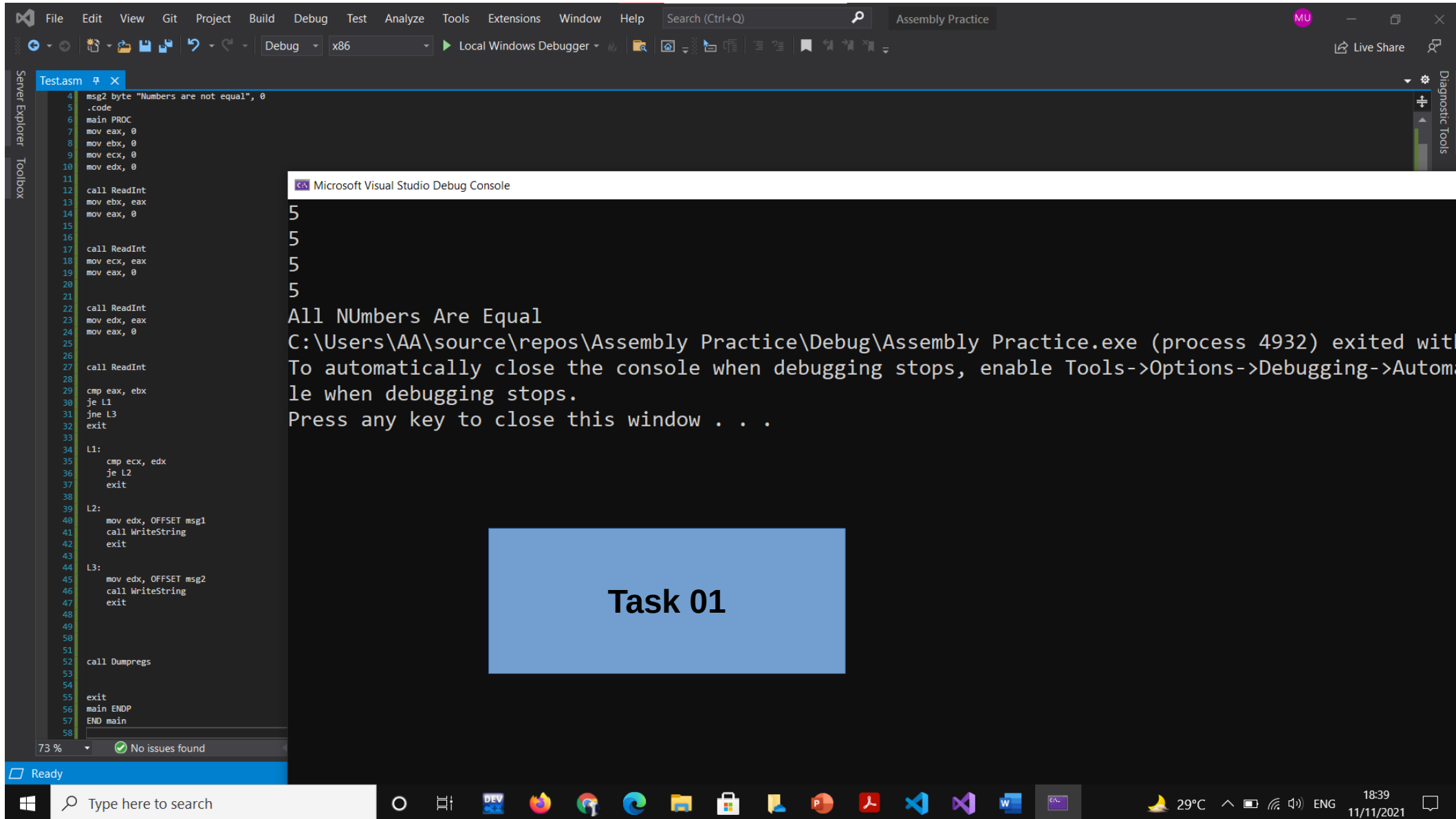


Name: Kashif Ali
Kashif Ali: 20P-0648
Section: 3D



```
4 msg2 byte "Numbers are not equal", 0
5 .code
6 main PROC
7 mov eax, 0
8 mov ebx, 0
9 mov ecx, 0
10 mov edx, 0
```

