SHIVANI GAHLOT   IBM19CSI50

PALINDROME

```asm
.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, "IT IS A PALINDROME. $"
MSG4 DB 0DH, 0AH, "IT 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
```

```asm
            INC DI
            MOV CH, CL
            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 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
```