02.11.20

LAB-4

Palindrome

```
.MODEL SMALL
DISPLAY MACRO MSG
        LEA DX, MSG
        MOV AH, 09H
        INT 21H
ENDM

.DATA
MSG1 DB 0DH, 0AH, "Enter string : $"
MSG2      "       , " Reverse string :$"
MSG3      "       , " Input string is palindrome$"
MSG4      "       , " Input string is not
                      a palindrome. $"
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 '$'
       DEC SI
       MOV CH , CL
       MOV DI, OFFSET RSTRING
BACK : MOV AL , [SI]
       MOV [DI] , AL
       DEC SI
       INC DI
       DEC CH
       JN2 BACK
       MOV [DI] , BYTE PTR '$'.
       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 MSG 4
        JMP FINAL
SUCCESS : DISPLAY MSG 3
FINAL   : MOV AH, 4CH
          INT 21H
END.
```