```asm
;Subject: Microprocessor
;Expt. No. 10: To check whether a given string is a palindrome or not
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;Roll no: 28
;Date: 20/03/2024

DATA_SEG SEGMENT
        ARR_1 DB 'abcba'
        LEN DW 5
        PAL DB ?

DATA_SEG ENDS

CODE_SEG SEGMENT
     ASSUME CS:CODE_SEG, DS:DATA_SEG

START:  MOV AX, DATA_SEG        ;initialise data segment reg
        MOV DS,AX
        MOV SI,OFFSET ARR_1     ;initialise the pointer
        MOV DI,SI               ;initialise the counter
        MOV BX,LEN
        DEC BX
        ADD DI,BX

AGAIN:
        MOV AL,[SI]             ;read characters pointed by the start pointer
        CMP AL,
[DI]            ;compare characters pointed by start and end pointer
        JNZ NO_PAL              ;string is not palindrome
        INC SI
        DEC DI
        CMP SI,DI
        JNC AGAIN
        MOV PAL,0FFH
        JMP EXIT

NO_PAL:
        MOV PAL,00H

EXIT:
        MOV AH,4CH              ;exit to DOS
        INT 21H
CODE_SEG ENDS
END START




CODE_SEG ENDS
END START
```

≡ **File** **Edit** **View** **Run** **Breakpoints** **Data** **Options** **Window** **Help** `READY`

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      MOV PAL,00H


EXIT:
      MOV AH,4CH            ;exit to DOS
      INT 21
CODE_SEG ENDS
END START
```

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```
arr_1                    "abcba"
len                      5 (5h)
pal                      ' '  255 (FFh)
start                 ▌  @087D:0000
again                    @087D:0011
no_pal                   @087D:0025
```

─Watches───2─