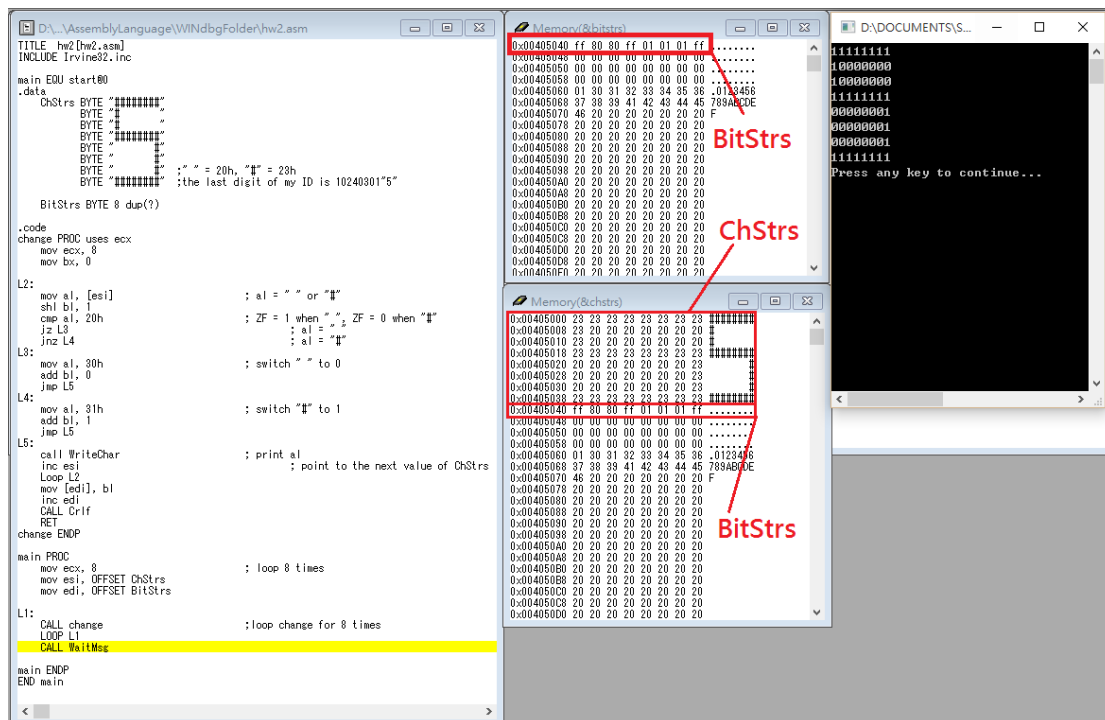


HW#02Procedure

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Code

```
1  TITLE hw2[hw2.asm]
2  INCLUDE Irvine32.inc
3
4  main EQU start@0
5  .data
6      ChStrs BYTE "#####"
7              BYTE "#"
8              BYTE "#"
9              BYTE "#####"
10             BYTE " #"
11             BYTE " #"
12             BYTE " #" ;" " = 20h, "#" = 23h
13             BYTE "#####";the last digit of my ID is 10240301"5"
14
15     BitStrs BYTE 8 dup(?)
16
17 .code
18 change PROC uses ecx
19     mov ecx, 8
20     mov bx, 0
21
22 L2:
23     mov al, [esi] ; al = " " or "#"
24     shl bl, 1
25     cmp al, 20h ; ZF = 1 when " ", ZF = 0 when "#"
26     jz L3 ; al = " "
27     jnz L4 ; al = "#"
28 L3:
29     mov al, 30h ; switch " " to 0
30     add bl, 0
31     jmp L5
32 L4:
33     mov al, 31h ; switch "#" to 1
34     add bl, 1
35     jmp L5
36 L5:
37     call WriteChar ; print al
38     inc esi ; point to the next value of ChStrs
39     loop L2
40     mov [edi], bl
41     inc edi
42     CALL Crlf
43     RET
44 change ENDP
45
46 main PROC
47     mov ecx, 8 ; loop 8 times
48     mov esi, OFFSET ChStrs
49     mov edi, OFFSET BitStrs
50
51 L1:
52     CALL change ;loop change for 8 times
53     LOOP L1
54     CALL WaitMsg
55
56 main ENDP
57 END main
```



Explanation:

I set the offset of ChStrs and BitStrs so that I can use them in procedure "change". The procedure "change" shifts bl at first in order to accumulate all digit (0 or 1) which will be transform from ChStrs, and then checks weather the char is "(space)" or "#" in L2, if it is a space, jump to L3 to switch it to 0 and add 0 to bl; Otherwise, switch the char to 1 if it is "#" originally. Finally, In L5, it will print out all digits as well as add them to bl.

Review:

I seldom take notes during classes since guided notes are very helpful for me to review the article of classes. However, after this assignment, I deeply realize that it's necessary to take some notes, or I would forget most of the contents in classes after couple of weeks. Fortunately, I was not too busy to google some ideas related to this assignment this week, even though it took me a lot of time, I still turned in the assignment on time. One question really confused me: Refer to the requirement of homework2 in LMS, It say that I should set Chstrs as well as BitStrs to BitStrs. But even I have tried hard to do that, I still can't get it. How does it works?