

COM 402 exercises 2019, session 1:

Introduction, Cyber attacks

Exercise 1.1

Here are three security mechanisms and three goals. For which goal can each mechanism be used?

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|--------------------|---|
| 1. authenticity | a. duplicate/distribute system |
| 2. availability | b. hash |
| 3. confidentiality | c. isolation |
| 4. integrity | d. message authentication code (keyed hash) |

Exercise 1.2

In your opinion, what is the most efficient way to protect against ransomware?

Explain why.

Exercise 1.3

You are developing a website that sells cigarettes on-line in Switzerland. For each of the following types of cyber threats, describe the goal and technical means used to achieve it:

- Commodity threat
- Hacktivism

Exercise 1.4

In your opinion, is an anti-virus software a good protection against social engineering attacks carried out over e-mail ?

What would be the best way of protecting against these attacks?

Exercise 1.5

An anti-malware tool adds up the sizes of all files on a disk, adds the size of the empty space and compares it to the total disk size.

What type of malware is this software trying to detect?