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assume cs:code, ds:data

data segment
    msg1 db 10, 13, 'Enter any string: $'
    msg2 db 10, 13, 'Entered string is: $'
    msg4 db 10, 13, 'No, given string is not a palindrome $'
    msg5 db 10, 13, 'The given string is a palindrome $'
    msg6 db 10, 13, 'Reverse of entered string is: $'
    p1 label byte
    m1 db 0ffh
    l1 db ?
    str1 db 0ffh dup ('$')
    str2 db 0ffh dup ('$')
data ends

display macro msg
    mov ah, 09h
    lea dx, msg
    int 21h
endm

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

    display msg1

    lea dx, p1
    mov ah, 0ah
    int 21h

    display msg2

    display str1

    display msg6

    lea si, str1
    lea di, str2

    mov dl, l1
    dec dl
    mov dh, 0
    add si, dx
    mov cl, l1

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mov ch, 0

reverse:
    mov al, [si]
    mov [di], al
    inc di
    dec si
    loop reverse

    display str2

    lea si, str1
    lea di, str2

    mov cl, 11
    mov ch, 0

check:
    mov al, [si]
    cmp [di], al
    jne notpalin
    inc di
    inc si
    loop check

    display msg5
    jmp exit
notpalin:
    display msg4

exit:
    mov ah, 4ch
    int 21h
code ends
end start

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