MP-LAB

Comparison of two strings

3/11/2020

```
.MODEL SMALL
DISPLAY MACRO MSG
        LEA DX, MSG
        MOV AH, 09H
        INT 21H
ENDM
.DATA
MSG1 DB ODH, OAH, "ENTER FIRST STRING: $"
MSG2 DB ODH, OAH, "ENTER SECOND STRING: $"
MSG3 DB ODH, OAH, "LENGTH OF FIRST STRING: $"
MSG4 DB ODH, OAH, "LENGTH OF SECOND STRING: $"
MSG5 DB ODH, OAH, "--- STRINGS ARE EQUAL ---$"
MSG6 DB ODH, OAH, "--- STRINGS ARE NOT EQUAL ---$"
STRING1 DB 80H DUP(?)
STRING2 DB 80H DUP(?)

.CODE
START : MOV AX, @DATA
        MOV DS, AX
        DISPLAY MSG1
        MOV SI, OFFSET STRING1
        CALL READSTR
        MOV BL, CL      ; STORE THE LENGTH OF FIRST STRING
        DISPLAY MSG2
        MOV SI, OFFSET STRING2
        CALL READSTR
        PUSH BX
        PUSH CX
        DISPLAY MSG3
```

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```
MOV AL, BL
CALL LEN_DIS
DISPLAY MSG4
MOV AL, CL
CALL LEN_DIS
POP CX
POP BX
CMP CL, BL ; COMPARE THE LENGTHS
JNE FAIL ; IF LENGTHS ARE EQUAL, PROCESS NEXT STATEMENT
MOV SI, OFFSET STRING1
MOV DI, OFFSET STRING2
CLD
CHK: MOV AL, [SI]
     CMP AL, [DI] ; COMPARE BOTH THE STRING
     JNE FAIL
     INC SI
     INC DI
     DEC CL
     JNZ CHK
     DISPLAY MSG5
     JMP FINAL

LEN_DIS PROC NEAR
     XOR AH, AH
     ADD AL, 00H
     AAM
     ADD AX, 3030H
     MOV BH, AL
     MOV DL, AH
```

```
        MOV AH, 02H
        INT 21H
        MOV DL, BH
        MOV AH, 02H
        INT 21H
        RET
LEN_DIS ENDP
READSTR PROC NEAR
        XOR CL, CL
BACK :  MOV AH, 01H
        INT 21H
        CMP AL, 0DH
        JE FINISH
        MOV [SI], AL
        INC SI
        INC CL
        JMP BACK
FINISH : MOV [SI], BYTE PTR '$'
        RET
READSTR ENDP
FAIL : DISPLAY MSG 6
FINAL : MOV AH, 4CH
        INT 21H
END START
```