

Terna Engineering College
Computer Engineering Department

Program: Sem V

Course: Microprocessor Lab

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PRACTICE EXAMPLE

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→ Aim:

Write a program to display maximum from an array of n numbers.

→ Input:

Data Segment

```
msg db 0dh,0ah, "LENGTH OF ARRAY: $"
msg1 db 0dh,0ah, "ENTER A NUMBER: $"
newl db 0dh,0ah, " $"
res db 0dh,0ah, "MAXIMUM NUMBER: $"
len db?
max db?
```

Data ends

Code Segment

assume CS:Code,DS:Data

Start:

```
mov ax,Data
mov DS,ax
mov dx,offset msg
mov ah,09h
int 21h
call Accept
mov len,bl
mov cl,bl
mov ch,00h
mov di,1000h
back: mov dx,offset msg1
mov ah,09h
```

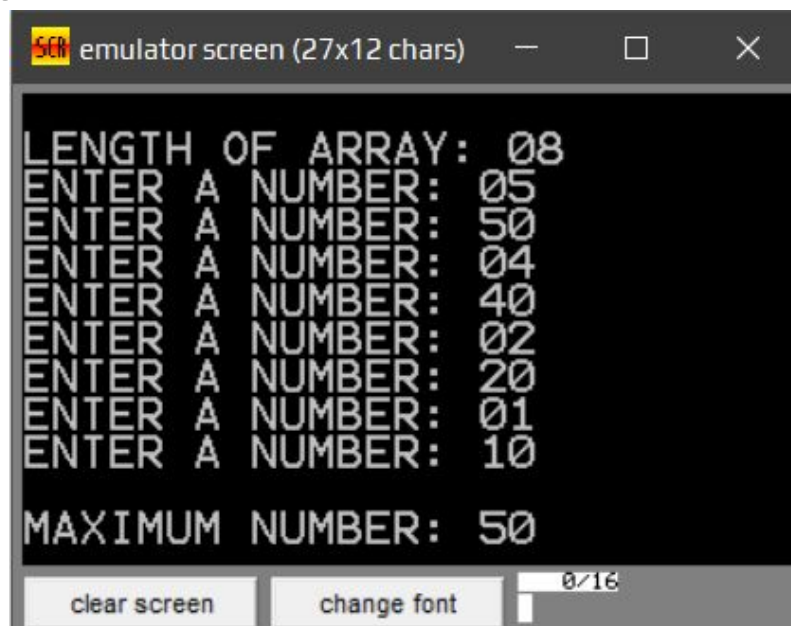
```
int 21h
call Accept
mov [di],bl
inc di
loop back
mov di,1000h
mov cl,len
mov ch,00h
mov dx,offset newl
mov ah,09h
int 21h
mov al,[di]
mov max,al
chk: mov bl,max
mov al,[di]
cmp bl,al
jc a
mov max,bl
jmp b
a: mov max,al
b: inc di
loop chk
mov dx,offset res
mov ah,09h
int 21h
mov bl,max
call DispNum
mov ah,4ch
int 21h
Accept proc
mov ah,01h
int 21h
call AsciiToHex
rol al,4
mov bl,al
mov ah,01h
int 21h
call AsciiToHex
add bl,al
ret
endp
DispNum proc
mov dl,bl
```

```

    and dl,0f0h
    ror dl,4
    call HexToAscii
    mov ah,02h
    int 21h
    mov dl,bl
    and dl,0fh
    call HexToAscii
    mov ah,02h
    int 21h
endp
AsciiToHex proc
    cmp al,41h
    jc sk
    sub al,07h
sk: sub al,30h
    ret
endp
HexToAscii proc
    cmp dl,0ah
    jc sk2
    add dl,07h
sk2: add dl,30h
    ret
endp
Code ends
end Start

```

→ **Output:**



```

emulator screen (27x12 chars)
LENGTH OF ARRAY: 08
ENTER A NUMBER: 05
ENTER A NUMBER: 50
ENTER A NUMBER: 04
ENTER A NUMBER: 40
ENTER A NUMBER: 02
ENTER A NUMBER: 20
ENTER A NUMBER: 01
ENTER A NUMBER: 10
MAXIMUM NUMBER: 50
clear screen  change font  0/16

```