



UNIVERSITY OF INFORMATION  
TECHNOLOGY AND SCIENCES (UITs)  
DEPARTMENT OF INFORMATION TECHNOLOGY

LAB No.3

IT-312 : ASSEMBLY PROGRAMMING LANGUAGE LAB

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## SUB function

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# 1 Code

```
01  
02 .stack 100h  
03 .data  
04  
05 a db 'Input first digit $',  
06 b db 'Input second digit $',  
07 c db 'Result $'  
08 .code  
09 main proc  
10 mov ax, @data  
11 mov ds, ax  
12 mov ah, 9  
13 lea dx, a  
14 int 21h  
15 mov ah, 1  
16 int 21h  
17 mov bl, al  
18 mov ah, 2  
19 mov dl, 10  
20 int 21h  
21 mov dl, 13  
22 int 21h  
23 mov ah, 9  
24 lea dx, b  
25 int 21h  
26 mov ah, 1  
27 int 21h  
28 mov bh, al  
29 mov ah, 2  
30  
31  
32 mov dl, 10  
33 int 21h  
34 mov dl, 13  
35 int 21h  
36 mov ah, 9  
37 lea dx, c  
38 int 21h  
39  
40 sub bl, bh  
41 add bl, 48  
42 mov ah, 2  
43 mov dl, bl  
44 int 21h  
45 exit:  
46 mov ah, 4ch  
47 int 21h  
48 main endp  
49 end main
```

Figure 1:

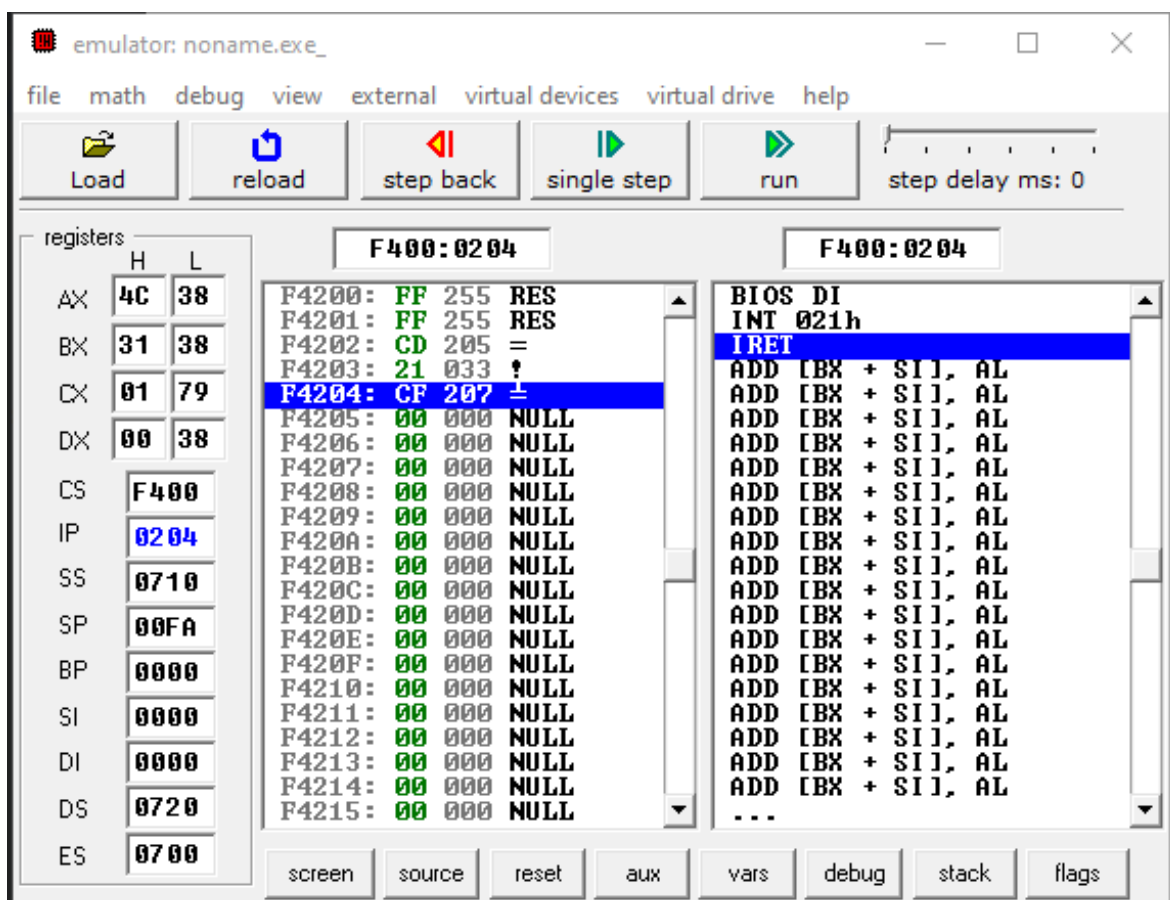


Figure 2:

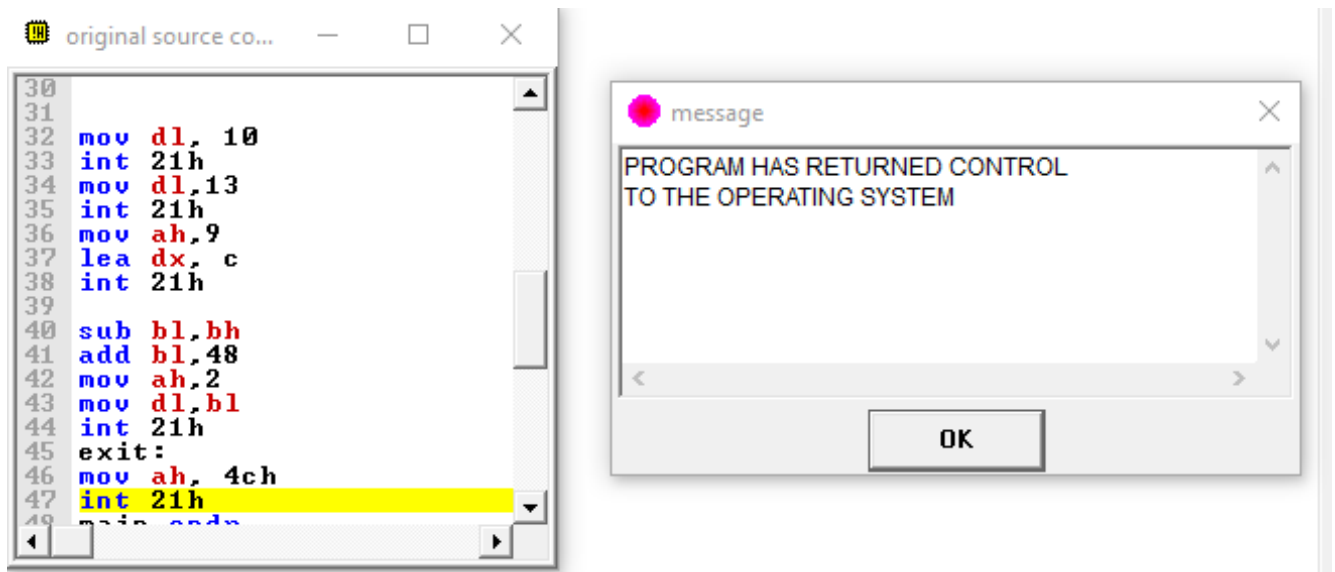
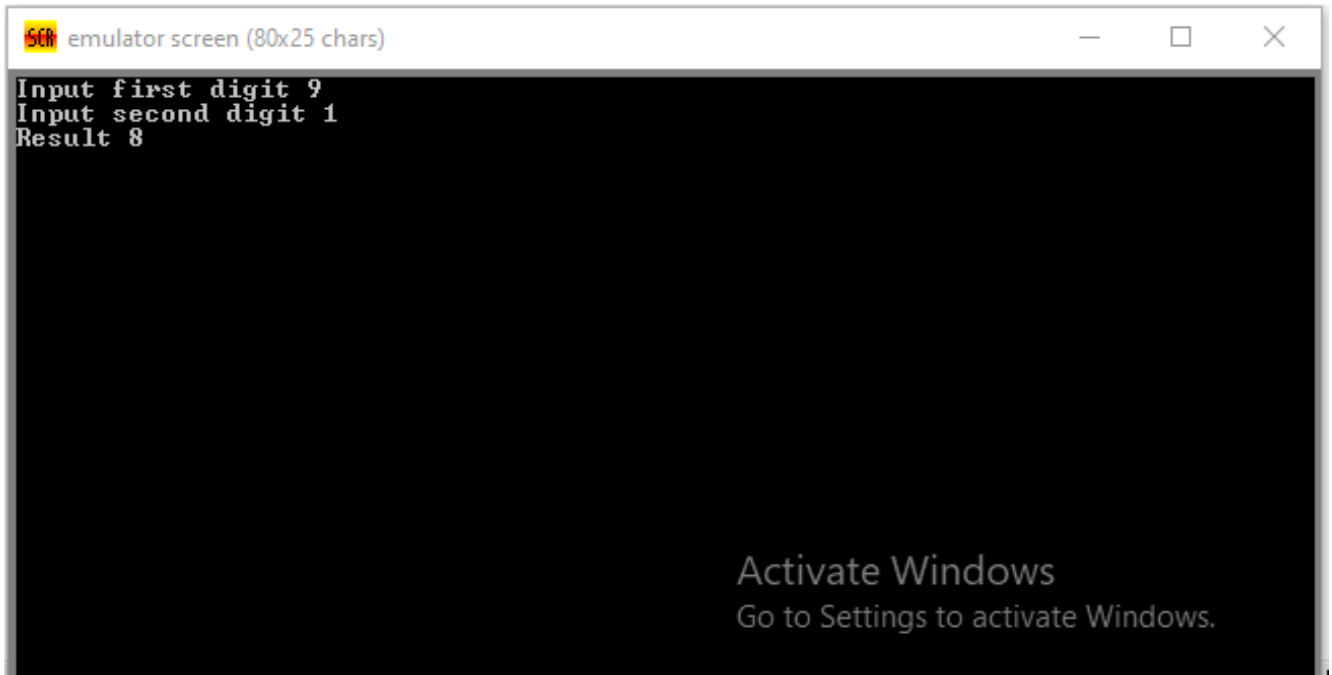


