

Task-1:

```
.model small
.stack 100h
.data
    msg1 db 'Enter a character: $'
    msg2 db 13, 10, 'Character is not a letter (A-Z).$'

.code
main:
    mov ax, @data
    mov ds, ax

    ; Prompt user
    lea dx, msg1
    mov ah, 09h
    int 21h

    ; Read a character into DL
    mov ah, 01h
    int 21h    ; Character entered now in AL
    mov dl, al ; Move it to DL for checking

    ; Check if DL >= 'A'
    cmp dl, 'A'
    jl not_letter ; If less than 'A', jump to not_letter

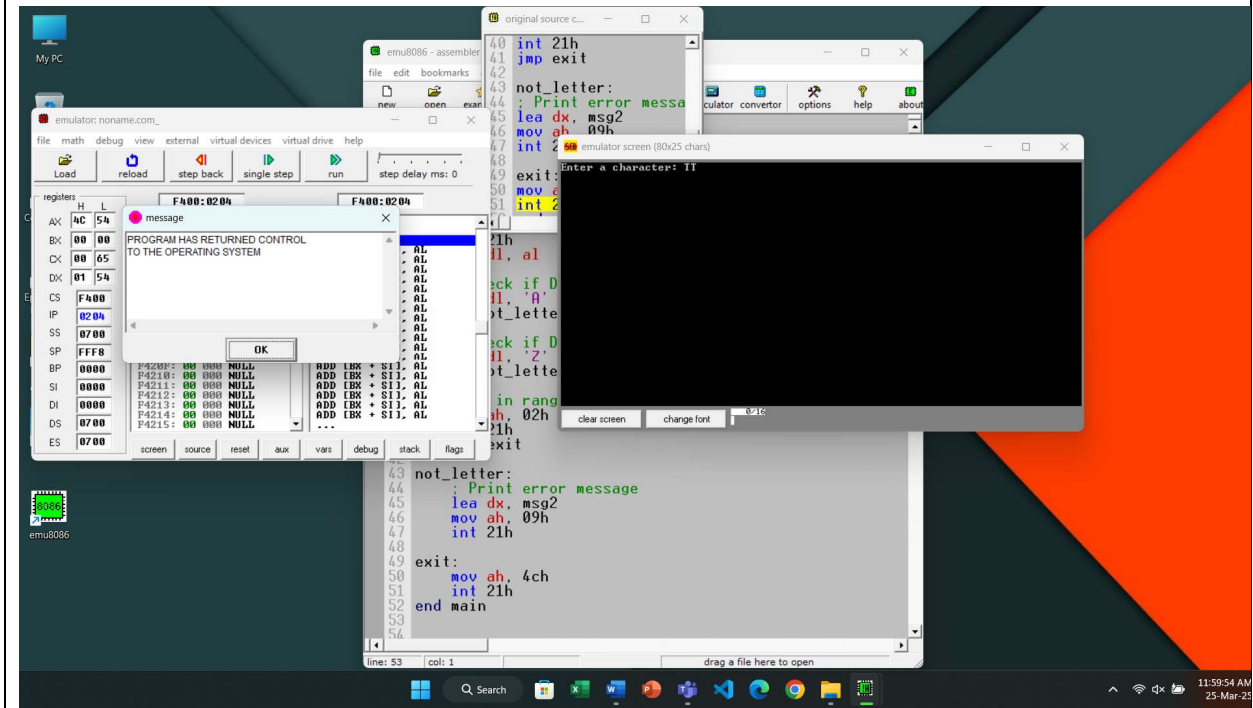
    ; Check if DL <= 'Z'
    cmp dl, 'Z'
    jg not_letter ; If greater than 'Z', jump to not_letter

    ; If in range, print character
    mov ah, 02h
    int 21h
    jmp exit

not_letter:
    ; Print error message
    lea dx, msg2
    mov ah, 09h
    int 21h

exit:
    mov ah, 4ch
    int 21h
end main
```

Output:



Task-2:

.MODEL small

.STACK 100h

.DATA

msg1 db "Enter a number (1-4): \$"

msg2 db 0Dh, 0Ah, "Output: o\$"

msg3 db 0Dh, 0Ah, "Output: e\$"

