

Quiz 1

1. What are the three primary goals of security? Give examples where each is compromised.

C-I-A triad: confidentiality, integrity, and availability.

Examples must be the situations where the three goals are COMPROMISED.

2. Describe the difference between a vulnerability and a threat.

A vulnerability is a weakness that could be exploited to cause harm.

A threat is a set of circumstances that has the potential to cause loss or harm. (May or may not be caused by a vulnerability)

3. You are doing some online banking using your bank's website. However, an attacker has set up an active wiretap between your computer and your bank's server. After checking your balance and reading through your transactions, you attempt to log out. However, the attacker uses the active wiretap to send a message requesting to the bank a transfer from your account to an account they control. In the process, this causes your logout message to time out. Describe the ways in which this attack is an example of interception, interruption, modification, and/or fabrication.

Interception: the attacker uses an active wiretap and eavesdrops your balance and transaction information transmitted between your computer and the bank server.

Interruption: the attacker uses the active wiretap to send a request to the bank server, which blocks your logout message and causes it to time out.

Fabrication: the attacker uses the active wiretap to send a fake message to the bank server, which requests a transfer from your account to their account.