

# Security Requirements and CIA Triad Exercise

For each of the following security violation case, indicate if it is an attack against confidentiality, integrity, availability, accountability. Also, indicate if the attack is passive or active attack

**CASE 01:** User A transmits a file to user B. The file contains sensitive information (e.g., payroll records) that is to be protected from disclosure. User C, who is not authorized to read the file, is able to monitor the transmission and capture a copy of the file during its transmission.

**CASE 02:** A network manager, D, transmits a message to a computer, E, under its management. The message instructs computer E to update an authorization file to include the identities of a number of new users who are to be given access to that computer. User F intercepts the message, alters its contents to add or delete entries, and then forwards the message to computer E, which accepts the message as coming from manager D and updates its authorization file

**CASE 03:** Rather than intercept a message, user F constructs its own message with the desired entries and transmits that message to computer E as if it had come from manager D. Computer E accepts the message as coming from manager D and updates its authorization file accordingly.

**CASE 04:** An employee is fired without warning. The personnel manager sends a message to a server system to invalidate the employee's account. When the invalidation is accomplished, the server is to post a notice to the employee's file as confirmation of the action. The employee is able to intercept the message and delay it long enough to make a final access to the server to retrieve sensitive information. The message is then forwarded, the action taken, and the confirmation posted. The employee's action may go unnoticed for some considerable time.

**CASE 05:** A message is sent from a customer to a stockbroker with instructions for various transactions. Subsequently, the investments lose value and the customer denies sending the message.