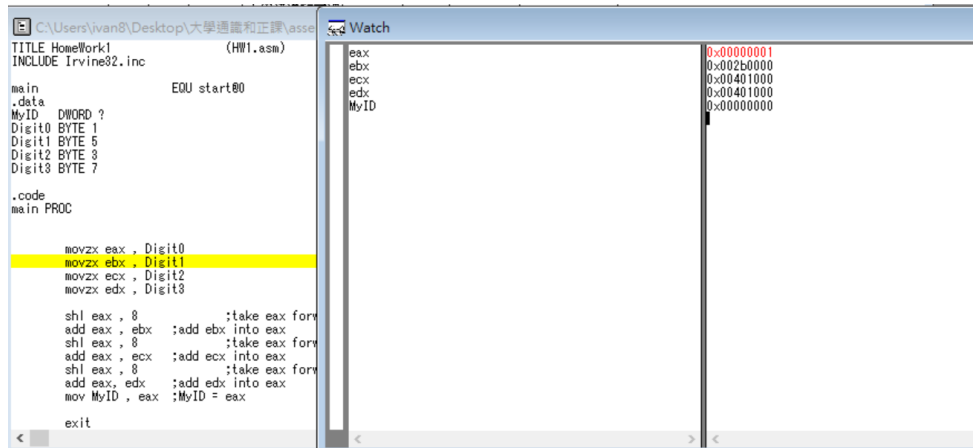


Assembly Language HW1

數學三 B 107201537 詹偉翔

1. I put 1 into eax



```

C:\Users\ivan8\Desktop\大學通識和正課\asse
Watch
TITLE HomeWork1
INCLUDE Irvine32.inc

main
    EQU start@0

.data
MyID  DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

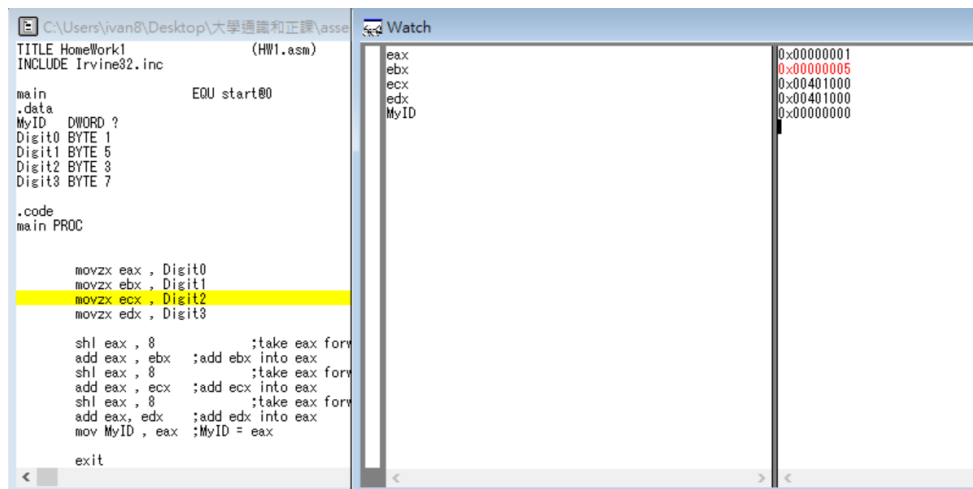
    shl eax, 8      ;take eax forw
    add eax, ebx    ;add ebx into eax
    shl eax, 8      ;take eax forw
    add eax, ecx    ;add ecx into eax
    shl eax, 8      ;take eax forw
    add eax, edx    ;add edx into eax
    mov MyID, eax   ;MyID = eax

exit


```

Variable	Value
eax	0x00000001
ebx	0x002b0000
ecx	0x00401000
edx	0x00401000
MyID	0x00000000

2. I put 5 into ebx



```

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TITLE HomeWork1
INCLUDE Irvine32.inc

main
    EQU start@0

.data
MyID  DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

    shl eax, 8      ;take eax forw
    add eax, ebx    ;add ebx into eax
    shl eax, 8      ;take eax forw
    add eax, ecx    ;add ecx into eax
    shl eax, 8      ;take eax forw
    add eax, edx    ;add edx into eax
    mov MyID, eax   ;MyID = eax

exit


```

Variable	Value
eax	0x00000001
ebx	0x00000005
ecx	0x00401000
edx	0x00401000
MyID	0x00000000

