

COAL LAB 02 - 6 Feb 2025

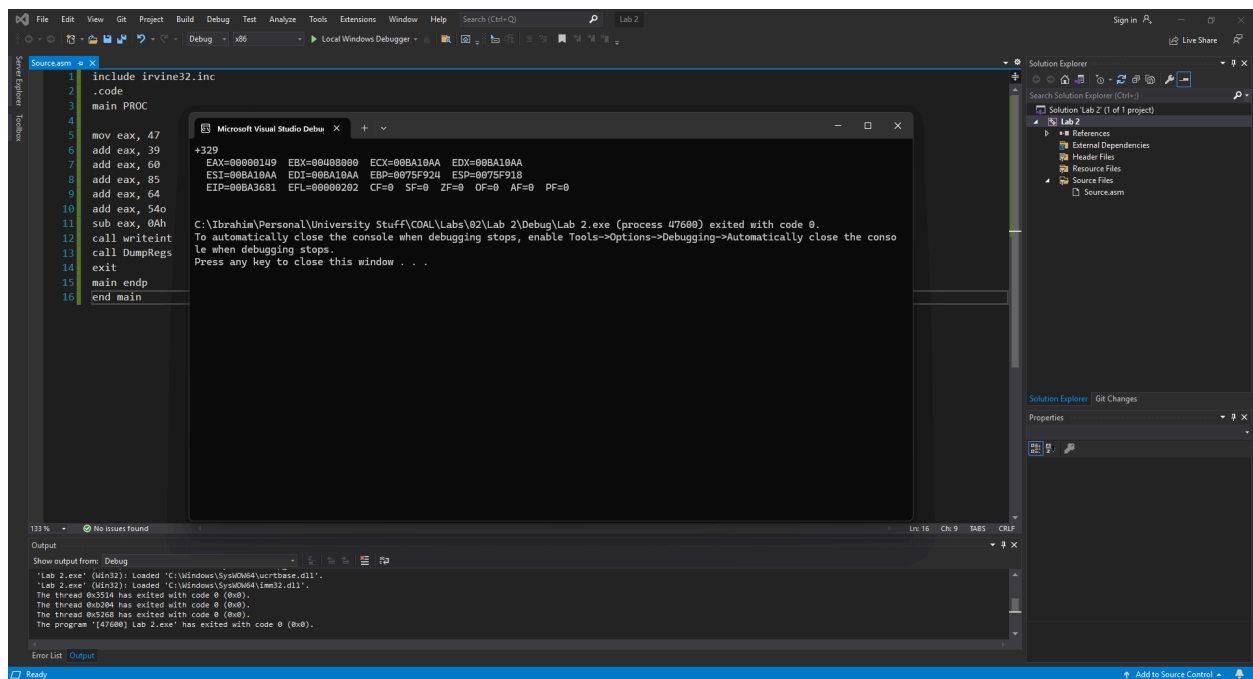
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Task 1a:

```
include irvine32.inc
.code
main PROC

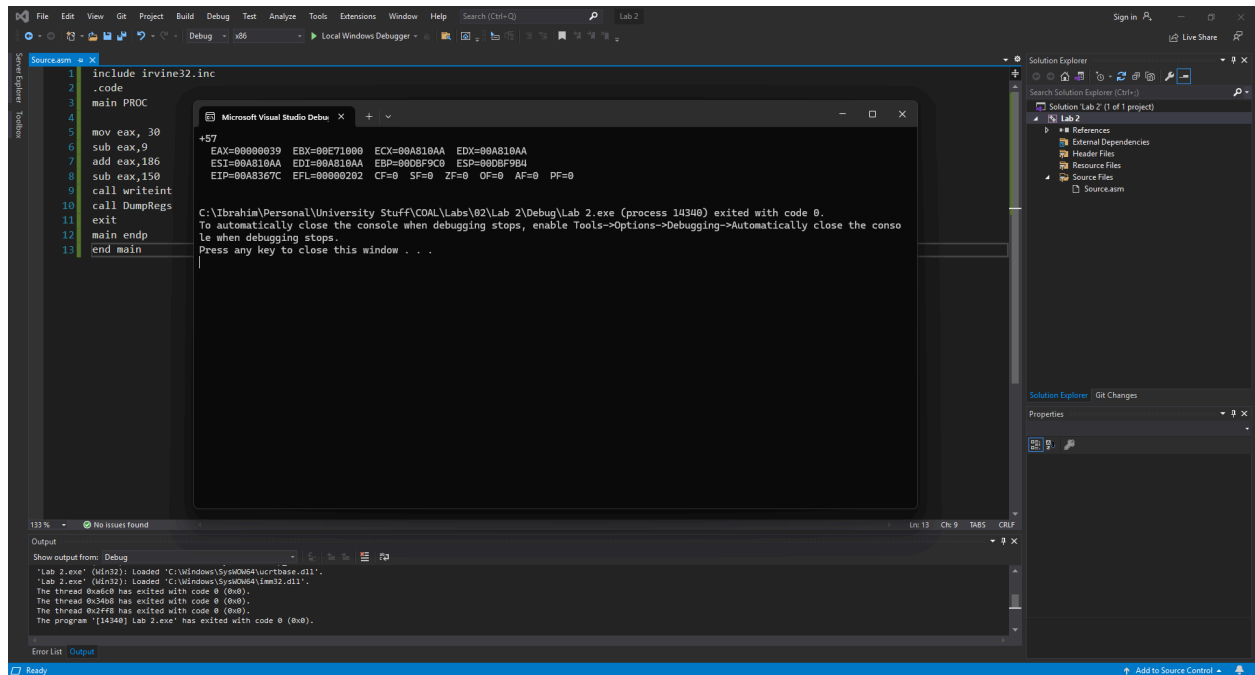
mov eax, 47
add eax, 39
add eax, 60
add eax, 85
add eax, 64
add eax, 540
sub eax, 0Ah
call writeint
call DumpRegs
exit
main endp
end main
```



