

Introduction

Encryption is a security method that protects data by turning readable information into unreadable text called ciphertext. Its main purpose is to keep personal or sensitive data safe from unauthorized access, especially when it is sent over the internet or stored on devices. Encryption works by using algorithms and keys. A key is used to encrypt the data. Only someone with the correct key can decrypt the cipher text and read the original message. Modern systems use symmetric or asymmetric encryption depending on the situation.

Encryption has many advantages: it protects privacy, secures communication, and prevents data theft. However, it also has some disadvantages. Strong encryption can slow down systems, key management can be difficult, and if a key is lost, the data cannot be recovered.