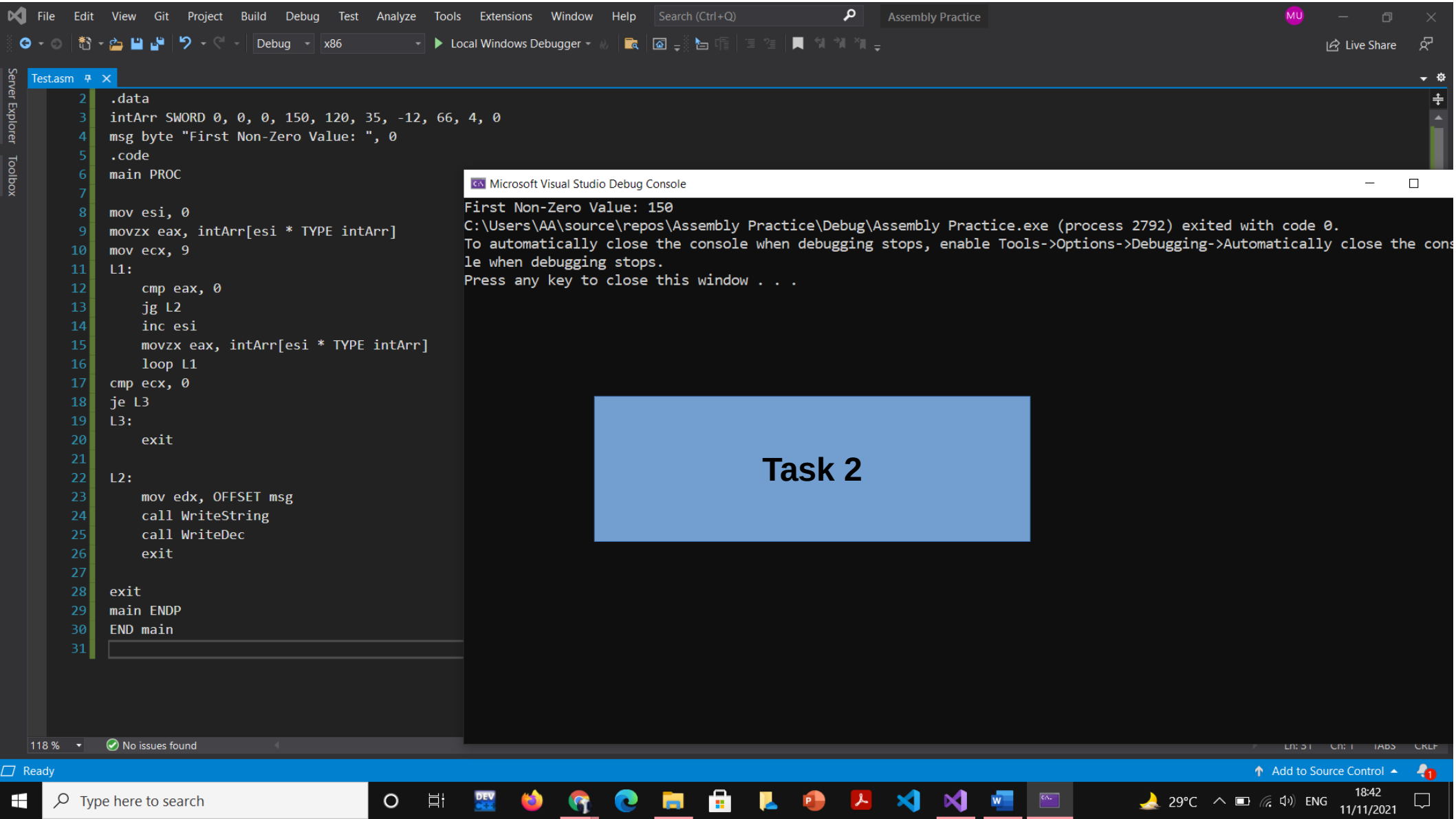
```
11
12 call ReadInt
13 mov ebx, eax
14 mov eax, 0
15
16
17 call ReadInt
18 mov ecx, eax
19 mov eax, 0
20
21
22 call ReadInt
23 mov edx, eax
24 mov eax, 0
25
26
27 call ReadInt
28
29 cmp eax, ebx
30 je L1
31 jne L3
32 exit
```

```
33
34 L1:
35     cmp ecx, edx
36     je L2
37     exit
38
39 L2:
40     mov edx, OFFSET msg1
41     call WriteString
42     exit
43
44 L3:
45     mov edx, OFFSET msg2
46     call WriteString
47     exit
48
49
50
51 call Dumpregs
52
53
54
55 exit
56 main ENDP
57 END main
58
```

