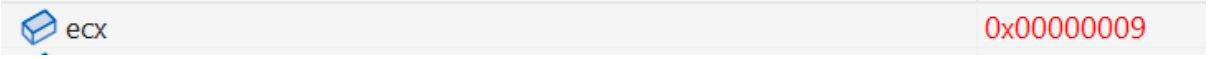
報告標題: lab3, 組別: 48, 姓名學號: 曾千芸109504501賈子悅110502514

- **程式執行流程、記憶體 (暫存器) 狀態、截圖說明、** 程式碼說明

```
1   include Irvine32.inc
2   .data
3       Result byte 9 DUP(?)
4   .code
5   main PROC
6       mov ecx, 9                  ;將ecx定義為9 (ecx is automatically used as a counter and is decremented each time the loop repeats)
7       mov esi, OFFSET Result      ;傳回變數從所在區段開始的偏移距離
8       mov al, 0                   ;將al定義為0
9   L1:
10      add al, 9                   ;將al加上9
11      mov [esi], al               ;The contents of the al register are copied to the memory location addressed by esi
12      inc esi                     ;將esi加上1
13  LOOP L1                         ;repeat L1 (9 times)
14      exit
15  main ENDP
16  END main
17
```

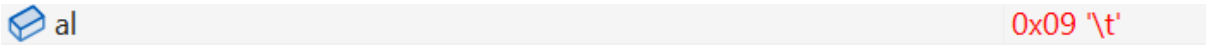
L6: 將ecx定義為9 (ecx is automatically used as a counter and is decremented each time the loop repeats)



L7: 傳回變數從所在區段開始的偏移距離

L8: 將al定義為0

L10: 將al加上9

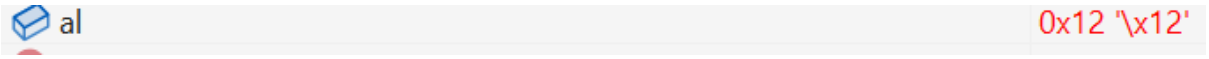


L11: The contents of the al register are copied to the memory location addressed by esi

L12: 將esi加上1

L13: repeat L1 (ecx = ecx - 1 because ecx is automatically used as a counter and is decremented each time the loop repeats)

L10: 將al加上9



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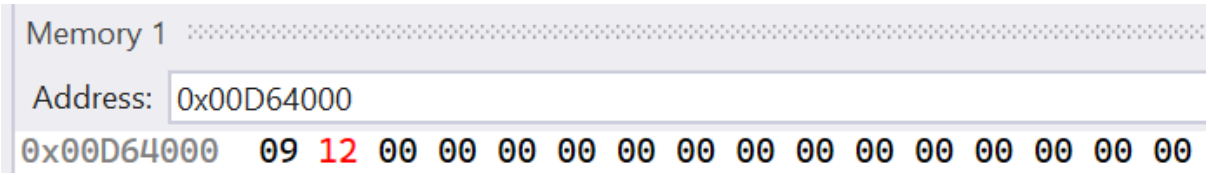

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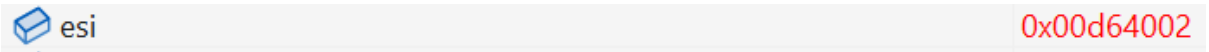

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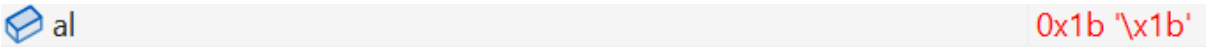

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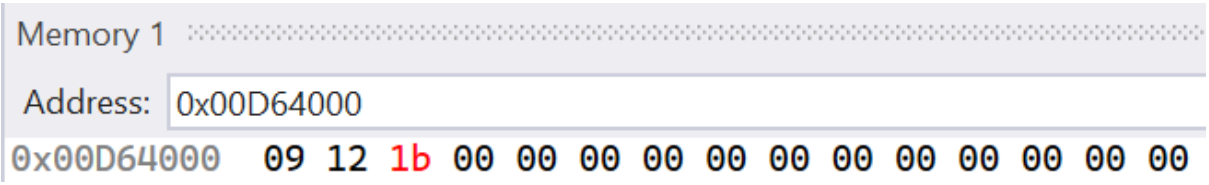

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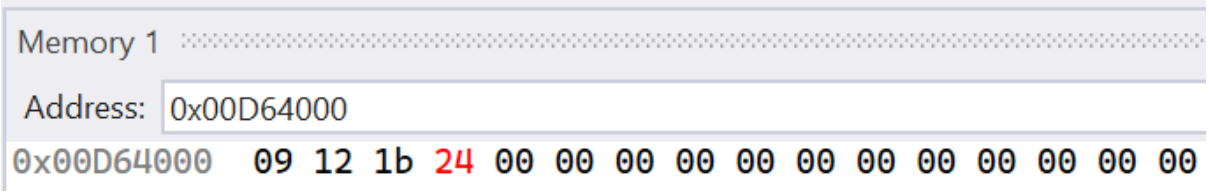

