

### Lab -3

Objective-1 : Find the largest number in a given array of size N.

#### PROGRAM:

**.data**

**count db 04h ; count = array size**

**value db 09h, 10h,05h,03h ; array elements**

**res db ? ; store the result in res**

**.code**

**MAIN PROC**

```
        mov ax, data
        mov ds, ax
        mov cl, count
        dec cl
        LEA SI, value
        mov al, [SI]
up:      inc si
        cmp al, [si]
        jnl nxt      ; jump to "nxt" if not less than
        mov al, [si]
nxt:     dec cl
        jnz up
        LEA DI, res
        mov [DI], al
END MAIN
```

**Result: DS:offset (0710:0000) : 04 09h 10h 05h 03h 10h(largest no)**

2. Arrange the elements of an given array of size N in ascending order.

**PROGRAM:**

**.DATA**

count DB 06

value DB 09H,0FH,14H,45H,24H,3FH

**.CODE**

**MAIN PROC**

```
        MOV AX,DATA
        MOV DS,AX
        LEA DI, count
        MOV CH,[DI]
        DEC CH
UP2:     MOV CL,CH
        LEA SI, value
UP1:     MOV AL,[SI]
        CMP AL, [SI+1]
        JC DOWN                ; JNC for descending
        MOV DL,[SI+1]
        XCHG [SI],DL
        MOV [SI+1],DL          } ; swapping of MEMORY location DATA
DOWN:    INC SI
        DEC CL
        JNZ UP1
        DEC CH
        JNZ UP2

        END MAIN
```

**Result location and data:**

0710:0000 -> 06h 09H 0FH 14H 24H 3FH 45H