

Lab Homework Week 3 Report Group 66

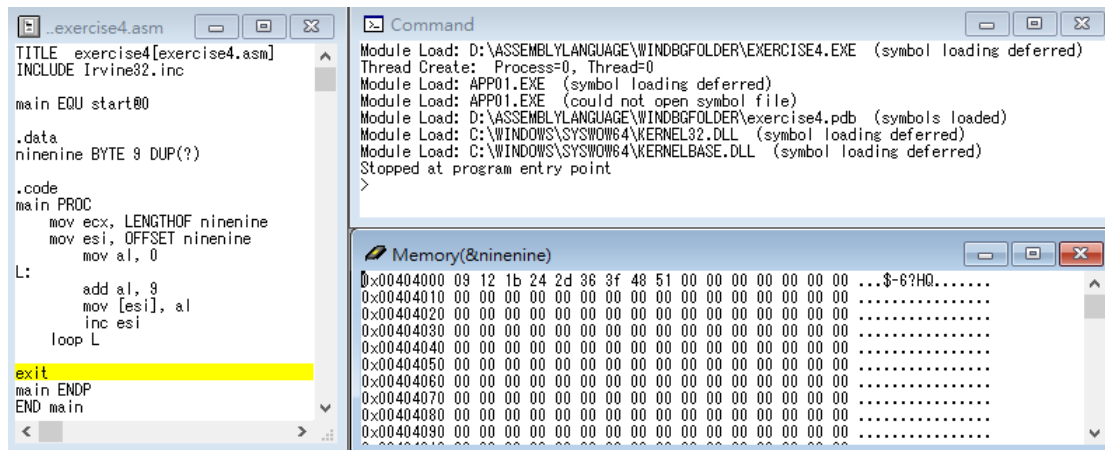
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Objective: To understanding how to write simple Assembly program and program structure.

Explanations: Use the course content to learn using loop in assembly language. Use loop to calculate multiplication table from 9*1 to 9*9.

Step: set al to 9 initially, set the value of [esi] to al, and add 9 for each loop. Set esi to OFFSET to let esi point to the first byte of ninenine, and increase esi by 1 for every loop in order to let esi point to next byte. Repeat this process for 9 times, the value of al would be 9*1~9*9.

```
1  TITLE  exercise4[exercise4.asm]
2  INCLUDE Irvine32.inc
3
4  main EQU start@0
5
6  .data
7  ninenine BYTE 9 DUP(?)
8
9  .code
10 main PROC
11     mov ecx, LENGTHOF ninenine
12     mov esi, OFFSET ninenine
13     mov al, 0                ; initiate al = 0
14 L:
15     add al, 9                ; al += 9
16     mov [esi], al            ; [esi] = al
17     inc esi                  ; esi points to next byte
18     loop L
19
20 exit
21 main ENDP
22 END main
23
```

Review: At first, we had a compiling error which said that “the file link is wrong”, we thought our code was OK so it took us long time to figure out what was happened. We even cut the whole folder from disk C and paste to disk D. The weird thing was, the error message was different: file link error to disk C but “Unsolved problem” to disk D. Soon after, we realized that we missed the following code: “TITLE exercise4 [exercise4.asm]” and “main EQU start@0”. Even we solved the problem, we still didn’t actually know the meaning and usage of the two line. It’s just necessary in assembly language programming?