

Report: HW1#ARITHMETIC

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- Code Flows :

[illegible]

(1) Set register `eax` to 0

[illegible]

(2) Give Digit0 to register al

[illegible]

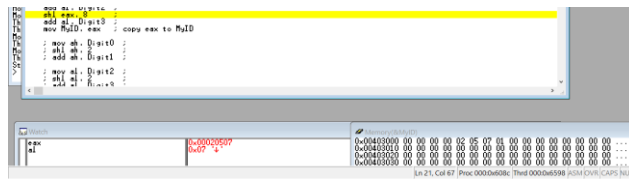
(3) Shift register eax left 8 bits

[illegible]

(4) Give Digit1 to register al (is equivalent to `eax + Digit1`)

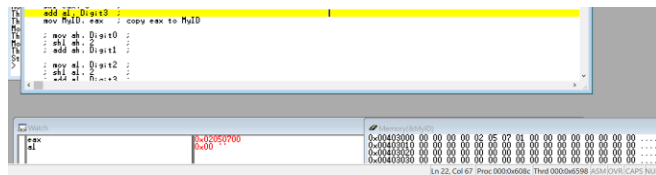
[illegible]

(5) Shift register eax left 8 bits



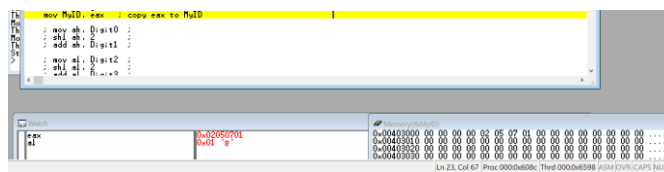
The screenshot shows a debugger window with assembly code. The code includes instructions for shifting the register eax left by 8 bits. The register window shows the value of eax as 0x00000000. The memory window shows the value of eax as 0x00000000.

(6) Give Digit2 to al



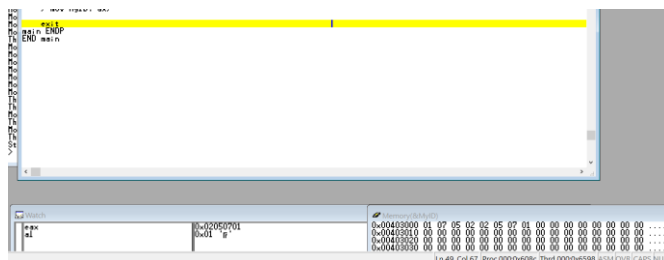
The screenshot shows a debugger window with assembly code. The code includes instructions for moving the value of Digit2 to the register al. The register window shows the value of al as 0x00000000. The memory window shows the value of al as 0x00000000.

(7) Shift register eax left 8 bits



The screenshot shows a debugger window with assembly code. The code includes instructions for shifting the register eax left by 8 bits. The register window shows the value of eax as 0x00000000. The memory window shows the value of eax as 0x00000000.

(8) Give Digit3 to register al



The screenshot shows a debugger window with assembly code. The code includes instructions for moving the value of Digit3 to the register al. The register window shows the value of al as 0x00000000. The memory window shows the value of al as 0x00000000.

(9) Give register eax to MyID

- Finished $\sim \sim$:

```

C:\Users\abcd1\Desktop\Coding\ASM\hw1\hw1.asm
TITLE HW1 of 108502571 (hw1.asm)
INCLUDE Irvine32.inc

.data
MyID DWORD ?
Digit0 BYTE 2
Digit1 BYTE 3
Digit2 BYTE 3
Digit3 BYTE 1

.code
main EQU start0
main PROC
    mov eax, 0 ; eax(16 bits), give all the number to 0
    mov al, Digit0 ; eax the last half is ax, ax = ah + al
    ; BYTE: 4 bits, DWORD: 16 bits
    shl eax, 8 ; 16 bits shift to left for 2
    add al, Digit1 ; add the new number
    shl eax, 8
    add al, Digit2
    shl eax, 8
    add al, Digit3
    mov MyID, eax ; copy eax to MyID
main ENDP

```

- Review :

This project is kind of difficulty and take me many efforts to understand it. Though this, it is a chance to learn more about assembly. I know more about the size of type and the way to let a register move to all 0s.