Task 1b:

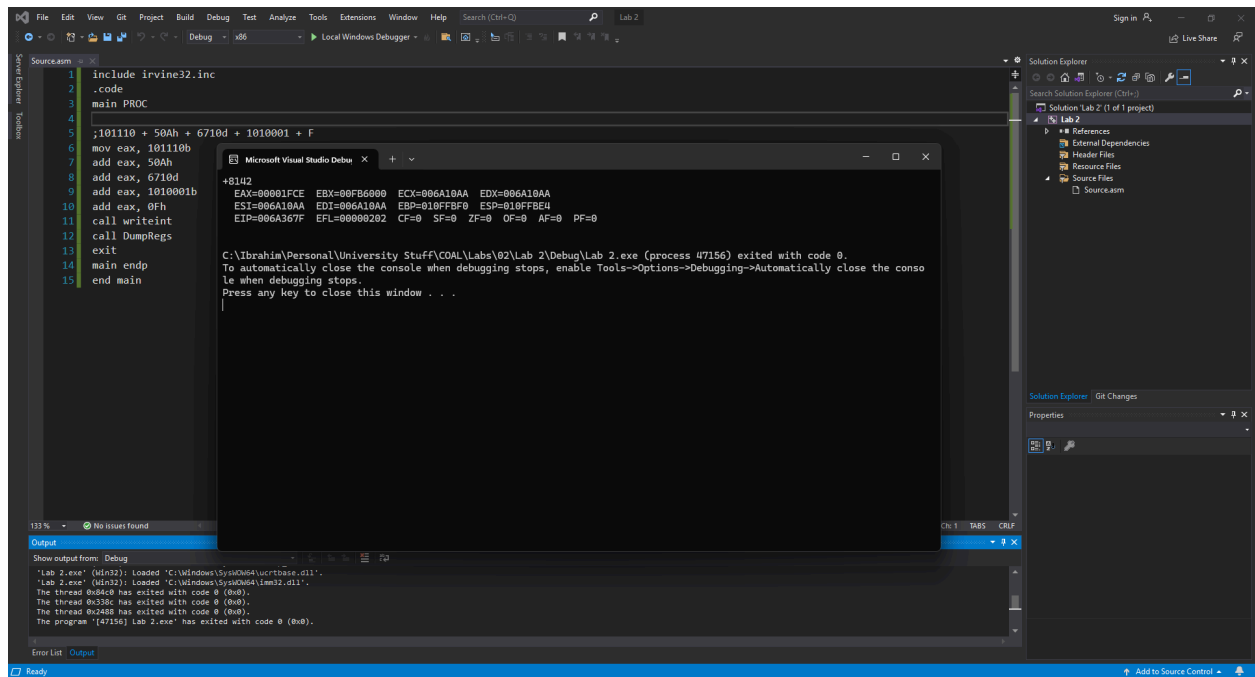
```
include irvine32.inc
.code
main PROC

mov eax, 30
sub eax, 9
add eax, 186
sub eax, 150
call writeint
call DumpRegs
exit
main endp
end main
```



