Q. Write an Assembly language program to compare ~~two 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, Num2
        CMP  Ax, Bx
        JZ   Equal 1
        JS   label 2
        MOV  Num2 Greater, 1
        Jmp  JUMP  Exitt
Equal1: MOV  Equal, 1
        Jmp  Jump  Exitt
label 2: MOV Num1 Greater, 1
        Jmp  Jump  Exitt

Exit :  MOV  Ax, 4C00H
        Int 21H
```

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Mycode ends

Write an assembly language program to compare three numbers

```
Mydata segment
        Num1    DB  10
        Num2    DB  20
        Num3    DB  30
        Equal   DB  0
        Num1 Greater   DB  0
        Num2 Greater   DB  0
        Num3 Greater   DB  0
Mydata ends

Mycode segment
        Assume DS: Mydata , CS: Mycode
        Mov AX, Mydata
        Mov DS, AX
```

* Array :

→ LEA : Load Effective Address.

Eg :

LEA BX, prices

LEA BP, SS: STACK-TOP.

μ = micro second

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

$t = 1/f \quad = \quad t = 1/8 \times 10^6$

$= 0.125 \times 10^{-6}$ μs.

=

If Jump : 2.125 μs. = 0.125 × 17

If not Jump : 0.625 μs = 0.125 × 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)

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C_L = Total no. of Cycle Required. [3+3+17 Eg. Disp

N = number of times loop Execute.

Write a program [6.32] Procedure.

- CALL → Ch-6.3
- RETURN → Ch- 6.22
  → RET

- Return
- Instruction Pointer Register

CODSB

Load a string byte/word from Memory to AL/AX ← to memory location pointed by DI in ES.

e SB

CMPSB