Lab #1A – Hex and ASCII conversion

Goals:

Practice converting between binary and hexadecimal representations

Practice decoding and encoding ASCII character representation

Step 1: Download the ASCII conversion chart posted in the Week #1 module in Canvas to your laptop and refer to it in this exercise.

Step 2: Decode the first two questions below using the ASCII conversion chart. The data in Question 1 is in binary and represents ASCII data, and the data in Question 2 is in hexadecimal and represents ASCII data. Work as a group to tackle this task anyway you want.

Question1:

01010111011010000110010101110010011001010010000001100001011100100110001010010000001111001011011110111010100100000011001100111001001101111011101

Question 2:

0x576861742069732079 6F7572206D616A6F723F

Step 3: When both questions are converted, talk to one another to get the answers from everyone in your group.

Step 4: Type both decoded questions and the answers from your group into the text area for this assignment. All group members should submit a response to this Canvas assignment.

Step 5: Decode the third question below using the ASCII conversion chart, but **do not immediately answer it**. The data in Question 3 is in hexadecimal and represents ASCII data. Work as a group to tackle this decoding task anyway you want. Type the decoded question into the text area for this assignment.

Question3:

0x576861742069732074686520 6D6F73742066756E20796F7520686164206F7665722073756D6D65723F

Step 6: Now working **individually**, encode your answer confidentially into hex data using the ASCII conversion chart. Give your encoded hex data to the student seated to your right in your group. Decode the answer you are given by the student to your left.

Step 7: When all answers are decoded, type your answer in both plain text and encoded hex data into the text area for this assignment.