DONE

SUPPLEMENTARY WORKSHEET

WEEK 02

4 bit Binary Number	Unsigned representation	Signed representation	1's Complement representation	2's Complement representation
	0-15	**[-7->-0] [+0->+7]**	**[-7->-0] [+0->+7]**	**[-8->-1] [0->+7]**
0000	0	+0	+0	0
0001	1	+1	+1	+1
0010	2	+2	+2	+2
0011	3	+3	+3	+3
0100	4	+4	+4	+4
0101	5	+5	+5	+5
0110	6	+6	+6	+6
0111	7	+7	+7	+7
1000	8	-0	-7	-8
1001	9	-1	-6	-7
1010	10	-2	-5	-6
1011	11	-3	-4	-5
1100	12	-4	-3	-4
1101	13	-5	-2	-3
1110	14	-6	-1	-2
1111	15	-7	-0	-1

1. Using 8-bit to represent numbers, find the value of the following binary numbers that are using (i) unsigned, (ii) signed, (iii) 1's complement and (iv) 2's complement number systems.
    a. 0000 1000
    b. 0000 1010
    c. 0101 0101

    d. 1111 1101
    e. 1111 0111
2. Using a 8-bit system, represent the following decimal numbers using (i) unsigned, (ii) signed, (iii) 1's complement and (iv) 2's complement number systems.
    a. 9
    b. -16
    c. 65
    d. -1
    e. 96
3. Add the following numbers that are using 4-bit 2's complement number system.
    a. 3+3
    b. 4-3
    c. 5+1
    d. 7-2
4. Add the following numbers that are using 8-bit 2's complement number system.
    a. 23+13
    b. 44-30
    c. 15+11
    d. 17-12