TUTORIAL 6

1. Construct instructions that first clear bits 0 and 1 in AL. Then, if the destination operand is equal to zero, the code should jump to label L3. Otherwise, it should jump to label L4.

2. Write instructions that jump to label L1 when the unsigned integer in DX is less than or equal to the integer in CX.

3. Construct an instruction sequence to mask the upper 16 bits of the register EBX.

4. Construct an instruction (other than NOT) that reverses all the bits in EAX

5. Given the table below, prove by giving examples to show that OR operation can be used to obtain certain information about its value.

Zero Flag	Sign Flag	Value in AL is..
Clear	Clear	Greater than zero
Set	Clear	Equal to zero
Clear	Set	Less than zero

6. Write a single instruction using 16-bit operands that clears high 8 bits of AX and does not change the low 8 bits.

7. Write a single instruction using 16-bit operands that sets high 8 bits of AX and does not change the low 8 bits.

8. Write a single instruction to convert the ASCII characters "C" to "c".

9. Write a single instruction to convert the ASCII characters "c" to "C".

10. Write a single instruction (other than NOT) that reverses all the bits in EAX.

11. Write a single instruction that converts a lowercase character in AL to uppercase but does not modify AL if it already contains an uppercase letter.

12. List the jump instruction that follow unsigned integer comparisons.

13. List the jump instruction that follow signed integer comparison.

14. State which conditional jump instruction is equivalent to the jump instructions below:
    a) JNGE
    b) JNA

c) JNAE

Review Questions 6.10

No 8, 9, 10, 11, 16

6.10.2

No 2, 3, 4, 8