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assume cs:code, ds: data

data segment
    msg1 db 0ah, 0dh, "Enter the string: $"
    msg2 db 0ah, 0dh, "The string is: $"
    msg3 db 0ah, 0dh, "The length of the string is: $"
    instr1 db 40 dup("$")
data ends

code segment
start:
    mov ax, data
    mov ds, ax

    lea si, instr1

    ; display msg to get string
    mov ah, 09h
    lea dx, msg1
    int 21h

    mov ah, 0Ah
    mov dx, si
    int 21h

    ; print the string
    mov ah, 09h
    lea dx, msg2
    int 21h

    mov ah, 09h
    lea dx, instr1+2
    int 21h

    ; print the length of the string
    mov ah, 09h
    lea dx, msg3
    int 21h

    add si, 2
    mov ax, 00

l2:
    cmp byte ptr[si], "$"

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je l1; encountered end of string, therefore stop
inc si
add al, 1
jmp l2
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l1:

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sub al, 1
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mov cx, 0; set counter to 0
mov dx, 0; clear dx
mov bx, 0Ah
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divide:

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div bx
push dx
mov dx, 0
inc cx
or ax, ax
jnz divide
```

print:

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pop dx
add dl, 30h
mov ah, 02h
int 21h
loop print
```

```
mov ah, 4ch
int 21h
```

```
code ends
end start
```