A Secure Document Archive Implemented using Multiple Encryption

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Abstract:
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Abstract:
Documents are something that provides information or can be a certification for someone or also can be a legal report. The theft of such important documents/certificates can interfere/hamper an individual or organization from performing their work efficiently and can also lead to loss of possessions. In this manuscript, “Pocket Certificates” - a conventional document archive with the capability of securely storing those documents is presented. The solution is the use of a Double Encryption system based on an amalgamation of AES and 3DES standards. Use of enhanced security can be thought of as a compromise in reliability and smooth function of a system but to the process, there are some constraints to be set so that the Encryption/Decryption process does not hamper the usability. This paper takes account of such attributes and keeps a balance between all of them. There is also the use of other Hashing techniques like bycrypt securely storing user login details and use of passport middleware for unique user authentication requirements at each application stage. The paper consists of an overall web application for the secure archive to documents or important data.

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Presently there is more than 70% use of physical documents. The use of physical copies of documents creates huge overhead in terms of security, paper storage, manual audits, etc. incurring high cost and inconvenience. The work environment nowadays demands that proper security measures be taken when it comes to all forms of documentation - digital or otherwise. While it's easy to heist documents from a conventional cabinet locker, digital theft/duplication/deletion can be harder. Proper document organization combined with the use of cryptography tools will make sure that the sensitive data can stay secure.

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