THURS 15 JAN 2015

BASIC unit of storage is a bit.

Clear ⇒ assign 0 to a bit
Set ⇒ assign 1 to a bit

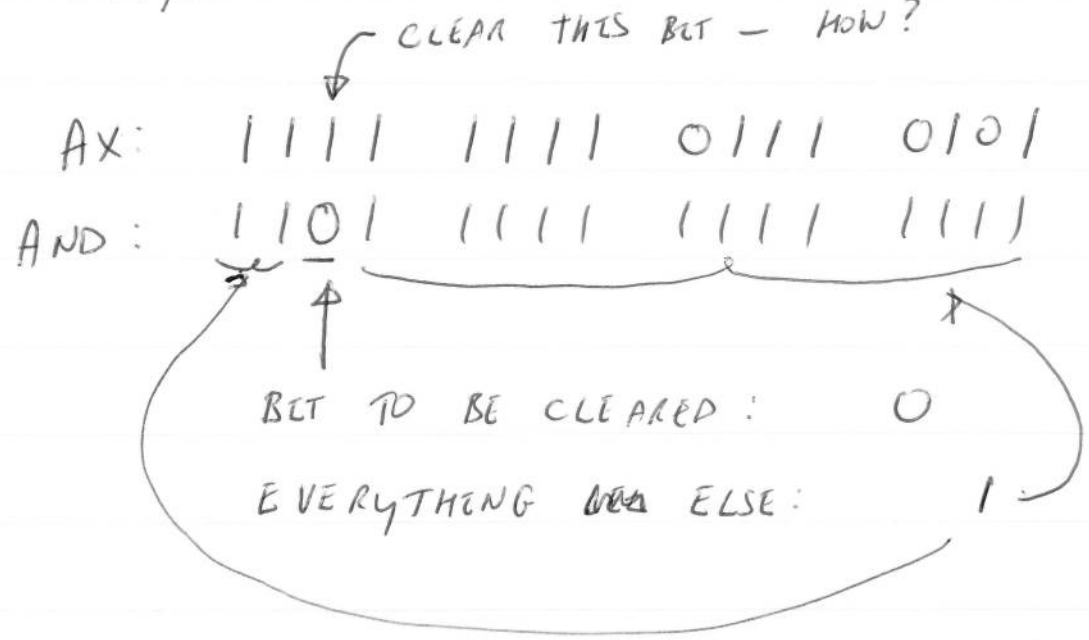
Clear a bit in an operand e.g. AX Register Mem. Location

AND instruction is used

AND TRUTH TABLE

A	B	Z
0	0	0
0	1	0
1	0	0
1	1	1

SAMPLE CODE:



AND THESE TWO BITS: (SEE TRUTH TABLE), THEN AND NEXT TWO ETC.

AX:	1111	1111	0111	0101	: FF75
AND WITH:	1101	1111	0111	1111	: DFFF
	1101	1111	0111	0101	: DF75

observe: THE ONLY BITS TO CHANGE ARE THE DOUBLE UNDERLINED BITS

~~MOV AX:~~ CODE

```
MOV  AX, 0FF75h
MOV
AND  AX, 0DFFFh
```

AX WILL NOW CONTAIN DF75

(3)

SET A BIT IN AN OPERAND

OR INSTRUCTION IS USED

OR TRUTH TABLE

A	B	Z
0	0	0
0	1	1
1	0	1
1	1	1

SAMPLE CODE:

SET THIS BIT – HOW?

AX: 1111 1111 0111 0101

OR: 0000 0000 1000 0000

BIT TO BE SET: 1

EVERYTHING ELSE: 0

OR EACH PAIR OF BITS:

AX: 1111 1111 0111 0101 : FF75

OR, WITH: 0000 0000 1000 0000 : 0080

1111 1111 1111 0101 : FFF5

OBSERVE: ONLY THE DOUBLE UNDERLINED BITS CHANGED

CODE:

```
MOV   AX, 0FF75h
OR    AX, 0080h
```

AX WILL CONTAIN FFF5