

## COMP500 / ENSE501: Week 11 – Exercise:

**EXERCISE NAME:** *Secret Encoder*

Write a program that allows the user to input a C-String message, up to 100 characters in length.

For each byte in the C-String message, the program must swap the low and high four-bits of the byte.

For example, if a byte holds the `'a'` character, which has the value of `0x61` (97 in base-10), this must be swapped to the value `0x16`.

The resulting swapped bytes must then be written to the binary file named `secret.msg`.

Once the `secret.msg` file has been written to disk, open the file in a hex editor to ensure the secret message is not visible as ASCII text.

Ensure the program output is exactly as described, and that the whitespace of your source code is well formatted.