

# Difference Between Encryption and Decryption

Both encryption and decryption operations employ the same algorithm and key. The difference between encryption and decryption are provided in the table below.

Encryption vs Decryption	
Encryption	Decryption
It is a technique for converting plain or clear text into ciphertext with the help of a key.	It is a technique for converting encrypted text to plain or clear text.
The technique of transforming a normal message into a meaningless message is known as encryption.	While the process of restoring a meaningless communication to its original form is known as decryption.
Either a secret key or a public key can be used to encrypt any message.	While either a secret key or a private key can be used to decrypt an encrypted message.
The encryption-decryption operation employs the same algorithm and key.	A pair of keys and a single algorithm are used for encryption and decryption, with each key being used for both operations.
When using encryption, the sender actually sends the encrypted data.	In decryption, after receiving the data, the receiver decodes it.

## What is Encryption?

Encryption is the process of encoding data. This process converts plaintext, or the data's original representation, into cipher text, or another type of data representation. The original data shouldn't be accessible to anyone but authorized parties who can decrypt a cipher text back to plaintext. Although encryption does not by itself preclude interference, it does make it more difficult for a potential interceptor to comprehend the data.

For technical reasons, an encryption system often uses a pseudo-random encryption key generated by an algorithm. Despite the fact that communication can be decoded without the key, a well-designed encryption system requires a lot of computer power and expertise.

## What is Decryption?

The process of returning encrypted material to its original condition is called decryption. Most of the time, it's the encryption process's inverse mechanism. Decryption decodes the encrypted data so that only an authorized user may decrypt the data since it requires a secret key or password.

Information is susceptible to unauthorized individuals or groups looking over and accessing it as it travels across the Internet. Data is therefore encrypted in order to guard against data loss and theft. One can encrypt many different types of data, including email messages, text files, images, user data, and directories. To access the encrypted data, the person in charge of decryption gets a popup or window asking for a password.

### **Key Difference Between Encryption and Decryption**

The key difference between encryption and decryption is given below.

- Normal data is transformed into an unreadable form through the process of encryption, whilst unreadable/coded data is transformed back into its original form through the process of decryption.
- While the person transmitting the data to the destination does the encryption, the person receiving the data performs the decryption.

