**In-Class Exercise # 15 – “CursorCtrl”**

Due Day: 2022/12/13, Tuesday, 12:00 P.M. (noon)

GOAL：Using keyboard to control the position of the cursor, and the cursor should only move in the specific area.

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| INCLUDE Irvine32.inc  .data  consoleHandle DWORD ?  xyInit COORD <\_\_\_,\_\_\_> ; starting coordinate  xyBound COORD <80,25> ; Border  xyPos COORD <\_\_\_,\_\_\_> ; position of cursor  main EQU start@0  .code  main PROC  ; Get the Console standard output handle:  INVOKE \_\_\_\_\_\_\_, STD\_OUTPUT\_HANDLE  mov consoleHandle,eax    ; set the starting position  INITIAL:  mov ax,xyInit.x  mov xyPos.x,ax  mov ax,xyInit.y  mov xyPos.y,ax  START:  call ClrScr  INVOKE \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, xyPos  call ReadChar  .IF ax == \_\_\_\_\_\_\_ ;UP  sub xyPos.y,1  .ENDIF  .IF ax == \_\_\_\_\_\_\_ ;DOWN  add xyPos.y,1  .ENDIF  .IF ax == \_\_\_\_\_\_\_ ;LEFT  sub xyPos.x,1  .ENDIF  .IF ax == \_\_\_\_\_\_\_ ;RIGHT  add xyPos.x,1  .ENDIF  .IF ax == 011Bh ;ESC  jmp END\_FUNC  .ENDIF    ; examine if each directions are over the border.  .IF xyPos.x == 0h ;x lowerbound  jmp INITIAL ; if over the border then stay at the original position.  .ENDIF  mov ax,xyBound.x ; p.s. when comparing can’t use two-address, so we turn one of them into register.  .IF xyPos.x == ax ;x upperbound  jmp INITIAL ; if over the border then stay at the original position.  .ENDIF    .IF xyPos.y == 0h ;y lowerbound  jmp INITIAL ; if over the border then stay at the original position.  .ENDIF  mov ax,xyBound.y  .IF xyPos.y == ax ;y upperbound  jmp INITIAL ; if over the border then stay at the original position.  .ENDIF    jmp START  END\_FUNC:  exit  main ENDP  END main |

* Deadline : 2022/12/13(Tue.) Before 12:00 P.M. (EEClass)
* Each group only needs to submit one report
* Pack the following files and compress into .zip file.
* Zip file name -> (ex: lab13\_groupX.zip)
  1. Code (lab13\_groupX.asm)
  2. Report (lab13\_groupX.doc or  lab13\_ 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.
* Please must be aware of the file name.
* If you want to update your file, please give a new file name(ex: lab13\_group01\_v2.zip).