

EXPERIMENT No : 05

(24)

Roll No: 5139

DATE: 8/4/22

Aim: To search a number and its index from an array.

THEORY:

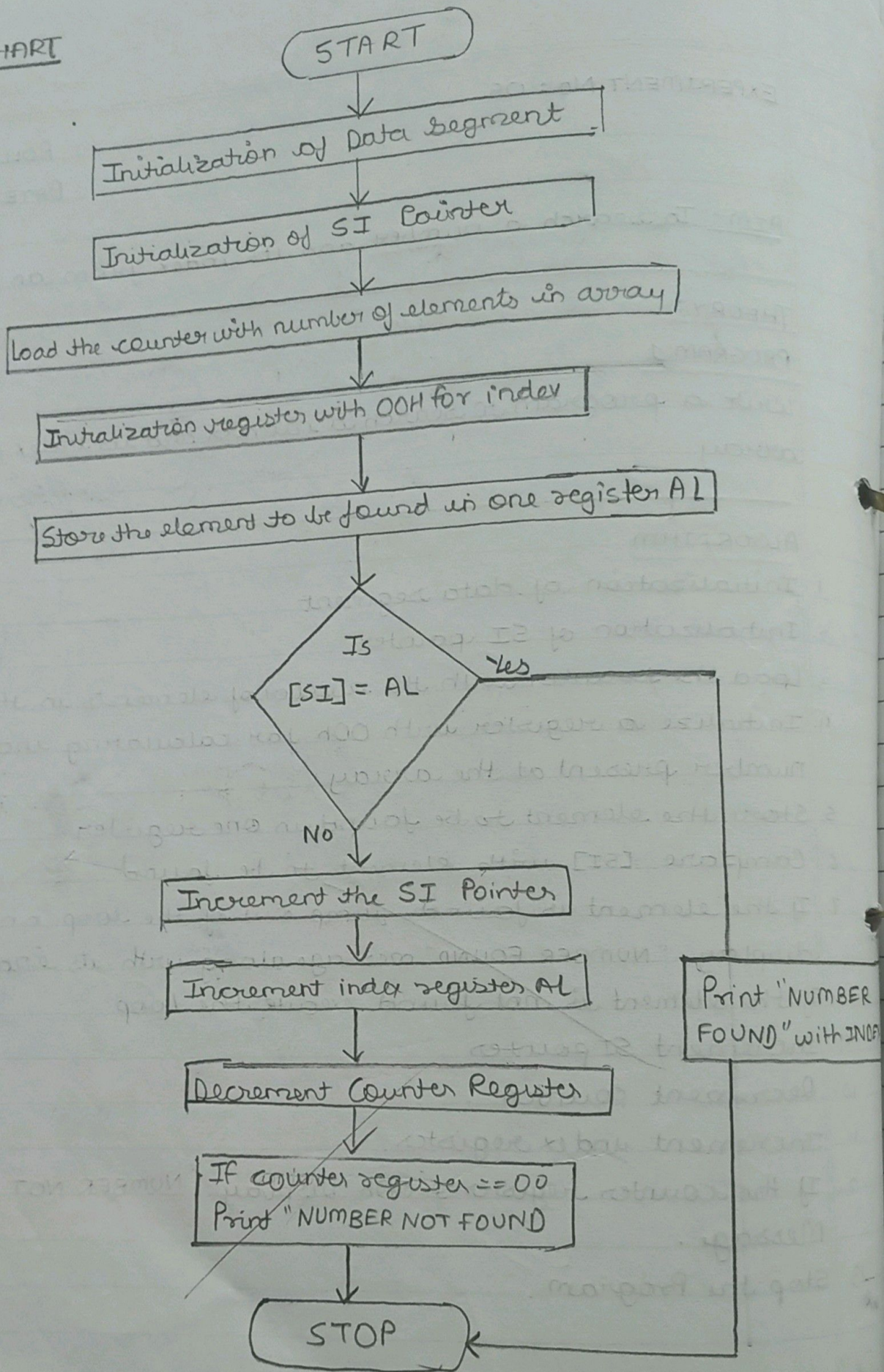
PROGRAM 1

Write a program to search a number and its index from an array

ALGORITHM

1. Initialization of data segment
2. Initialization of SI pointer
3. Load the counter with the number of elements in the array
4. Initialize a register with 00h for calculating index of number present at the array
5. Store the element to be found in one register
6. Compare [SI] with element to be found.
7. If the element is found, jump out of the loop and display "NUMBER FOUND" message along with its index
8. If the element is not found execute the loop
9. Increment SI pointer
10. Decrement counter
11. Increment index register
12. If the counter register = 00h Display "NUMBER NOT FOUND" Message.
13. Stop the Program.

# FLOWCHART



```
.model small
.data
a db 01,02,03,04,05h
b db 07h
c db ' Number is not found$'
.code
    mov ax,@data
    mov ds,ax
    LEA DX,c
    lea si,a
    mov bl,b
    mov ch,05h
back:mov al,[si]
    cmp al,bl
    je i8
    inc si
    dec ch
    jnz back
    jmp i7
i8: mov ch,02h
    mov cl,04h
    mov bh,al
i2: rol bh,cl
    mov dl,bh
    and dl,0fh
    cmp dl,09
    jbe i4
    add dl,07h
i4: add dl,30h
    mov ah,02h
    int 21h
    dec ch
    jnz i2
    mov ah,4ch
    int 21h
i7: MOV AH,09H
    INT 21H
    mov ah,4ch
    int 21h
```

end

Turbo Link Version 2.0

Warning: no stack

C:\TASM>search

Number is not found

C:\TASM>