**In-Class Lab9 # 11 – “Start Assembly Programming”**

Due Day: 2020/11/22, Tuesday, 12:00

Goal: Please use the content learned in the course to finish two programs.

First program you’ll have to find out if v1,v2 and v3 these three inputs are all different. If they are all different set register eax to 1, otherwise set it to zero.

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| INCLUDE Irvine32.inc  .386  .model flat,stdcall  .stack 4096  ExitProcess proto,dwExitCode:dword ;delcare proto type  DifferentInputs \_, v1:\_, v2:\_, v3:\_ ;delcare proto type  main EQU start@0  .data  .code  main proc    invoke DifferentInputs,2,2,3  invoke DifferentInputs,2,3,2  invoke DifferentInputs,3,5,5  invoke DifferentInputs,2,2,2  invoke DifferentInputs,104522064,\_,\_ ;fill your IDs    call WaitMsg  invoke ExitProcess,0  main endp  DifferentInputs proc,  v1:dword, v2:dword, v3:dword  mov eax,v1 ; take out v1  cmp v2,eax ; compare v1 to v2  je Label\_Equal ; if (v1==v2) jump to Label\_Equal, return 0  \_ \_,\_ ; compare v1 to v3  \_ Label\_Equal ; if (v1==v3) jump to Label\_Equal, return 0 mov eax,v2 ; take out v2  \_ \_, \_ ; compare v2 to v3  \_ Label\_Equal ; if (v2==v3) jump to Label\_Equal, return 0  \_ \_,1 ; return 1  \_ exit\_label ; return true  Label\_Equal:  mov eax,0 ; return false    exit\_label:  call DumpRegs  ret  DifferentInputs endp  end main |

The second program: Write a procedure named Str\_remove that removes n characters from a string. Pass a pointer to the position in the string where the

characters are to be removed. Pass an integer specifying the number of

characters to remove.

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| INCLUDE Irvine32.inc  main EQU start@0  Str\_remove PROTO,  pStart:PTR BYTE,  nChars:DWORD  .data  target1 BYTE "\_",0 ; fill the studend ID of team member 1  target2 BYTE "\_",0 ; fill the studend ID of team member 2  target3 BYTE "999999999",0  .code  main PROC  INVOKE Str\_remove, OFFSET target1, 5 ; Remove five char  mov edx,OFFSET target1  call WriteString  call Crlf  INVOKE Str\_remove, OFFSET target2, 2 ; remove 2 char  mov edx,OFFSET target2  call WriteString  call Crlf  INVOKE Str\_remove, OFFSET [target2+1], 15 ; remove the length over the target  mov edx,OFFSET target2  call WriteString  call Crlf  call WaitMsg  exit  main ENDP  Str\_remove PROC,  pStart:PTR BYTE, ; points to first character to delete  nChars:DWORD ; number of characters to delete  INVOKE Str\_length, pStart ; get the string length  mov ecx,eax ; the length save in ecx, it will be used by loop  .IF nChars <= ecx ; check whether nChars exceeds the string size  sub ecx,nChars ; if no exceed, then ecx minus nChars  .ENDIF  mov \_,pStart ; Set the begining of the copy source  add esi,\_ ; Move the starting to the correct location  mov \_,pStart ; Set the destination position  \_\_ ; clear direction flag (forward)  \_\_ movsb ; do the move  mov BYTE PTR [edi],0 ; insert new null byte  Exit\_proc:  ret  Str\_remove ENDP  END main |

1. Deadline : 2022/11/22(Tue.) Before 12:00 P.M. (EEClass)
2. Each group only needs to submit one report
3. Pack the following files and compress into .zip file.
4. Zip file name -> (ex: lab9\_groupX.zip)
   1. Code (lab9\_groupX.asm)
   2. Report (lab9\_groupX.doc or  lab9\_ groupX.pdf)
      * Title
      * Group、StudentID、Name
      * Screenshots of Result and Code + Explanation
      * The report has to clearly explain how the program works.
      * Thoughts about the lab.
5. Please must be aware of the file name.
6. If you want to update your file, please give a new file name (ex: lab9\_group01\_v2.zip).