3. I put 3 into ecx

```

C:\Users\ivan8\Desktop\大學通識和正課\asse
Watch
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main EQU start80

.data
MyID DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

    shl eax, 8 ;take eax forward
    add eax, ebx ;add ebx into eax
    shl eax, 8 ;take eax forward
    add eax, ecx ;add ecx into eax
    shl eax, 8 ;take eax forward
    add eax, edx ;add edx into eax
    mov MyID, eax ;MyID = eax

    exit

main ENDP

```

Variable	Value
eax	0x00000001
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

4. I put 7 into edx

```

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Watch
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main EQU start80

.data
MyID DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

    shl eax, 8 ;take eax forward
    add eax, ebx ;add ebx into eax
    shl eax, 8 ;take eax forward
    add eax, ecx ;add ecx into eax
    shl eax, 8 ;take eax forward
    add eax, edx ;add edx into eax
    mov MyID, eax ;MyID = eax

    exit

main ENDP

```

Variable	Value
eax	0x00000001
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

5. Because I want to make $eax+ebx$ to be 0105, I need to shift left eax 8bytes=2byte forward two digits.

```

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Watch
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main EQU start80

.data
MyID DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

    shl eax, 8 ;take eax forward
    add eax, ebx ;add ebx into eax
    shl eax, 8 ;take eax forward
    add eax, ecx ;add ecx into eax
    shl eax, 8 ;take eax forward
    add eax, edx ;add edx into eax
    mov MyID, eax ;MyID = eax

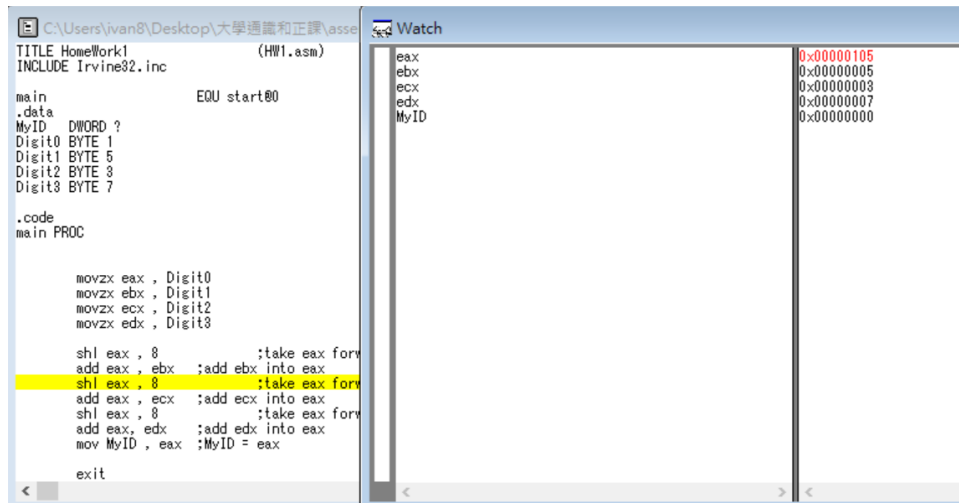
    exit

main ENDP

```

Variable	Value
eax	0x00000100
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

6. add ebx to eax.



```

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INCLUDE Irvine32.inc

main
    EQU start@0

.data
MyID  DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

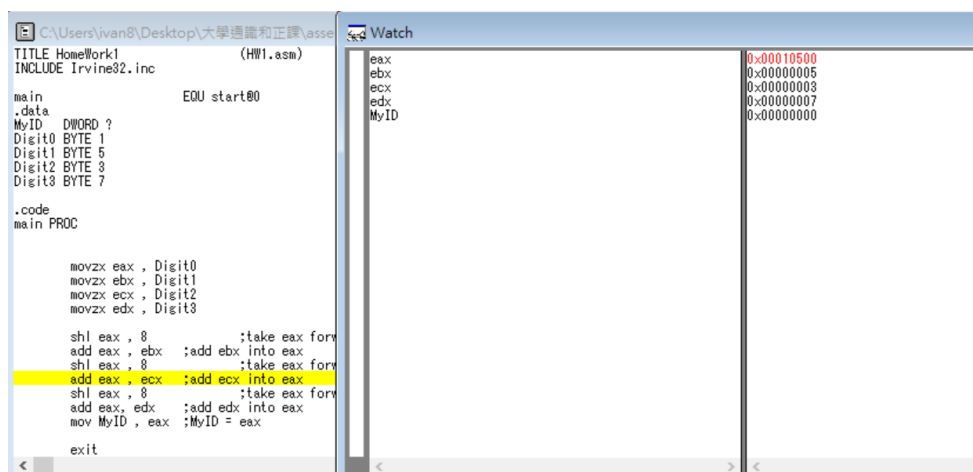
    shl eax, 8      ;take eax forward two digits
    add eax, ebx    ;add ebx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, ecx    ;add ecx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, edx    ;add edx into eax
    mov MyID, eax   ;MyID = eax

    exit
main ENDP

