

Q. Write an Assembly language program to Compare ~~three~~ ~~numbers~~ two numbers.

Mydata segment

Num 1 DB 10

Num2 DB 20

Equal DB 0

Num1 Greater DB 0

Num2 Greater DB 0

Mydata ends

Mycode Segment

Assume DS: mydata, CS: mycode

MOV AX, Mydata

MOV DS, AX

MOV AX, Num 1

MOV BX, Num 2

CMP AX, BX

JZ Equal 1

JN ~~JS~~ Num2 label 2

MOV Num2 Greater, 1

JMP JUMP Exit

Equal 1: MOV Equal, 1

JMP JUMP Exit

Label 2: MOV Num1 Greater, 1

JMP JUMP Exit

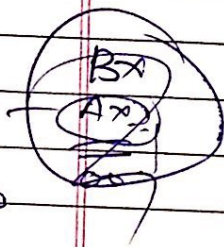
Exit: MOV AX, 4C00H

Int 21H

~~AX~~
~~BX~~

JMP

AX
BX
CX
DX
SI
DI
BP
SP



ZF=0

C+

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Mycode ends

Write an assembly language program to compare three numbers

Mydata segment

Num 1 DB 10

Num 2 DB 20

Num 3 DB 30

Equal DB 0

Num 1 Greater DB 0

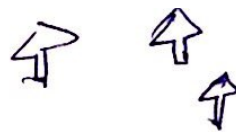
Num 2 Greater DB 0

Num 3 Greater DB 0

Mydata ends

~~Mycode segment~~

~~Assume DS: Mydata, CS: Mycode
 MOV AX, Mydata
 MOV DS, AX~~



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* Array :

→ LEA : Load Effective Address.

Eg :

LEA BX, prices

LEA BP, SS: STACK-top.

$\mu = \text{micro}$
~~second~~
 Date:

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→ Operating frequency is 8 of processor is 8MHz. How much amount of time it will take to execute loop instruction.

$$t = \frac{1}{f} = t = \frac{1}{8} \times 10^6$$

$$= 0.125 \mu s$$

$$= 0.125 \times 10^{-6} \mu s$$

=

$$\text{If Jump : } 2.125 \mu s = 0.125 \times 17$$

$$\text{If not Jump : } 0.625 \mu s = 0.125 \times 5$$

→ NOP : No Operations. [Time pass]

Delay
Loop

$$C_T = C_0 + N(C_L) - 12$$

$$N = \frac{C_T - C_0 + 12}{C_L}$$

C_T = Delay time

C_0 = Overhead (instruction which do no repeat)

C_L = Total no. of cycle Required. $\left[\begin{matrix} 3+3+ \\ 17 \end{matrix} \right]$
 eg. 22

N = number of times loop execute.

write a program 6.32 Procedure.

- CALL \rightarrow CH-6.3
 - RETURN \rightarrow CH-6.22
 \searrow RET \nearrow

Return

Instruction Related Register

CODSB

load a string byte/word from memory to
~~AL/AX~~ to memory location pointed by
 \nwarrow DI in ES.
 e SB

CMPSB