

LAB-4 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, "Input string is PALINDROME: \$"

MSG4 DB, 0DH, 0AH, "Input string is not a PALINDROME: \$"

STRING DB 80H DUP (1)

RSTRING DB 80H DUP (?)

CODE

START: MOV AX, DATA

MOV DS, AX

DISPLAY MSG1

MOV SI, OFFSET STRING

XOR CL, CL

AGAIN: MOV AH, 0H

INT 21H

CMPI AL, 0DH

INC SI

INC CL

JMP AGAIN

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NEXT: MOV [SI], BYTE PTR 'S'
      DEC SI
      MOV CH, CH
      MOV DI, OFFSET RSTRING

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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

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AG:   MOV AL, [SI]
      CMP AL, [DI]
      JNE FAIL
      INC SI
      DEC DI
      JZ SUCCESS
      JMP AG

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FAIL: DISPLAY MSG1
      JMP FINAL

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SUCCESS: DISPLAY MSG3

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FINAL: MOV AX, 4CH
      INT 21H

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END

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