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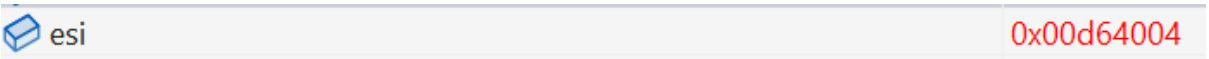

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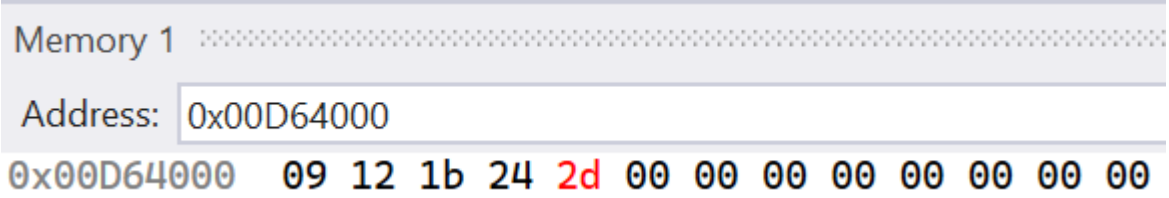

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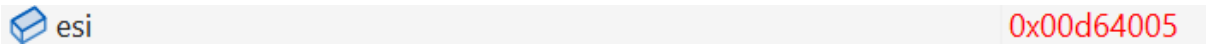

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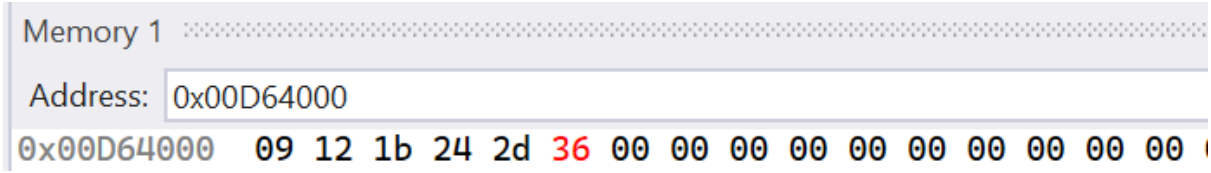

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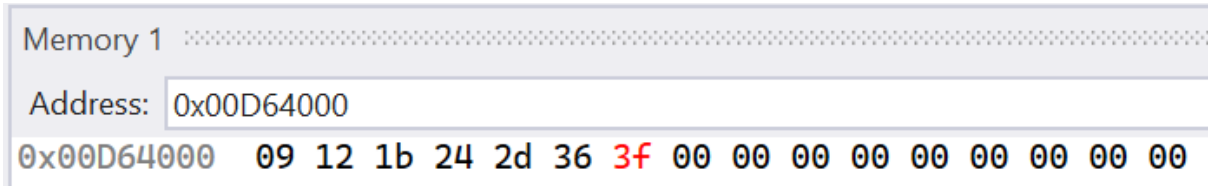

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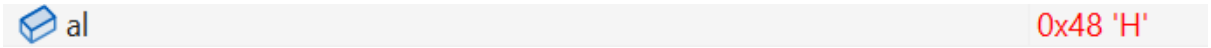

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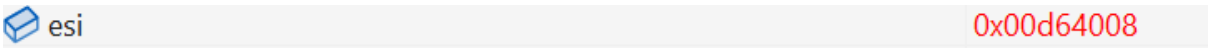

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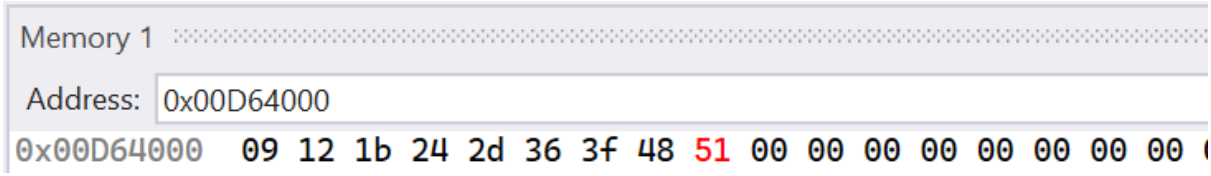

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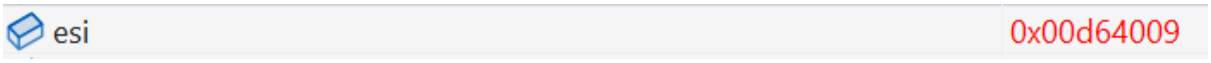

L13: did not continue to repeat L1 because ecx = 0 (ecx = ecx - 1 because ecx is automatically used as a counter and is decremented each time the loop repeats)

L14: exit

- 心得

這次的實習課學到了迴圈的應用，和其他程式語言略有不同，但是經由老師上課的學習單，並且與同學們討論過後，理解的很快，馬上在這次作業運用出，得到9的各個倍數在16 進位上的顯示。此外，也學習使用ecx來計算已經跑過迴圈多少次,當ecx等於零時就會結束迴圈，我認為ecx是一個非常好用的計數變數。有遇到一點小插曲是用自己電腦程式跑不出來，但是在助教的幫助下完成設置，感謝助教在實驗課的指導，讓我們能如期完成實驗課的作業。