IMPLEMENTATION OF DATA ENCRYPTION STANDARD (DES) METHOD FOR POPULATION DATA SECURITY (Case Study: Mlati District Office, Sleman)

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ABSTRACT

As technological developments become more and more advanced, crimes in the digital era are increasingly becoming more numerous. The increasing number of crimes that attack businesses in the digital era include hacking, phishing and data theft which causes losses for various parties, especially government offices such as the Mlati District Office. The Mlati District Office is an administrative office in the Mlati district. One of the data stored by the Mlati District Office is population data for the people in Mlati District. Population data stored at the Mlati District Office is still in the form of Microsoft Office Excel. This of course poses a risk if sensitive and valuable information is accessed by irresponsible people. Apart from that, leaked data can be misused by irresponsible people, causing huge losses. Security of information regarding population data is very necessary for the Mlati District Office. In this research, we will design a population data security system for the Mlati District Office. The algorithm that will be used to provide data security is the Data Encryption Standard (DES) cryptographic algorithm. The system that will be built uses the Hypertext Preprocessor (PHP) programming language and the database uses MySQL. The result of this research is a website-based population data security system at the Mlati District Office. The population data security system can carry out encryption to secure population data and carry out decryption to return population data to its original form.

Keywords: Encryption, Decryption, DES, Data, Security, Population