**In-Class Exercise # 5 – “Start Assembly Programming”**

Due Day: 2017/03/16, Friday, 12:00

Objective: To understanding how to write procedure in Assembly.

Explanations：

1. Use the course content to learn about the change in memory and how to use PUSH and POP instructions. Completed the PROC CONVERT (using USES) and CONVERT2 (without USES), the goal of this PROC is to convert value that stored in esi addresses change from 0 to ‘A’, 1 to ‘B’, and so on.
2. The screenshot have to be taken in the register when in the initial state, after convert executed, and after convert2 executed.

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| .data  myID byte "\_\_\_\_\_\_\_\_\_" ;Student ID of leader  size\_ID = \_\_\_\_\_\_\_\_ ;size\_ID is the length of myID  myID2 byte "\_\_\_\_\_\_\_\_\_" ;Student ID of member  size\_ID2 = \_\_\_\_\_\_\_\_\_ ;size\_ID2 is the length of myID2  .code  Convert PROC USES \_\_\_ ;Convert change myID value 0-A 1-B and so on.  L1:    Do something  loop L1  ret  Convert ENDP  Convert2 PROC ; Convert2 do the same thing as Convert  L1:    Do something  loop L1  ret  Convert2 ENDP  start@0 PROC  mov eax, 9999h ; The value of eax cannot be changed  mov ebx, 9999h ; The value of ebx cannot be changed  mov edx, 9999h ; The value of edx cannot be changed  mov esi, OFFSET myID  mov ecx, size\_ID  call Convert  mov esi, OFFSET myID2  mov ecx, size\_ID2  call Convert2    exit  start@0 ENDP  END start@0 |

1. Use WINdbg to shows registers and memory status when program executed and add screenshots to report in Word files.
2. Compress(.zip,.rar) the following file with the name of the group ( e.g. group\_1.zip)
   * 1. Code(\*.asm)
     2. Report(\*.doc)
        + Report Title
        + Group, name, student ID
        + Program execution flow, memory (register) status
        + Screenshots description code Description
        + Reviews
3. To update the contents of report can be directly re-upload file with the name of version (e.g. Group\_1\_v2.zip)

Note：

1. Each group, one report
2. Upload the report to (<http://lms.ncu.edu.tw/ncu>) before Friday 12:00.