



**বরেন্দ্র বিশ্ববিদ্যালয়**  
VARENDRA UNIVERSITY



## Department of Computer Science and Engineering

21<sup>st</sup> Batch

### Lab Report 7

Course title : Microprocessor and Assembly Language  
Course Code : CSE-334

Submitted By	Submitted To
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**Problem Statement:** Write an assembly program that will take some values from the user and put them in an array. Your task is to find the lowest value of those elements and print the value afterward.

**Theory:** To print the lowest value from an array we will take the array element as the input while taking the inputs we will check the values for the lowest one and store the lowest value in a register which will be used later on to show the value at the end of the program.

### CODE:

```
.MODEL SMALL
.STACK 100H

.DATA
NL EQU 0DH,0AH
ARR DB 100 DUP(?)
NIN DB "ENTER THE NUMBER OF ARRAY ELEMENT : $"
AIN DB NL,"ENTER THE ARRAY ELEMENT : $"
AOUT DB NL,"THE ARRAY ELEMENTS ARE : $"
ALOW DB NL,"THE LOWEST VALUE IS : $"
VAR DB ?

.CODE
MAIN PROC
    MOV AX,@DATA
    MOV DS,AX

    MOV AH,9
    LEA DX,NIN
    INT 21H
    MOV AH,1
    INT 21H
    SUB AL,30H
```

```
XOR CX,CX
XOR BX,BX
MOV CL,AL
MOV VAR,AL

MOV AH,9
LEA DX,AIN
INT 21H
LEA SI,ARR
MOV AH,1
MOV BL,9
INPUT:
    INT 21H
    MOV ARR[SI],AL
    SUB AL,30H
    CMP AL,BL
    JG NEXT
    MOV BL,AL
    NEXT:
    INC SI
    LOOP INPUT

MOV AH,9
LEA DX,AIN
INT 21H
MOV CL,VAR
LEA SI,ARR
MOV AH,2
OUTPUT:
    MOV DL,ARR[SI]
    INT 21h
    INC SI
    LOOP OUTPUT

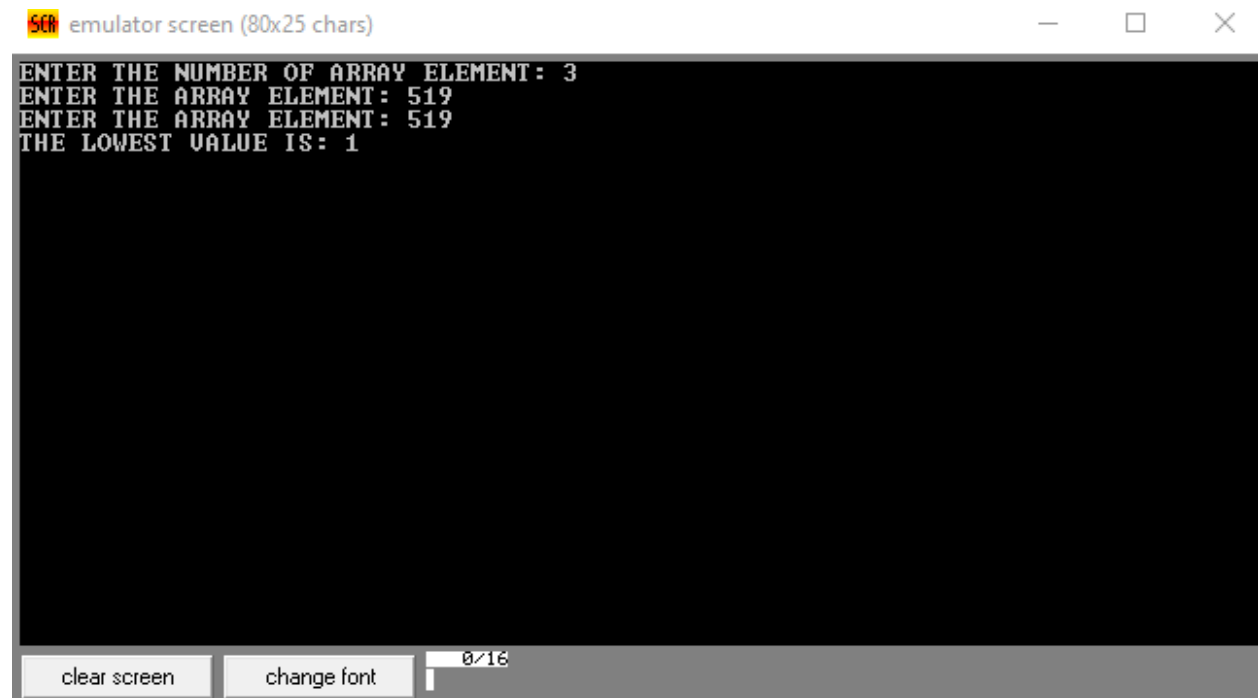
MOV AH,9
LEA DX,ALOW
INT 21H

ADD BL,30H
MOV AH,2
```

```
MOV DL,BL
INT 21H

MOV AH,4CH
INT 21H
MAIN ENDP
END MAIN
```

## Result:



The screenshot shows a window titled "emulator screen (80x25 chars)" with a black background and white text. The text displays the execution of an assembly program. It prompts the user to enter the number of array elements (3), then prompts for three array elements (all entered as 519). Finally, it displays the result: "THE LOWEST VALUE IS: 1". At the bottom of the window, there are two buttons labeled "clear screen" and "change font", and a small status bar showing "0/16".

```
ENTER THE NUMBER OF ARRAY ELEMENT: 3
ENTER THE ARRAY ELEMENT: 519
ENTER THE ARRAY ELEMENT: 519
THE LOWEST VALUE IS: 1
```