Microsoft Visual Studio Debug Console

```
5
5
5
5
All NuMbers Are Equal
C:\Users\AA\source\repos\Assembly Practice\Debug\Assembly Practice.exe (process 4932) exited with
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Autom
le when debugging stops.
Press any key to close this window . . .
```

Task 01



Test.asm

```
2 .data
3 intArr WORD 0, 0, 0, 150, 120, 35, -12, 66, 4, 0
4 msg byte "First Non-Zero Value: ", 0
5 .code
6 main PROC
7
8 mov esi, 0
9 movzx eax, intArr[esi * TYPE intArr]
10 mov ecx, 9
11 L1:
12     cmp eax, 0
13     jg L2
14     inc esi
15     movzx eax, intArr[esi * TYPE intArr]
16     loop L1
17 cmp ecx, 0
18 je L3
19 L3:
20     exit
21
22 L2:
23     mov edx, OFFSET msg
24     call WriteString
25     call WriteDec
26     exit
27
28 exit
29 main ENDP
30 END main
31
```

Microsoft Visual Studio Debug Console

First Non-Zero Value: 150
C:\Users\AA\source\repos\Assembly Practice\Debug\Assembly Practice.exe (process 2792) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

Task 2

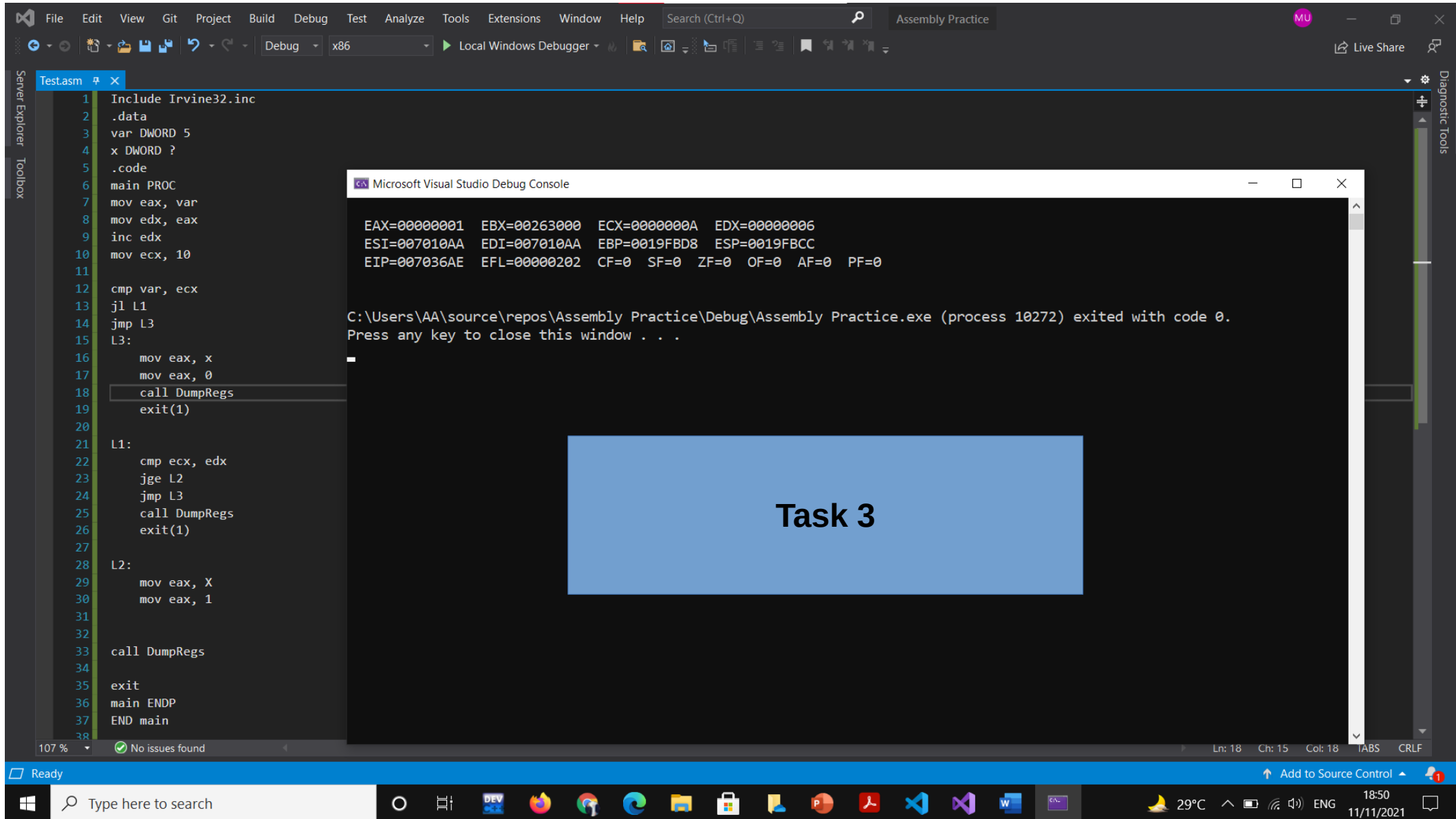
118 % No issues found

Ready

Add to Source Control

Type here to search

29°C 18:42 11/11/2021



Test.asm

```
1 Include Irvine32.inc
2 .data
3 var DWORD 5
4 x DWORD ?
5 .code
6 main PROC
7 mov eax, var
8 mov edx, eax
9 inc edx
10 mov ecx, 10
11
12 cmp var, ecx
13 jl L1
14 jmp L3
15 L3:
16     mov eax, x
17     mov eax, 0
18     call DumpRegs
19     exit(1)
20
21 L1:
22     cmp ecx, edx
23     jge L2
24     jmp L3
25     call DumpRegs
26     exit(1)
27
