**In-Class Exercise # 14 – “Draw box”**

Due Day: 2022/12/16, Tuesday, 12:00(noon)

目標：請利用本週課程所學內容完成程式。在終端機中畫出指定大小和指定顏色的框線。

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| INCLUDE Irvine32.inc  main EQU start@0  BoxWidth = \_\_\_\_  BoxHeight = \_\_\_\_    .data  boxTop    BYTE \_\_\_\_\_, (BoxWidth - 2) DUP(\_\_\_\_\_), \_\_\_\_\_  boxBody   BYTE \_\_\_\_\_, (BoxWidth - 2) DUP(' '), \_\_\_\_\_  boxBottom BYTE \_\_\_\_\_, (BoxWidth - 2) DUP(\_\_\_\_\_),\_\_\_\_\_    outputHandle DWORD 0  bytesWritten DWORD 0  count DWORD 0  xyPosition COORD <10,5>    cellsWritten DWORD ?  attributes0 WORD BoxWidth DUP(\_\_\_\_\_)  attributes1 WORD (BoxWidth-1) DUP(\_\_\_\_\_),\_\_\_\_\_  attributes2 WORD BoxWidth DUP(\_\_\_\_\_)      .code  main PROC        INVOKE \_\_\_\_\_, \_\_\_\_\_ ; Get the console ouput handle      mov outputHandle, \_\_\_\_\_ ; save console handle      call Clrscr      ; 畫出box的第一行        INVOKE WriteConsoleOutputAttribute,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_        INVOKE WriteConsoleOutputCharacter,         \_\_\_\_\_,   ; console output handle         \_\_\_\_\_,   ; pointer to the top box line         \_\_\_\_\_,   ; size of box line         \_\_\_\_\_,   ; coordinates of first char         \_\_\_\_\_ ; output count        inc \_\_\_\_\_   ; 座標換到下一行位置        mov ecx, (\_\_\_\_\_)    ; number of lines in body        L1: push \_\_\_\_\_  ; save counter 避免invoke 有使用到這個暫存器      INVOKE WriteConsoleOutputAttribute,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_    INVOKE WriteConsoleOutputCharacter,         \_\_\_\_\_,         \_\_\_\_\_,   ; pointer to the box body         \_\_\_\_\_,         \_\_\_\_\_,         \_\_\_\_\_        inc \_\_\_\_\_   ; next line      pop \_\_\_\_\_   ; restore counter      loop L1        INVOKE WriteConsoleOutputAttribute,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_,        \_\_\_\_\_        ; draw bottom of the box      INVOKE WriteConsoleOutputCharacter,         \_\_\_\_\_,         \_\_\_\_\_,   ; pointer to the bottom of the box         \_\_\_\_\_,         \_\_\_\_\_,         \_\_\_\_\_        call WaitMsg      call Clrscr      exit  main ENDP  END main |