# MODERN SYMMETRIC KEY ENCRYPTION

http://www.tutorialspoint.com/cryptography/modern_symmetric_key_encryption.htm

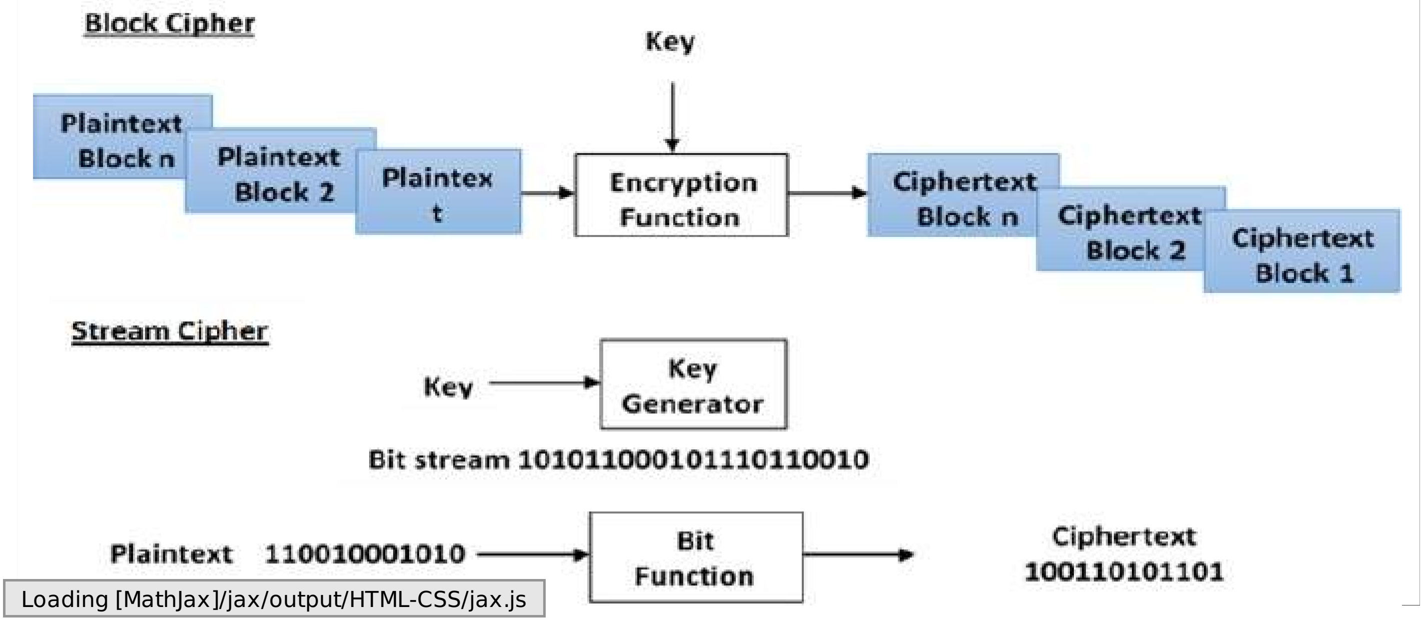
Digital data is represented in strings of binary digits *bits* unlike alphabets. Modern cryptosystems need to process this binary strings to convert in to another binary string. Based on how these binary strings are processed, a symmetric encryption schemes can be classified in to −

## Block Ciphers

In this scheme, the plain binary text is processed in blocks *groups* of bits at a time; i.e. a block of plaintext bits is selected, a series of operations is performed on this block to generate a block of ciphertext bits. The number of bits in a block is fixed. For example, the schemes DES and AES have block sizes of 64 and 128, respectively.

## Stream Ciphers

In this scheme, the plaintext is processed one bit at a time i.e. one bit of plaintext is taken, and a series of operations is performed on it to generate one bit of ciphertext. Technically, stream ciphers are block ciphers with a block size of one bit.



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