The results obtained, in terms of cryptography and steganography, there is no significant increase in the final file's size. For quality measurement, PSNR and MSE methods are used to determine the level of image damage after inserted process. On the PSNR results, the results are said to be quite good with an average value above 60 dB. And the MSE score shows a number below 0,02 dB which indicates that the difference between the input and output images is quite small.

Keywords: AES Cryptography, LSB Steganography, MSE, PSNR