

# Assignment 2

8 February 2013

**due Tuesday 19 February in class**

1. Write your first name in binary and hexadecimal, using the ASCII encoding. Here is mine, as an example:

C	h	r	i	s	(text)
67	104	114	105	115	(decimal)
01000011	01101000	01110010	01101001	01110011	(binary)
43	68	72	69	73	(hex)

2. Decode the following message. Each chunk is an 8-bit binary number representing the ASCII code for a letter.

01000011 01010011 01101001 01110011 01000110 01110101 01101110

3. Use truth tables to prove the equivalence of these two Boolean expressions:

$$X \cdot Y + X' \cdot Z + Y \cdot Z = X \cdot Y + X' \cdot Z$$

4. Use my hexadecimal image workshop at <https://liucs.net/cs101s13/heximage.html> to develop a small bitmap icon by typing hexadecimal numbers into the red-green-blue text boxes. You can make it as simple or as elaborate as you like. Here's my [sample Mario icon](#).

To submit your work for this exercise, right-click on the blue 'Link' text and "Copy Link Address," then paste it into an email message to me. (Similarly, you can save your work just by bookmarking that link or pasting it into any document.)