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LAB4: Palindrome Program

```
.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 : $"
MSG3 DB 0DH, 0AH, "INPUT STRING IS PALINDROME.$"
MSG4 DB 0DH, 0AH, "INPUT STRING IS NOT A
                   PALLINDROME STRING.$"
STRING DB 80H DUP(?)
RSTRING DB 80H DUP(?)
.CODE

START: MOV AX, @DATA
       MOV DS, AX
       DISPLAY MSG1
       MOV SI, OFFSET STRING
       XOR CL, CL

AGAIN: MOV AH, 01H
       INT 21H
       CMP AL, 0DH
       JE NEXT
       MOV [SI], AL
       INC SI
```

```
        INC CL
        JMP AGAIN

NEXT : MOV [SI], BYTE PTR '$'
       ; STRING INPUT OVER...
       DEC SI
       MOV CH, CL
       ;REVERSE 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 MSG2
       DISPLAY RSTRING
       MOV SI, OFFSET STRING
       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 MSG4
        JMP FINAL

SUCCESS : DISPLAY MSG3

FINAL : MOV AH, 4CH
        INT 21H

END.
```