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4-2 Written Assignment: Algorithm Ciphers

**Algorithm Ciphers**

Recommend an appropriate encryption algorithm cipher to deploy given Artemis Financials’ needs.

* The encryption algorithm cipher I would recommend Artemis Financial is the AES or the Advanced Encryption Standard. The AES standard uses 192- and 256-bit keys for encryption making it very difficult to crack and will work perfectly to store their archived data. Currently In the United States there are no mandatory laws on encryption, though some European countries do have restrictions.

Provide a brief overview of the encryption algorithm cipher, its advantages, and its disadvantages to justify your reasoning to Artemis Financial.

* As longer keys provide better encryption, AES uses 192- and 256-bit key length to encrypt or decrypt blocks of data making it very difficult to crack without a key and the hash function ensures the data hasn’t been tampered with. Additionally, AES uses a symmetrical cipher, meaning it uses the same key for encryption and decryption. AES is also the current standard used by the US government and historically encryption has been used to send and receive information going far back, though AES as developed in 1997.

Sources:  
Chen, L. C. (2016, December 29). Cryptographic Standards and Guidelines | CSRC. Csrc.Nist.Gov. <https://csrc.nist.gov/projects/cryptographic-standards-and-guidelines/archived-crypto-projects/aes-development#overview>

Simplelearn. (2021, September 15). What Is Data Encryption: Types, Algorithms, Techniques & Methods. Simplilearn.Com. <https://www.simplilearn.com/data-encryption-methods-article>