XpertBot

BabiBeauty

A-CIA TRIAD

The **CIA Triad** is a foundational model in cybersecurity that represents the three core principles of information security:

1. Confidentiality:Ensuring data is accessible only by authorized users,usually enforced by encryption techniques.

Example:When someone logs to their bank account,the website uses SSL/TLS encryption to ensure that their username,password and transaction details remains confidential.

1. Integrity:Ensures the accuracy and completeness of data,assuring the data hasn’t been improperly modified using hashing techniques.

Example:A company sends a contact via email with a digital signature which the recipient can use to verify that the document hasn’t been altered during transit.

1. Avilability:Data must be available when needed by authorized users,usually achieved through implementing redundancy.

Example: A hospital uses **cloud-based patient records** with redundant servers. Even if one server fails (or a **DDoS attack** targets the system), backups ensure doctors can still access critical medical data when needed.

B-SYMMETRIC ENCRYPTION:

Symmetric encryption utilizes a single key for both encryption and decryption.key encryption includes:AES,DES,RC5 and Twofish.