```

Register	Value
eax	0x00000105
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

7. Since I want to make $eax+ecx$ to be 010503, I need to shift left eax 8bytes=2byte forward two digits.



```

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Watch
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main
    EQU start@0

.data
MyID  DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

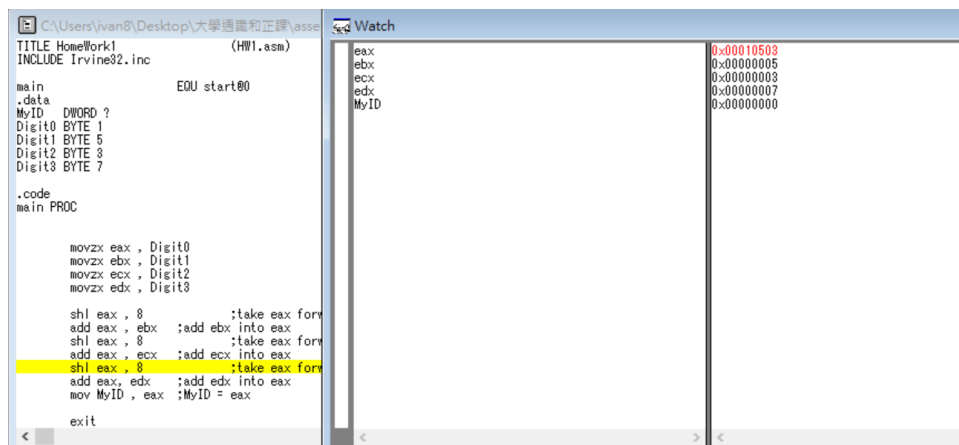
    shl eax, 8      ;take eax forward two digits
    add eax, ebx    ;add ebx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, ecx    ;add ecx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, edx    ;add edx into eax
    mov MyID, eax   ;MyID = eax

    exit
main ENDP

```

Register	Value
eax	0x00010500
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

8. add ecx to eax.



```

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Watch
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main
    EQU start@0

.data
MyID  DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

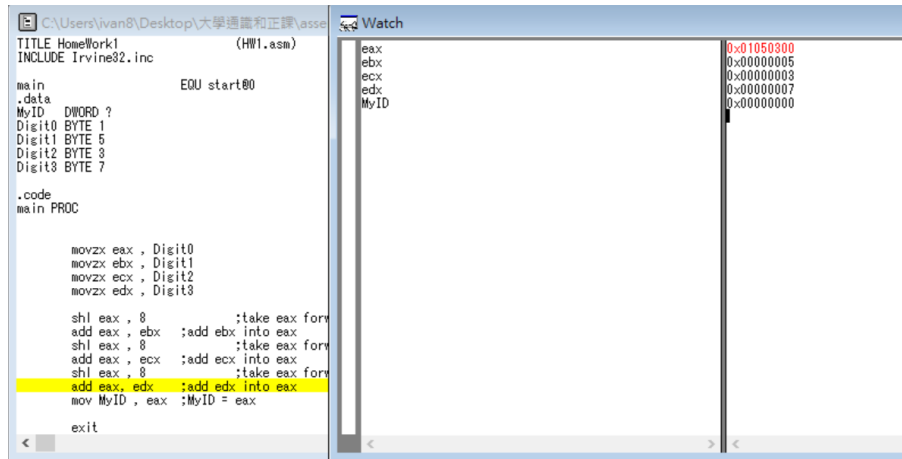
    shl eax, 8      ;take eax forward two digits
    add eax, ebx    ;add ebx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, ecx    ;add ecx into eax
    shl eax, 8      ;take eax forward two digits
    add eax, edx    ;add edx into eax
    mov MyID, eax   ;MyID = eax

    exit
main ENDP

```

Register	Value
eax	0x00010503
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

