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MD.NWT-E-AZAM

ID: 1512268 042

Quiz: 4

① When two operands are required for an instruction they are separated by comma, For Example.

AL, 27H ~~AX, 35H~~ and AL, 35H

When there are two operands, both operands must have the same size

For Example

AL, 27H

DX, AX

MOV BB, ?

AL, 35H

35H DW ?

AX, 35H

② TEST instruction uses AND logic on the bit pairs from both the arg_0 and arg_1 and can check if a specific bit is set or not, then FLAGS set accordingly.

cmp instruction uses sub instruction and subtract arg_1 from arg_0 and will set CF (carry Flag) and ZF (zero Flag) based on given args to cmp instruction, if both are equal then it's obvious that the result will be zero and ZF will be set to 1 ~~and if~~ ~~arg₀ > arg₁~~ and if $\text{arg}_0 > \text{arg}_1$ then no flag will be set and if $\text{arg}_0 < \text{arg}_1$ then ZF will remain 0 as they are not equal but CF will be set.

cmp AL, 000h

test AL, 001h

FOR TEST:

TEMP \leftarrow SRC1 ~~TEMP~~

SF \leftarrow MSB (TEMP)

IF TEMP = 0

THEN ZF \leftarrow 1

ELSE ZF \leftarrow 0

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Post cmp:

$temp \leftarrow SRC1 - \text{Sign Extend}(SRC2)$

Modify Status Flag