

PALINDROME

• mode small

```
Display macro msg  
        lea dx, msg  
        mov AX, 09H  
        int 21H
```

End M

• data

```
msg 1   db 0DH, 0AH "Enter String: $"  
msg 2   db 0DH, 0AH "Reverse String: $"  
msg 3   db 0DH, 0AH, "I/P String is palindrome: $"  
msg 4   db 0DH, 0AH, "Not Palindrome: $"  
String  db 80H DUP(?)  
RString db 80H DUP(?)
```

• code

```
start : mov AX, @DATA  
        mov DS, AX  
        Display msg 1  
        ; Take string character by character  
  
        mov si, offset String  
        xor cx, cx
```

Again: mov AH, 01H
 Int 21H
 cmp AL, 00H
 JE next
 mov [SI], AL
 Inc SI
 Inc CL
 Imp Again

next: MOV [SI], Byte ptr 'H'
 ; String input over
 DEC SI
 MOV CH, CL
 ; Reverse the string & 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 msg 2

· Display Rstring
MOV SI, offset Rstring
MOV DI, offset Rstring

AG MOV AL, [SI]
CMP AL, [DI]
JNE FAIL
INC SI
INC DI
DEC CX
JZ Success
JMP AG

FAIL: DISPLAY MSG 4
JMP FINAL

Success: Display msg 3
MOV AH, 4CH
INT 21H

END

51594 + 464950 Bytes symbol space free

0 Warning Errors

0 Severe Errors

C:\MASM>LINK LAB4.;

Microsoft (R) Overlay Linker Version 3.60

Copyright (C) Microsoft Corp 1983-1987. All rights reserved.

LINK : warning L4021: no stack segment

C:\MASM>LAB4

ENTER A STRING: HELLO

ENTERED STRING IS NOT A PALINDROME

C:\MASM>LAB4

ENTER A STRING: MADAM

ENTERED STRING IS PALINDROME

C:\MASM>