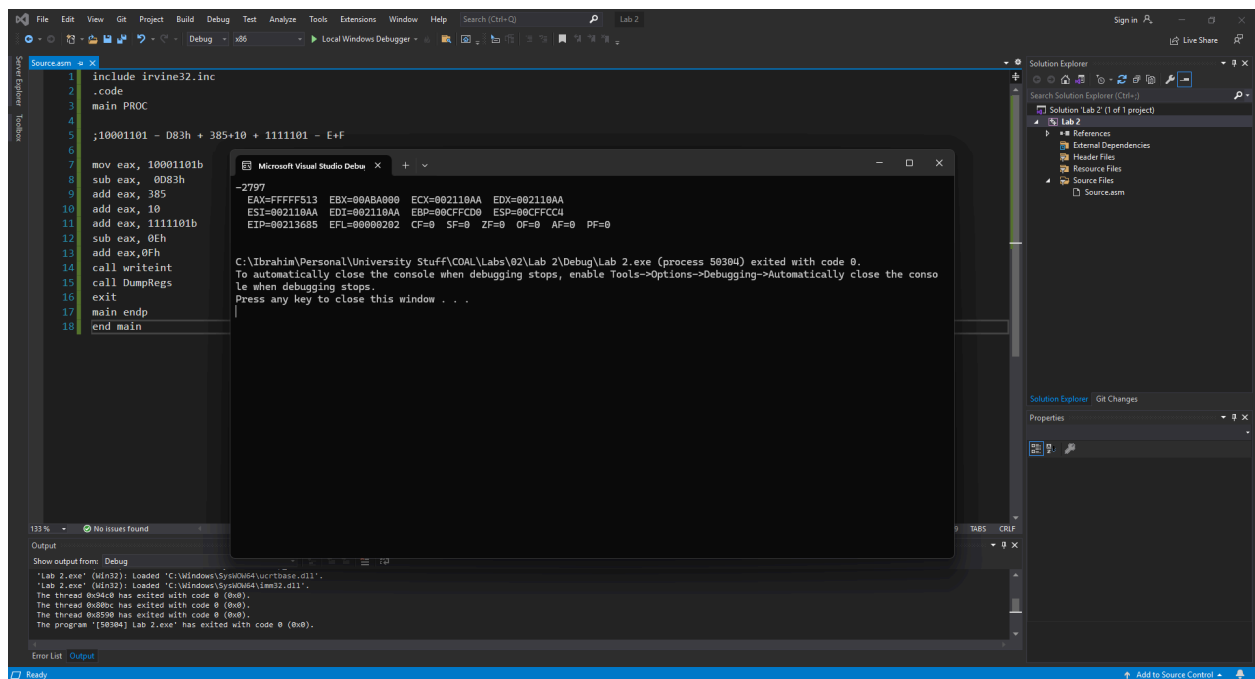
Task 1c:

```
include irvine32.inc
.code
main PROC
;101110 + 50Ah + 6710d + 1010001 + F
mov eax, 101110b
add eax, 50Ah
add eax, 6710d
add eax, 1010001b
add eax, 0Fh
call writeint
call DumpRegs
exit
main endp
end main
```



Task 1d:

