

Prog4. ASM [Palindrome]

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• MODEL SMALL

```
display macro msg  
    lea dx, msg  
    mov ah, 09h  
    int 21h  
endm
```

• data

```
msg1 db 0dh, 0ah, "Enter a string: $"  
msg2 db 0dh, 0ah, "Entered string is not a palindrome $"  
str db 10h dup(0)  
revstr db 10h dup(0)  
len dw 0  
msg3 db 0dh, 0ah, "Entered string is not a palindrome $"  
str db 10h dup(0)  
revstr db 10h dup(0)  
len dw 0
```

• code

```
mov ax, @data  
mov ds, ax
```

```
display msg1  
mov si, 00h
```

```
back1: mov ah, 01h  
int 21h
```

```
cmp al, 0dh  
jz next
```

```
mov str[ci], al
inc di
inc len
jmp back1
```

```
next: mov si, 00h
mov di, 00h
add di, len
dec di
mov cx, len
```

```
back2: mov al, str[si]
mov newstr[di], al
inc si
dec di
loop back2
```

```
mov cx, len
mov si, 00h
mov di, 00h
cld
```

```
back: mov bl, str[bi]
cmp bl, newstr[di]
jnz notpali
loop back3
display msg2
jmp last
```

```
not pali: display msg3
last: mov ah, 1ch
int 21h
end
```