

# Experiment 3

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.MODEL SMALL

.STACK 100H

.DATA

    ARRAY DB 10, 25, 15, 40, 5, 30, 50, 20

    LEN EQU \$ - ARRAY

    MIN DB 0

    MAX DB 0

.CODE

MAIN PROC

    MOV AX, @DATA

    MOV DS, AX

    MOV SI, 0

    MOV AL, ARRAY[SI]

    MOV MIN, AL

    MOV MAX, AL

FIND\_MIN\_MAX:

    MOV AL, ARRAY[SI]

    CMP AL, MAX

    JG UPDATE\_MAX

    CMP AL, MIN

JL UPDATE\_MIN

JMP NEXT\_ELEMENT

UPDATE\_MAX:

MOV MAX, AL

JMP NEXT\_ELEMENT

UPDATE\_MIN:

MOV MIN, AL

NEXT\_ELEMENT:

INC SI

CMP SI, LEN

JL FIND\_MIN\_MAX

MOV AX, 4C00H

INT 21H

MAIN ENDP

END MAIN

OUTPUT:

The screenshot shows a debugger window with the following content:

Address	Disassembly	Comment	Register/Value
cs:000D	8A840000	+ mov al, [array + si]	ax 0C07
cs:0011	3AC4	+ cmp al, ah ; Compare c	bx 0000
cs:0013	7F15	+ jg update_max ; If AL	cx 0000
cs:0015	3AC0	+ cmp al, al ; Compare c	dx 0000
cs:0017	7C0D	+ jl update_min ; If AL	si 0006
cs:0019	46	+ inc si	di 0000
cs:001A	A00700	+ mov al, [n] ; Load arr	bp 0000
cs:001D	3BF0	+ cmp si, ax ; Compare i	sp 0100
cs:001F	7CEC	+ jl find_min_max ; If s	ds 0B7F
cs:0021	B8004C	+ mov ax, 4C00h	es 0B6C
cs:0024	CD21	+ int 21h	ss 0B80
#max#update_min			cs 0B7C
			ip 001F

Registers (right side):

c=1
z=0
s=1
o=0
p=1
a=1
i=1
d=0

Stack (bottom):

ss:0102 0403
ss:0100 52FB