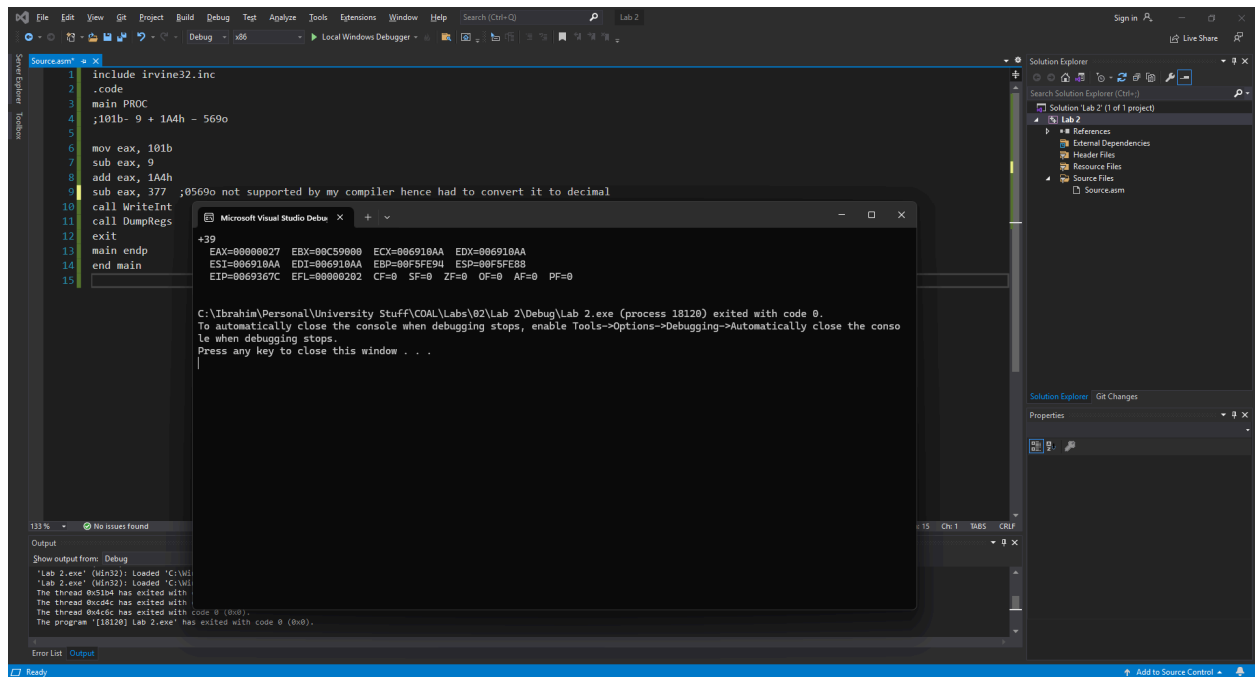
```
include irvine32.inc
.code
main PROC
;10001101 - D83h + 385+10 + 1111101 - E+F
mov eax, 10001101b
sub eax, 0D83h
add eax, 385
add eax, 10
add eax, 1111101b
sub eax, 0Eh
add eax,0Fh
call writeint
call DumpRegs
exit
main endp
end main
```



Task 1e:

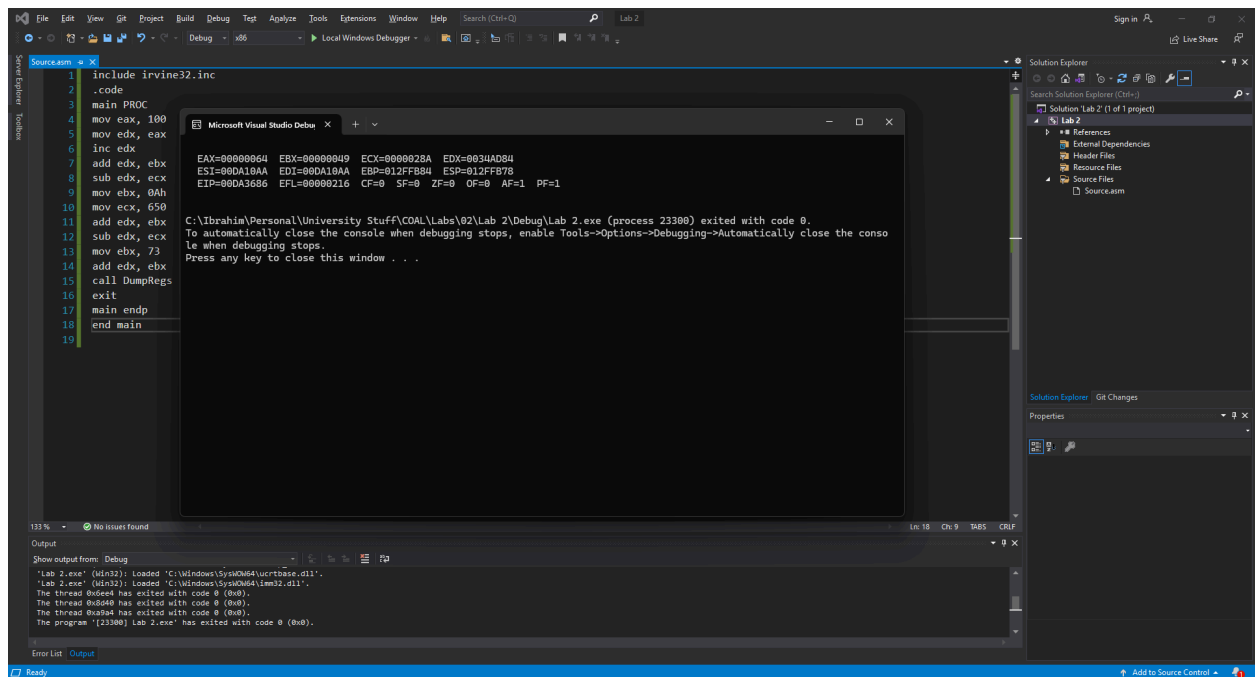
```
include irvine32.inc
.code
main PROC
;101b- 9 + 1A4h - 569o

mov eax, 101b
sub eax, 9
add eax, 1A4h
sub eax, 377 ;0569o not supported by my compiler hence had to convert it to decimal
call WriteInt
call DumpRegs
exit
main endp
end main
```



