**LAB TASK – 8**

1. Write a program in assembly language to take two single-digit numbers as input and

display whether they are equal or not.

org 100h

jmp start

msg1 db 'Enter first digit: $'

msg2 db 0Dh, 0Ah, 'Enter second digit: $'

equalMsg db 0Dh, 0Ah, 'Digits are equal.$'

notEqualMsg db 0Dh, 0Ah, 'Digits are not equal.$'

start:

mov dx, offset msg1

mov ah, 09h

int 21h

mov ah, 01h

int 21h

;sub al, 30h

mov bl, al

mov dx, offset msg2

mov ah, 09h

int 21h

mov ah, 01h

int 21h

;sub al, 30h

cmp bl,al

je equal

mov ah, 09h

mov dx, offset notEqualMsg

int 21h

jmp EndProgram

equal:

mov ah, 09h

mov dx,offset equalMsg

int 21h

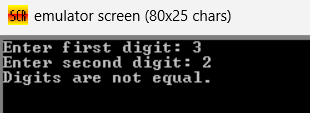
EndProgram:

mov ah,4Ch

int 21h

ret

OUTPUT:



2. Write a program in assembly language to check whether a single-digit number is odd or

even.

ORG 100h ; Origin, to specify that the program starts at 100h (COM file format)

; Display the message "Enter a digit: "

MOV AH, 09h ; Function 09h of INT 21h prints a string

MOV DX, OFFSET msg\_input ; Load the offset of the input message into DX

INT 21h ; Call DOS interrupt to print the message

; Take input digit

MOV AH, 01h ; Function 01h of INT 21h to read a character from the keyboard

INT 21h ; Read the digit from the user

SUB AL, '0' ; Convert ASCII to numeric value

; Check if the number is even or odd

MOV BL, AL ; Store the input number in BL

AND BL, 1 ; Perform bitwise AND with 1 to check if the last bit is set

JZ even\_number ; If zero, it means the number is even

; If number is odd, display "Odd"

MOV AH, 09h ; Function 09h of INT 21h prints a string

MOV DX, OFFSET msg\_odd ; Load the offset of the "Odd" message into DX

INT 21h ; Call DOS interrupt to print the message

JMP end\_program ; Jump to the end of the program

even\_number:

; If number is even, display "Even"

MOV AH, 09h ; Function 09h of INT 21h prints a string

MOV DX, OFFSET msg\_even ; Load the offset of the "Even" message into DX

INT 21h ; Call DOS interrupt to print the message

end\_program:

; Terminate the program

MOV AH, 4Ch ; Function 4Ch of INT 21h terminates the program

INT 21h ; Call DOS interrupt to exit

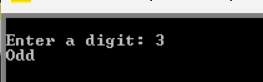
; Data section with messages

msg\_input DB 0Dh, 0Ah, 'Enter a digit: $' ; Prompt for digit

msg\_even DB 0Dh, 0Ah, 'Even$' ; Message when number is even

msg\_odd DB 0Dh, 0Ah, 'Odd$'

OUTPUT:



Github link:

<https://github.com/SRIVALLI2005/-ABM-MODULE->