# Systems and Network Security (NETW-1002)

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Assignment 1

**Deadline: Thursday May 12, 2022**

## Requirement 1

Implement the DES algorithm in Java, C/C++, or Python and use it to encrypt a text file on your hard disk. You should use both the ECB and CBC modes of operation.

## Requirement 2

- Install the openssl tool on your computer and understand its use and functionality.
- Use openssl to encrypt the same file that you encrypted using your program.
- Compare the cipher text produced by your program with the one produced by openssl, they should be identical.

**Note:** You are allowed to work in groups from 3 to 4 persons.
You are expected to:
– Know how to use the Command Line Interpreter (CLI) of openssl.
– Know the functionality of openssl.
– Be ready to answer questions about the usage of openssl in the assignment.