

Task-4:

Code:

```
.MODEL small
.STACK 100h
.DATA
    msg1 db "Enter a character: $"
    msg2 db "Thank you.$"
.CODE

MAIN PROC
    mov ax, @DATA
    mov ds, ax

    ; Display prompt message
    mov ah, 09h
    lea dx, msg1
    int 21h

    ; Read a character
    mov ah, 01h
    int 21h
    mov bl, al    ; store input character into BL

    ;New Line
    mov ah,02h
    mov dx,0Ah
    int 21h
    mov dx,0Dh
    int 21h

    ; Set CX = 50 for loop
    mov cx, 50

print_loop:
    mov ah, 02h
    mov dl, bl    ; load character into DL
    int 21h
    loop print_loop
```

```

;New Line
mov ah,02h
mov dx,0Ah
int 21h
mov dx,0Dh
int 21h

; Print Thank you
mov ah, 09h
lea dx, msg2
int 21h

; Exit program
End:
mov ah, 4Ch
int 21h

```

```

MAIN ENDP
END MAIN

```

Output:

```

13
14      ; Display prompt message
15      mov ah, 09h
16      lea dx, msg1
17      int 21h
18
19      ; Read a character
20      mov ah, 01h
21      int 21h
22      mov bl, al      ; store input character into BL
23
24      ;New Line
25      mov ah,02h
26      mov dx,0Ah
27      int 21h
28      mov dx,0Dh
29      int 21h
30
31
32      ; Set CX = 50 for loop
33      mov cx, 50
34
35      print_loop:
36      mov ah, 02h
37      mov dl, bl      ; load character into DL
38      int 21h
39      loop print_loop
40
41      ;New Line
42      mov ah,02h
43      mov dx,0Ah
44      int 21h
45      mov dx,0Dh
46      int 21h
47
48      ; Print Thank you
49      mov ah, 09h
50      lea dx, msg2
51      int 21h

```

emulator screen (80x25 chars)

```

Enter a character: d
dddddddddddddddddddddddddddddddddddddddd
Thank you.

```

line: 30 col: 76

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Task-5:

Code:

.MODEL small

.STACK 100h

.DATA

msg1 db "Enter characters: \$"

msg2 db "Thank you.\$"

.CODE

MAIN PROC

mov ax, @DATA

mov ds, ax

mov ah, 09h

lea dx, msg1

int 21h

mov ah, 01h

int 21h

mov bl, al

mov ah, 01h

int 21h

mov bh, al

mov ah, 02h

mov dl, 0Dh

int 21h

mov dl, 0Ah

int 21h

cmp bl, bh

jg swap_letters

```
swap_letters:  
xchg bl, bh  
jmp print_letters
```

```
print_letters:  
mov ah, 02h  
mov dl, bl  
int 21h
```

```
mov ah, 02h  
mov dl, bh  
int 21h
```

```
mov ah, 02h  
mov dl, 0Dh  
int 21h  
mov dl, 0Ah  
int 21h
```

```
mov ah, 09h  
lea dx, msg2  
int 21h
```

```
End:  
mov ah, 4Ch  
int 21h
```

```
MAIN ENDP  
END MAIN
```

Output:

```
37 swap_letters:
38 xchg bl, bh
39 jmp print_letters
40
41
42 print_letters:
43 mov ah, 02h
44 mov dl, bl
45 int 21h
46
47 mov ah, 02h
48 mov dl, bh
49 int 21h
50
51 mov ah, 02h
52 mov dl, 00h
53 int 21h
54 mov dl, 0Ah
55 int 21h
56
57
58 mov ah, 09h
59 lea dx, msg2
60 int 21h
61
62
63 End:
64 mov ah, 4Ch
65 int 21h
66
67
68
69 MAIN ENDP
70 END MAIN
71
```

emulator screen (80x25 chars)

Enter characters: CB
02
Thank you.

clear screen change font 8x10

line: 41 col: 79 drag a file here to open

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