

# ASSEMBLY - SCAS INSTRUCTION

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The SCAS instruction is used for searching a particular character or set of characters in a string. The data item to be searched should be in AL for SCASB, AX for SCASW or EAX for SCASD registers. The string to be searched should be in memory and pointed by the ES:DI or EDI register.

Look at the following program to understand the concept –

```
section .text
    global _start          ;must be declared for using gcc

_start:             ;tell linker entry point

    mov ecx,len
    mov edi,my_string
    mov al , 'e'
    cld
    repne scasb
    je found ; when found
    ; If not not then the following code

    mov eax,4
    mov ebx,1
    mov ecx,msg_notfound
    mov edx,len_notfound
    int 80h
    jmp exit

found:
    mov eax,4
    mov ebx,1
    mov ecx,msg_found
    mov edx,len_found
    int 80h

exit:
    mov eax,1
    mov ebx,0
    int 80h

section .data
my_string db 'hello world', 0
len equ $-my_string

msg_found db 'found!', 0xa
len_found equ $-msg_found

msg_notfound db 'not found!'
len_notfound equ $-msg_notfound
```

When the above code is compiled and executed, it produces the following result –

Found!

Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js