# 2.Digital Signature

A digital signature ensures the authenticity and integrity of a message or document in digital communication.

## How It Works:

- The sender encrypts the message using their private key to generate a unique signature.
- The receiver uses the sender's public key to decrypt the signature and verify its authenticity.
- This process ensures the message is sent by the claimed sender and has not been tampered with.

## Applications:

- Used for secure transactions.
- Proves identity in online communications.

## Additional Concept:

- **Double Encryption**:
  - Combines encryption and signing for enhanced security.
  - Example: Encrypt with a public key, sign with a private key.