

LAB PROGRAM - 10

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; PROGRAM :: COMPUTE NCR USING RECURSIVE
; 'r' ARE NON-NEGATIVE INTEGERS.

• MODEL SMALL

• DATA

N DB 05H

R DB 02H

NCRVAL DW 01H DUP(?)

• CODE

START: MOV AX, @DATA

MOV DS, AX

MOV CL, R

MOV CH, N

XOR AX, AX

CALL NCR

MOV [NCRVAL], AX

MOV AH, 4CH

INT 21H

NCR PROC NEAR

CMP CH, CL

JE EQUAL

JC FINISH

CMP CL, 01H

JE NEXT

CMP CL, 00H

JE EQUAL

DEC CH

PUSH CX

; N == R ? SET 1

; NCR ? SET ZERO

; R == 1 ? SET N

; R == 0 ? SET 1

CALL NCR

POP CX

DEC CL

CALL NCR

RET

NEXT: XOR BX, BX

MOV BL, CH

ADD AX, BX

RET

EQUAL: ADD AX, 01H

FINISH: RET

NCR ENDP

END START.