9. For I want to make $eax+edx$ to be 01050307, I need to shift left eax 8bytes=2byte forward two digits.



```
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main EQU start@0

.data
MyID DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

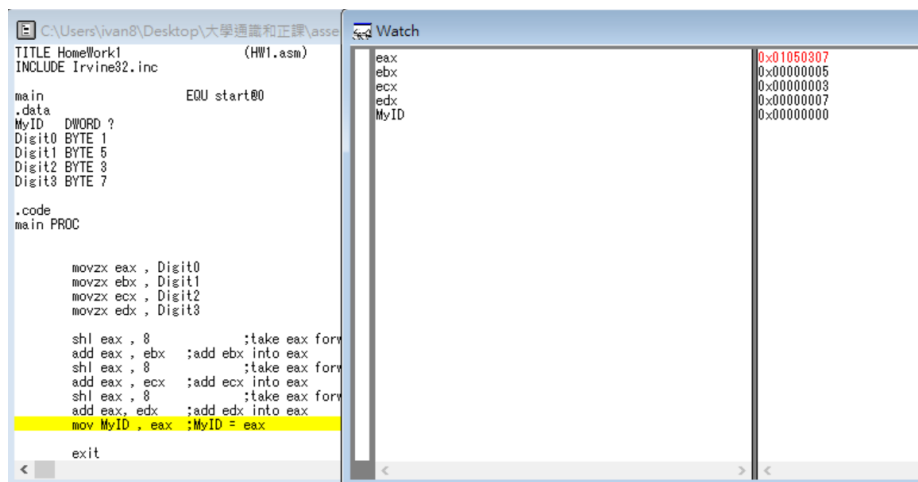
    shl eax, 8 ;take eax forward two digits
    add eax, ebx ;add ebx into eax
    shl eax, 8 ;take eax forward two digits
    add eax, ecx ;add ecx into eax
    shl eax, 8 ;take eax forward two digits
    add eax, edx ;add edx into eax
    mov MyID, eax ;MyID = eax

    exit

main ENDP
```

Register/Variable	Value
eax	0x01050300
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

10. add edx to eax .



```
TITLE Homework1 (HW1.asm)
INCLUDE Irvine32.inc

main EQU start@0

.data
MyID DWORD ?
Digit0 BYTE 1
Digit1 BYTE 5
Digit2 BYTE 3
Digit3 BYTE 7

.code
main PROC

    movzx eax, Digit0
    movzx ebx, Digit1
    movzx ecx, Digit2
    movzx edx, Digit3

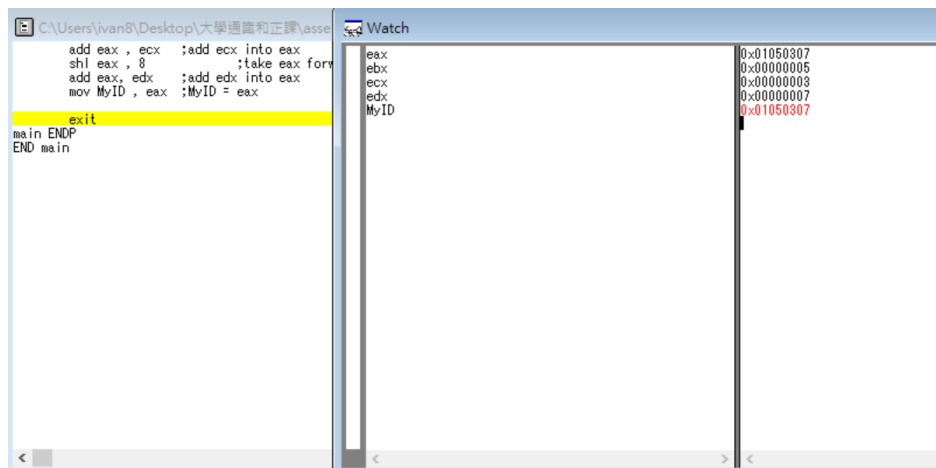
    shl eax, 8 ;take eax forward two digits
    add eax, ebx ;add ebx into eax
    shl eax, 8 ;take eax forward two digits
    add eax, ecx ;add ecx into eax
    shl eax, 8 ;take eax forward two digits
    add eax, edx ;add edx into eax
    mov MyID, eax ;MyID = eax

    exit

main ENDP
```

Register/Variable	Value
eax	0x01050307
ebx	0x00000005
ecx	0x00000003
edx	0x00000007
MyID	0x00000000

11. The final procedure is let $MyID$ be eax , so that $MyID$ is answer 01050307.



心得:

This is assembly class's first homework! Because I can't finish the lab exercise in the class every time, I just can only finish at home. This week is also the same and I need to do the homework, so I take a lot of time to accomplish the lab's exercise and homework. Although I take a lot of time in assembly, I think I will be better when this semester finish.