.CODE

MAIN PROC

mov ax, @DATA

mov ds, ax

; Display message to ask for input

mov ah, 09h

lea dx, msg1

int 21h

; Take input from user

```
mov ah, 01h
int 21h
mov al, al ; AL already has the input
sub al, 30h ; Convert ASCII to number

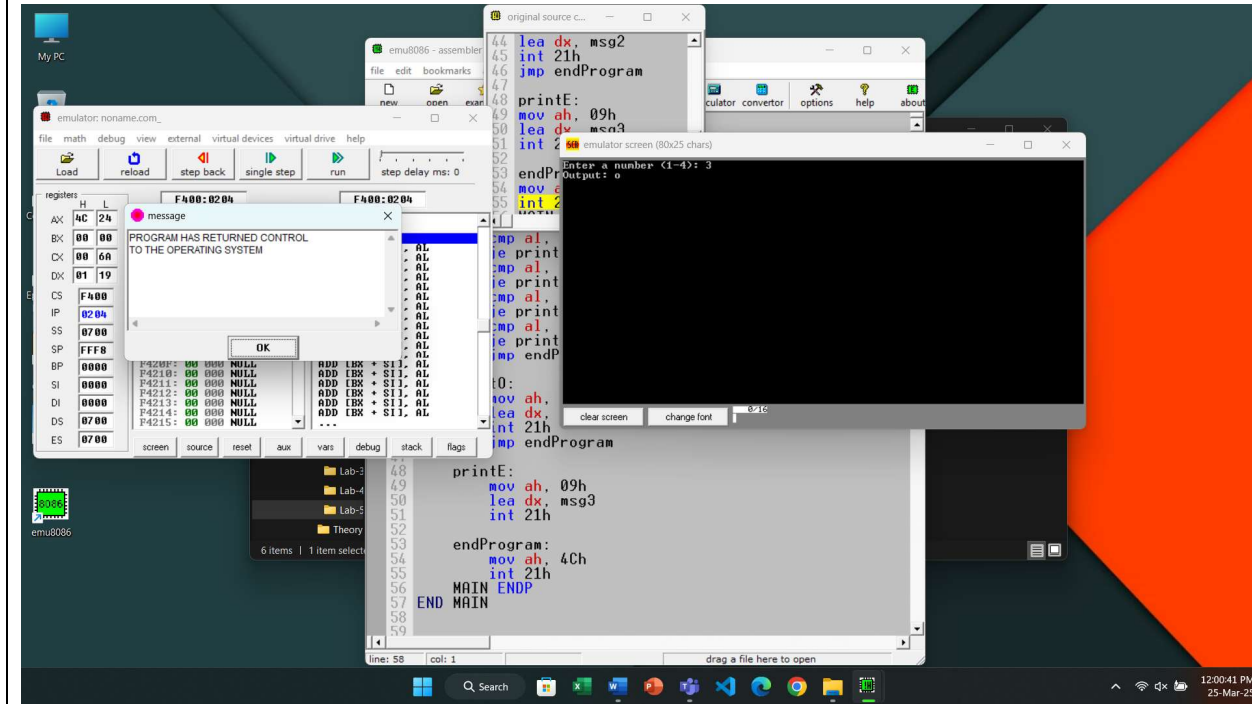
; Compare AL to decide output
cmp al, 1
je printO
cmp al, 3
je printO
cmp al, 2
je printE
cmp al, 4
je printE
jmp endProgram

printO:
mov ah, 09h
lea dx, msg2
int 21h
jmp endProgram

printE:
mov ah, 09h
lea dx, msg3
int 21h

endProgram:
mov ah, 4Ch
int 21h
MAIN ENDP
END MAIN
```

Output:



Task-3:

.MODEL small

.STACK 100h

.DATA

```
box DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah
     DB '*****', 0Dh, 0Ah, '$'
```

.CODE

MAIN PROC

```
    MOV AX, @DATA
```

```
    MOV DS, AX
```

```
; Display the box
MOV DX, OFFSET box
MOV AH, 09h
INT 21h
```

```
; Exit program
MOV AH, 4Ch
INT 21h
```

```
MAIN ENDP
END MAIN
```

Output:

