報告標題: lab9_1, 組別: 48, 姓名學號: 曾千芸109504501 賈子悅110502514

Screenshots of **Different Inputs**:

```
INCLUDE Irvine32.inc
ExitProcess proto,dwExitCode:dword
DifferentInputs proto, v1:dword, v2:dword, v3:dword
.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, 110502514, 109504501
     call WaitMsg
     invoke ExitProcess,0
     exit
main ENDP
DifferentInputs proc,
     v1:dword, v2:dword, v3:dword
    mov eax,v1 ;set eax as v1
    cmp v2,eax ;compare eax with v2
je Label_Equal ;if equal, jump to Label_Equal
cmp v3,eax ;compare eax with v3
je Label_Equal ;if equal, jump to Label_Equal
mov eax,v2 ;set eax as v2
cmp v3,eax ;compare eax with v3
je Label_Equal ;if equal, jump to Label_Equal
     mov eax,1
                             ;set eax as 1
     jmp exit_label
                             ;jump to exit_label
Label_Equal:
     mov eax,θ
                       ; return false
exit_label:
    call DumpRegs
     ret
DifferentInputs endp
END main
```

EAX=00000000
ESI=004210AA
EIP=004236DC

EAX=00000000
ESI=004210AA
EIP=004236DC

EAX=00000000
ESI=004210AA
EIP=004236DC

EAX=00000000
ESI=004210AA
EIP=004236DC

Main函式呼叫將5組變數依序代進DifferentInput

DifferentInput做的事情:

- 1. 三種數字互相比較,如果其中兩個相等變跳至label_equal,若否,則跳至 exit_label
- 2. 若跳至label_equal, 將eax輸入0(即傳回false值)。

exit_label就呼叫dumpregs, 將以16進位格式顯示eax ebx ecx edx esi edi ebp esp eip efl暫存器的值 同時也顯示進位、符號、零值及溢位旗標。

main:

calls 5 arrays to DifferentInput

DifferentInput:

Compare 3 numbers, if 2 of them equal, jump to label_equal; otherwise jump to exit_label. If jump to label_equal, set eax as 0 (return false)

If jump to exit label, call dumpregs, output those values.

• Thoughts about lab9:

In the first question, we encounter a problem that we are not sure about what the numbers mean in the ppt, but they are actually just testing numbers. After trying those numbers, we found that the program had something wrong due to the strange output. Eventually we found that we mistook je (jump equal) as jmp, and got the right output.