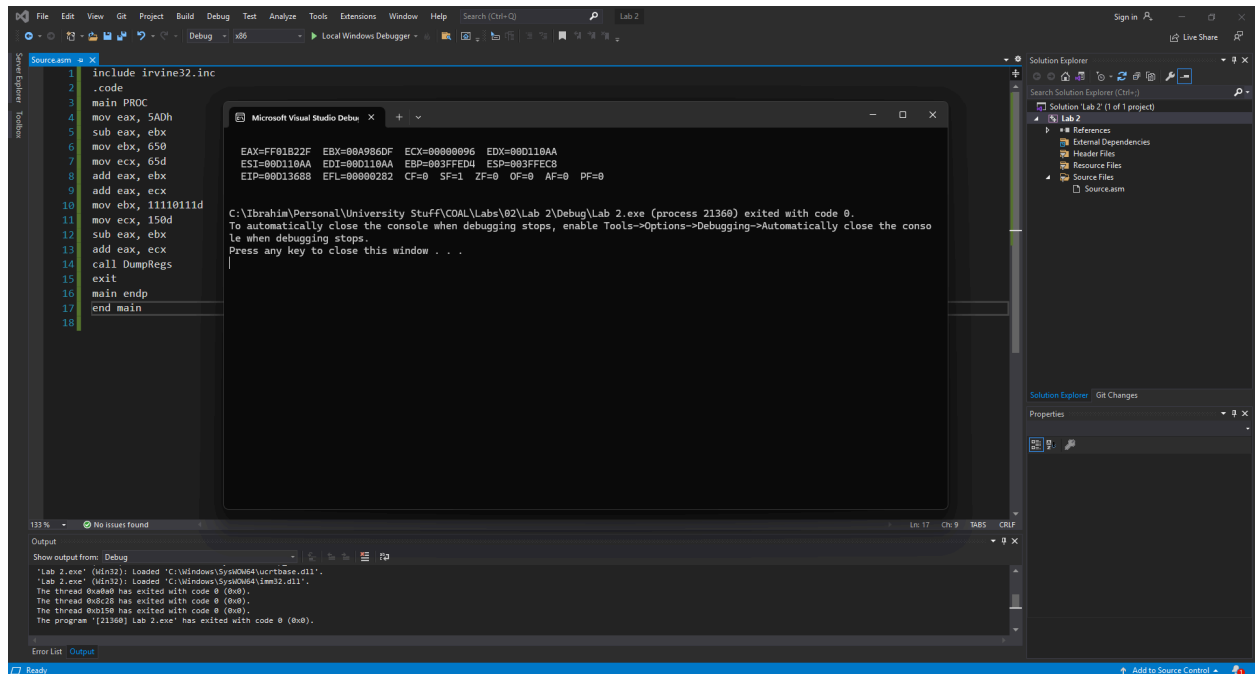
Task 2a:

```
include irvine32.inc
.code
main PROC
mov eax, 100
mov edx, eax
inc edx
add edx, ebx
sub edx, ecx
mov ebx, 0Ah
mov ecx, 650
add edx, ebx
sub edx, ecx
mov ebx, 73
add edx, ebx
call DumpRegs
exit
main endp
end main
```



