IMPLEMENTATION OF DATABASE SECURITY USING THE AES-128 . ALGORITHM METHOD DESKTOP BASED ON CONVECTION BUSINESS

(Case Study: Wiggle Industries Yogyakarta)

SHINTA BELLA
Informatics Study Program, Faculty of Science and Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor, Sleman, Yogyakarta
E-mail : bellashintaa555@gmail.com

ABSTRACT

Wiggle Industries is a convection service provider for clothing orders, which is located at Wonocatur KD IV, Banguntapan, Yogyakarta. Wiggle Industries' business conducts a lot of transactions with customers, however, in managing payment transactions at Wiggle Industries, it still uses an ineffective system, because the current payment transaction process is still done manually or by bookkeeping and the data has not been stored in an organized archive, so that the owner businesses find it difficult to find out transaction data and financial statement activities every month. This convection business has several important data that need to be kept confidential, such as transaction data and financial report activity data, because the issue of database security and confidentiality is one of the most important things to do for the protection of data stored in the convection business system at Wiggle Industries. .

Based on these problems, this study aims to solve problems that occur in the wiggle industries convection business by creating a desktop-based payment transaction system by applying cryptography to encrypt transaction data and financial statement activities registered in the database using the Advanced Encryption Standard (AES) algorithm. 128-bit. The software used is Netbeans as a text editor which has the main function of compiling a programming language that focuses on Java and MySQL as a database server. The data processed are customer data, transaction data, product data, and expenditure data. The system facilitates Wiggle Industries in carrying out payment transactions, as well as income and expense financial reporting activities and has implemented database security using the 128-bit AES algorithm.

This Desktop-based convection business payment transaction system can help convection business owners carry out transaction activities and also make it easier to record payment transactions from customers, record income and expenditure financial report activities and with the application of cryptography using the AES-128 bit algorithm, these data are already its security is guaranteed so that it is not misused by people who are not responsible or who are not authorized to the data with the aim of reducing data leakage, data theft and data manipulation.

Keywords: Advanced Encryption Standard, Transaction, Convection, Database, Desktop