

(4)

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Section : 3c

Batch : 2

papergrid

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PALINDROME

.model small

display macro msg

lea dx, msg

mov ah, 09h

int 21h

endm

.data

msg1 db 0DH, 0AH, "Enter String: \$"

msg2 db 0DH, 0AH, "Reverse String: \$"

msg3 db 0DH, 0AH, "It is a palindrome. \$"

msg4 db 0DH, 0AH, "It is not a palindrome. \$"

string db 80H dup(?)

rstring db 80H dup(?)

.code

start: mov ax, @data

mov ds, ax

display msg1

; Take the string from keyboard char by char

mov si, offset string

xor cl, cl

again: mov ah, 01h

int 21h

cmp al, 0DH ; BMSCE ascii value of enter

key = 0DH

je next ; A1 = 42 BMSCE

mov [si], al

inc si

inc cl

jmp again

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next : mov [si], byte ptr '$'
        ; String input over...
        dec si
        mov ch, cl
        ; Reverse string and store in rstring
        mov di, offset rstring
back : mov al, [si]
        mov [di], al
        dec si
        inc di
        dec ch
        jnz back
        mov [di], byte ptr '$'
        display msg2
        display rstring
        mov si, offset string
        mov di, offset rstring
ag : mov al, [si] ; BMSCE, madam
     cmp al, [di] ; ECSMB, madam
     jne fail
     inc si
     inc di
     dec cx
     jz success
     jmp ag
fail : display msg4
     jmp final
success : display msg3
final : mov ah, 4ch
        int 21h
end
```