

Experiment No. 3

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```
%macro scall 4
```

```
    mov eax, %1
```

```
    mov ebx, %2
```

```
    mov ecx, %3
```

```
    mov edx, %4
```

```
    int 80h
```

```
%endmacro
```

```
section .data
```

```
    m1 db "Enter size of array: ", 0xA, 0xD
```

```
    l1 equ $-m1
```

```
    m2 db "Enter array elements: ", 0xA, 0xD
```

```
    l2 equ $-m2
```

```
    m3 db "Largest: ", 0xA, 0xD
```

```
    l3 equ $-m3
```

```
    m4 db 0xA, 0xD
```

```
    l4 equ $-m4
```

```
section .bss
```

```
    cnt resb 3
```

```
    arr resb 3
```

```
    cnt1 resb 3
```

```
    arr1 resb 50
```

```
    temp resb 2
```

```
    char_ans resb 2
```

```
section .text
```

```
    global _start
```

```
_start:
```

```
    scall 4, 1, m1, l1
```

```
    scall 3, 0, cnt, 3
```

```
    mov esi, arr
```

```
    call asciihextohex
```

```
    mov byte [cnt], dl
```

```
    mov byte [cnt1], dl
```

```
    scall 4, 1, m2, l2
```

```
    mov edi, arr1
```

```
    scall 3, 0, cnt, 3
```

```
    mov esi, arr
```

```
back:
```

```
call asciihextohex
mov [edi], dl
inc edi
dec byte [cnt]
jnz back
```

```
mov esi, arr1
mov al, [esi]
inc esi
```

```
up1:
    mov bl, [esi]
    cmp al, bl
    jg next1
    mov byte [temp], al
    mov al, bl
    mov bl, byte [temp]
```

```
next1:
    inc esi
    dec byte [cnt1]
    jnz up1
```

```
mov ecx, 02
mov esi, char_ans
```

```
HtoA:
    rol al, 4
    mov dl, al
    and dl, 0FH
    cmp dl, 09h
    jbe next2
    add dl, 07h
```

```
next2:
    add dl, 30h
    mov [esi], dl
    inc esi
    dec ecx
    jnz HtoA
```

```
scall 4, 1, m3, l3
scall 4, 1, char_ans, 2
scall 4, 1, m4, l4
```

```
mov eax, 1
xor ebx, ebx
int 80h
```

```
asciihextohex:
    mov ecx, 2
```

```
mov dl, 0
```

```
top:
```

```
    rol dl, 4  
    mov al, [esi]  
    cmp al, 39h  
    jbe down  
    sub al, 07h
```

```
down:
```

```
    sub al, 30h  
    add dl, al  
    inc esi  
    loop top  
    ret
```

output-

Enter size of array: 6

Enter array elements: 1

2

5

3

4

0

Largest: 5