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#33 Message Authentication & Authentication Functions in Cryptography |CNS

Generated on December 19, 2023

Summary

Notes

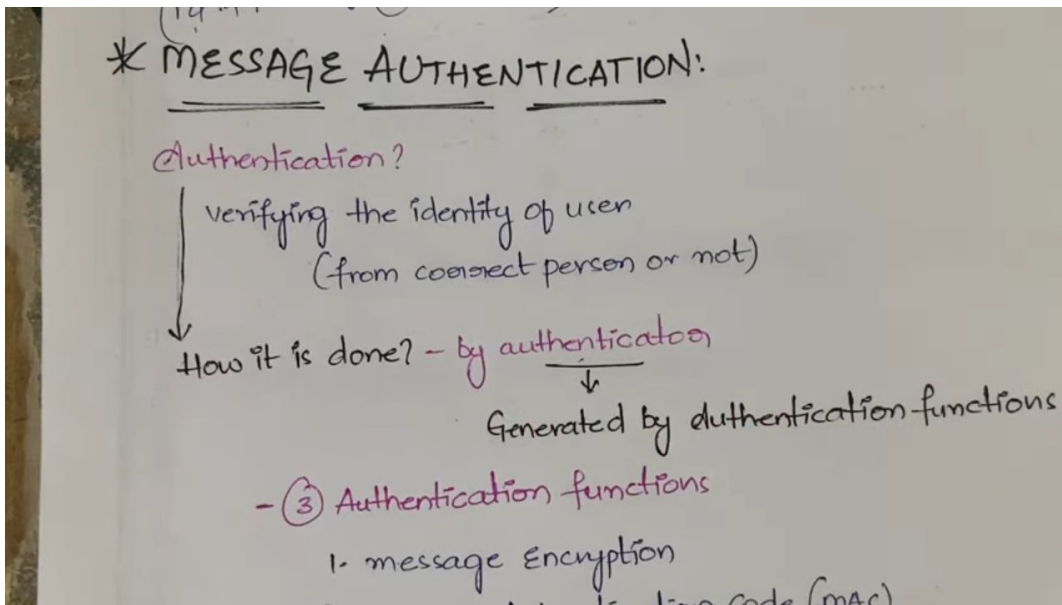
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✨ Researchers have discovered a new species of bird in the Amazon rainforest, known as the reter.

▶ 0:10

Authentication?

xyz
abc
↓
verifying the identity of user
(from correct person or not)

How it is done? - by authentication

↓
Generated by authentication functions

- (3) Authentication functions

- ✓ 1. message Encryption
- ✓ 2. message Authentication code (MAC)
- 3. Hash functions (H)

1. Message Encryption:

How it is done? - by authentication

↓
Generated by authentication functions

- (3) Authentication functions

- ✓ 1. message Encryption
 - ✓ 2. message Authentication code (MAC)
 - ✓ 3. Hash functions (H)
- } generate Authen

1. Message Encryption:

plain Text - Cipher Text

↓
acts as authenticator.

▷ 2:44

▷ 3:12

2. message authentication code:

$$C(M, k) = \text{o/p (fixed length code)}$$

C = authentication function

M = message

k = key

o/p = MAC code — acts as authentication

3. Hash function (H):

Similar to MAC, but $\text{key} \leftrightarrow \text{Hash function}$

$$H(m) = \text{fixed length code (hash code } h)$$

▷ 3:59

$k = \text{key}$

$\text{o/p} = \text{MAC code}$ — acts as authentication

3. Hash function (H):

Similar to MAC, but $\text{key} \leftrightarrow \text{Hash function}$

$$H(m) = \text{fixed length code (hash code } h)$$

H — Hash function

h — hash code — acts as authentication

▷ 4:48