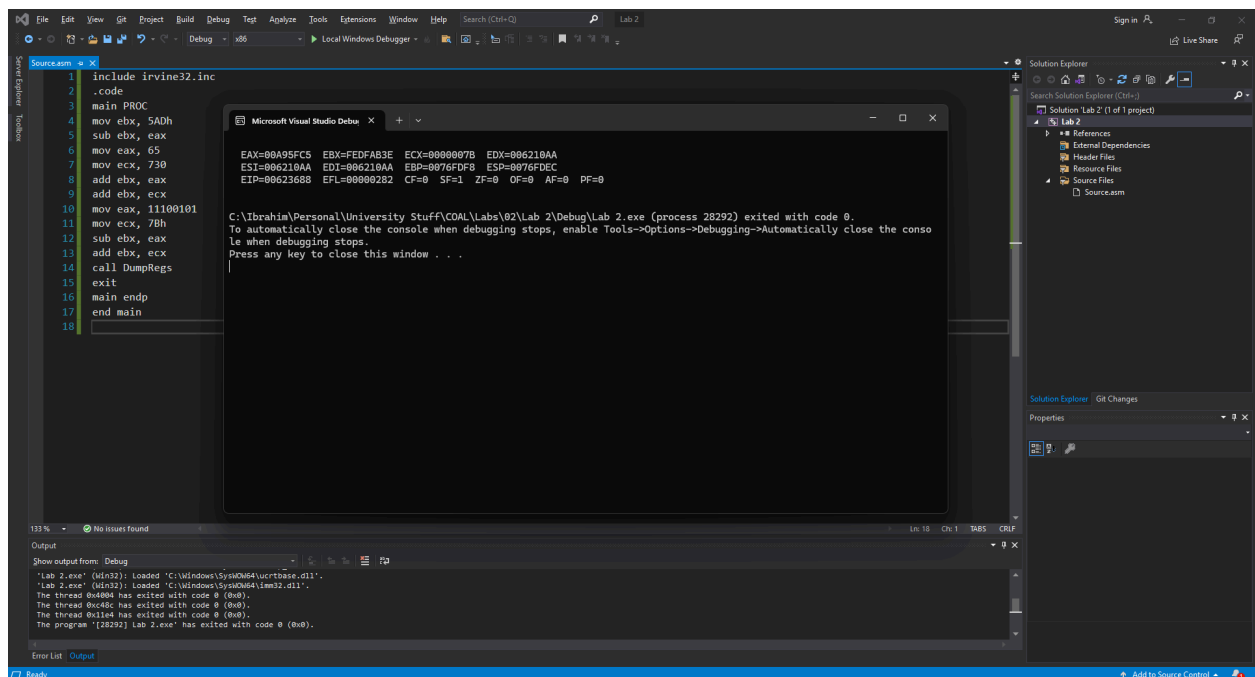
Task 2b:

```
include irvine32.inc
.code
main PROC
mov eax, 100
mov edx, eax
inc edx
add edx, ebx
sub edx, ecx
mov ebx, 0Ah
mov ecx, 650
add edx, ebx
sub edx, ecx
mov ebx, 73
add edx, ebx
call DumpRegs
exit
main endp
end main
```



Task 2c:

```
include irvine32.inc
.code
main PROC
mov ebx, 5ADh
sub ebx, eax
mov eax, 65
mov ecx, 730
add ebx, eax
add ebx, ecx
mov eax, 11100101
mov ecx, 7Bh
sub ebx, eax
add ebx, ecx
call DumpRegs
exit
main endp
end main
```



Task 2d:

```
include irvine32.inc
.code
main PROC
mov ecx, 110010101101b
mov eax, 45h
add eax, ecx
mov edx, 730
sub eax, edx
mov ebx, 50h
add eax, ebx
sub eax, ecx
inc eax
call DumpRegs
invoke ExitProcess, 0
main endp
end main
```