Figure 3:

## 2 Desired Output



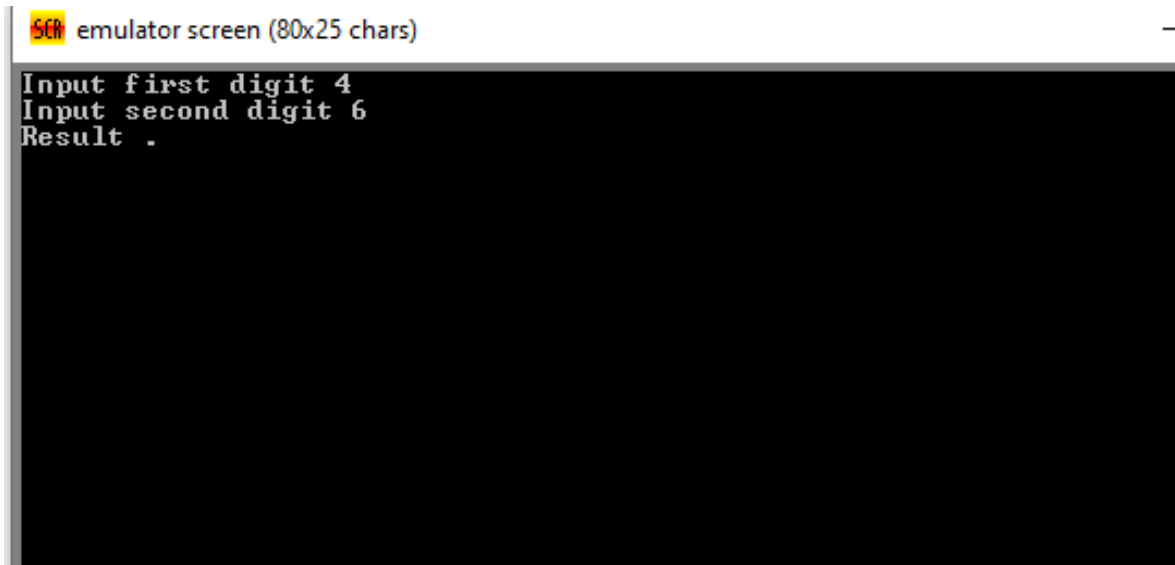
The screenshot shows a window titled "emulator screen (80x25 chars)" with a black background and white text. The text displays the input and output of a program: "Input first digit 9", "Input second digit 1", and "Result 8". A Windows watermark is visible in the bottom right corner of the screen.

```
Input first digit 9
Input second digit 1
Result 8
```

Activate Windows  
Go to Settings to activate Windows.

Figure 4:

### 3 Exception Output



```
Scr emulator screen (80x25 chars)
Input first digit 4
Input second digit 6
Result .
```

Figure 5:

### 4 Conclusion

Here I find a challenges of subtraction and that is if my first input is less then my second input so the subtraction will not work