

APPLICATION OF VIGENERE CIPHER CRYPTOGRAPHY IN SECURING PATIENT MEDICAL RECORD DATA

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ABSTRACT

Medical records are important documents that contain patient health information. This information is confidential and must be kept from unauthorized parties. Unfortunately, conventional systems with physical media used to store medical records currently have several weaknesses, especially in terms of data security. This system is not secure enough to protect this confidential data. Therefore, a safer storage system for medical records is needed. This system must be able to protect data from unauthorized access, and also ensure that the data remains available if it is needed again. Therefore, this research focuses on developing a web-based electronic medical record data security system. The system developed in this research uses the Vigenere Cipher encryption method. This method is an encryption method that is quite strong and has been proven effective in protecting data. With this method, patient medical record data can be encrypted and stored safely. If the data is needed at a later date, the data can be decrypted again using the same key. The research results show that the system developed is able to effectively secure patient medical record data. Patient medical record data can also be decrypted again using the appropriate key when encrypting medical records. This opens up opportunities for the use of these systems in medical practices, so that patient data can be better protected.

Keywords: Medical Records, Cryptography, Vigenere Cipher.

