

JATIYA KABI KAZI NAZRUL ISLAM UNIVERSITY

Trishal,Mymensingh



Course Title:Network Security

Course code:CSE-435

Topic: Assignment on Message authentication process and case study on cyber attack

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1.Designing a way in which a hash code can be used to provide message authentication are given bellow:

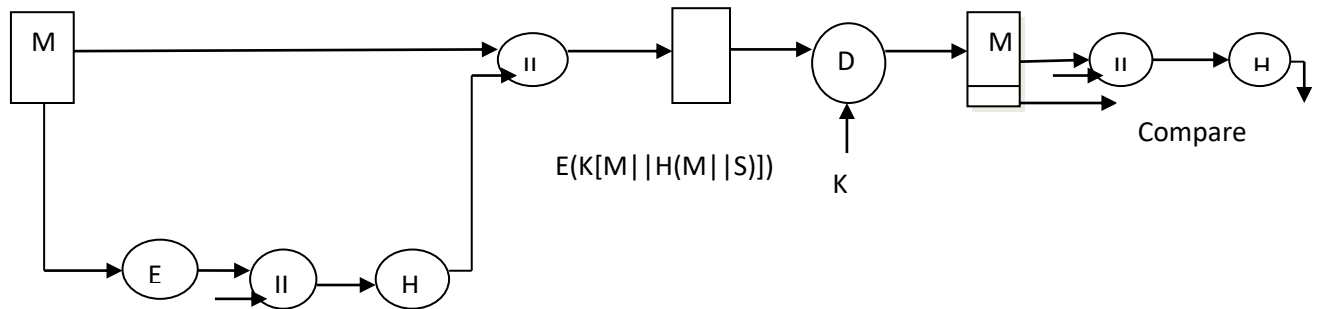


Fig: Simplified example f the use of Hash Function for Message authentication

Description for the process of authentication:

It is possible to encrypt message before hash function add for authentication. The technique assumes that the two communicating parties share common hash value. Since message is encrypted two paties can not alter message although they use same hash function.

2. Case studies on latest cyber attack occurred over the world in this year:

Marriott Data Breach

On March 31st, 2020, the hotel chain Marriott disclosed a security breach that impacted the data of more than 5.2 million hotel guests who used their company's loyalty application. Hackers obtained login credentials of two accounts of Marriott employees who had access to customer information regarding the loyalty scheme of the hotel chain. They used the information to siphon off the data approximately a month before the breach was discovered. The data accessed in the breach involved personal details such as names, birthdates, and telephone numbers, travel information, and loyalty program information. According to the Marriott, hackers might have obtained credentials of their employees either by credential stuffing or phishing. Previously, the hotel giant announced a data breach in late 2018 in which more than 500 million guests were impacted.