

Homework 2 Solution

1 Think about the function: `show_byte()` in 2.1.4, and answer the question.

	Little Endian	Big Endian
A	B1 A5	45 87
B	B1 A5 87	45 87 A5
C	B1	45

2 Integer representation using 1's and 2's complement. Assume we have an integer type of 8bits, fill in the following table.

Value	2's complement	1's complement	Sign-Magnitude
27	0001 1011	0001 1011	0001 1011
100	0110 0100	0110 0100	0110 0100
-6	1111 1010	1111 0101	1000 0110
-21	1110 1011	1110 1010	1001 0101
-32	1110 0000	1101 1111	1010 0000

3 Review the B2U and B2T

(1)B2U

$$F[00010001] = 17 \quad F[01110101] = 117 \quad F[01001001] = 73$$

$$F[10010001] = 145 \quad F[11010101] = 213 \quad F[11001111] = 207$$

(2)B2T

$$F[01010001] = 81 \quad F[11101101] = -19 \quad F[01001001] = 73$$

$$F[11110001] = -15 \quad F[01101101] = 109 \quad F[11110011] = -13$$