28 L2:
29     mov eax, x
30     mov eax, 1
31
32
33 call DumpRegs
34
35 exit
36 main ENDP
37 END main
38
```

Microsoft Visual Studio Debug Console

```
EAX=00000001 EBX=00263000 ECX=0000000A EDX=00000006
ESI=007010AA EDI=007010AA EBP=0019FBD8 ESP=0019FBCC
EIP=007036AE EFL=00000202 CF=0 SF=0 ZF=0 OF=0 AF=0 PF=0
```

C:\Users\AA\source\repos\Assembly Practice\Debug\Assembly Practice.exe (process 10272) exited with code 0.
Press any key to close this window . . .

Task 3

107 % No issues found

Ln: 18 Ch: 15 Col: 18 TABS CRLF

Ready

Add to Source Control

Type here to search

29°C 18:50 11/11/2021

FileEditViewGitProjectBuildDebugTestAnalyzeToolsExtensionsWindowHelpSearch (Ctrl+Q)Assembly Practice

Debugx86Local Windows Debugger

Test.asm* x

```
1 Include Irvine32.inc
2 .data
3
4 arr WORD 10, 4, 7, 14, 299, 156, 3, 19, 29, 300, 20
5 num WORD ?
6 msg byte "Enter a number: ", 0
7 msg1 byte "Number Found.", 0
8 msg2 byte "Number Not Found.", 0
9 .code
10 main PROC
11 mov edx, OFFSET msg
12 call WriteString
13 mov edx, 0
14
15 mov ax, 0
16 call ReadDec
17 mov num, ax
18
19 mov ecx, LENGTHOF arr
20 mov esi, 0
21 L1:
22 mov ax, arr[esi * TYPE arr]
23 cmp ax, num
24 je L2
25 inc esi
26 loop L1
27
28 cmp ecx, 0
29 je L3
30
31 L3:
32 mov edx, OFFSET msg2
33 call WriteString
34 call CRLF
35 exit
36
37 L2:
38 mov edx, OFFSET msg1
39 call WriteString
40 call CRLF
41
42
43 exit
44 main ENDP
45 END main
46
```

88 % No issues found

Ready

Microsoft Visual Studio Debug Console

Enter a number: 14
Number Found.

C:\Users\AA\source\repos\Assembly Practice\Debug\Assembly Practice.exe (process 12112) exited with code 0.
Press any key to close this window . . .

Task 5

Windows taskbar with search bar and various application icons.

```

1 Include Irvine32.inc
2 .data
3 msg byte "Enter a number for getting Weekday: ", 0
4 msg1 byte "Invalid number.", 0
5 day1 byte 'Monday', 0
6 day2 byte 'Tuesday', 0
7 day3 byte 'Wednesday', 0
8 day4 byte 'Thursday', 0
9 day5 byte 'Friday', 0
10 day6 byte 'Saturday', 0
11 day7 byte 'Sunday', 0
12
13
14 .code
15 main PROC
16 mov edx, OFFSET msg
17 call WriteString
18 mov edx, 0
19
20 mov eax, 0
21 call ReadDec
22
23 mov ebx, eax
24 mov eax, 0
25 mov esi, 0
26
27
28
29
30 cmp ebx, 1
31 je L1
32
33 cmp ebx, 2
34 je L2
35 cmp ebx, 3
36 je L3
37 cmp ebx, 4
38 je L4
39 cmp ebx, 5
40 je L5
41 cmp ebx, 6
42 je L6
43 cmp ebx, 7
44 je L7
45 jne L8
46
47
48
49 L1:
50     mov edx, OFFSET day1
51     call WriteString
52
53 L2:
54     mov edx, OFFSET day2
55     call WriteString

```

Task 7 code part a

```

1 Include Irvine32.inc
2 .data
3 msg byte "Enter a number for getting Weekday: ", 0
4 msg1 byte "Invalid number.", 0
5 day1 byte 'Monday', 0
6 day2 byte 'Tuesday', 0
7 day3 byte 'Wednesday', 0
8 day4 byte 'Thursday', 0
9 day5 byte 'Friday', 0
10 day6 byte 'Saturday', 0
11 day7 byte 'Sunday', 0
12
13
14 .code
15 main PROC
16 mov edx, OFFSET msg
17 call WriteString
18 mov edx, 0
19
20 mov eax, 0
21 call ReadDec
22
23 mov ebx, eax
24 mov eax, 0
25 mov esi, 0
26
27
28
29
30 cmp ebx, 1
31 je L1
32
33 cmp ebx, 2
34 je L2
35 cmp ebx, 3
36 je L3
37 cmp ebx, 4
38 je L4
39 cmp ebx, 5
40 je L5
41 cmp ebx, 6
42 je L6
43 cmp ebx, 7
44 je L7
45 jne L8
46
47
48
49 L1:
50     mov edx, OFFSET day1
51     call WriteString
52
53 L2:
54     mov edx, OFFSET day2
55     call WriteString

```

Task 7 code part a

```
52
53 L2:
54     mov edx, OFFSET day2
55     call WriteString
56     exit
57
58 L3:
59     mov edx, OFFSET day3
60     call WriteString
61     exit
62
63 L4:
64     mov edx, OFFSET day4
65     call WriteString
66     exit
67
68 L5:
69     mov edx, OFFSET day5
70     call WriteString
71     exit
72
73 L6:
74     mov edx, OFFSET day6
75     call WriteString
76     exit
77
78 L7:
79     mov edx, OFFSET day7
80     call WriteString
81     exit
82
83 L8:
84     mov edx, OFFSET msg1
85     call WriteString
86     exit
87
88 exit
89 main ENDP
90 END main
```

Task 7 code part b

mov ed
call W
mov ed
call W
exit

mov ed
call W
exit

mov ed
call W
exit

mov ed
call W
exit

mov ed
call W
exit

No iss

om: Bu

Microsoft Visual Studio Debug Console

Enter a number for getting Weekday: 5
Friday
C:\Users\AA\source\repos\Assembly Practice\Debug\Assembly Practice.exe (process 5696) exited with code 0.
Press any key to close this window . . .

The End

...