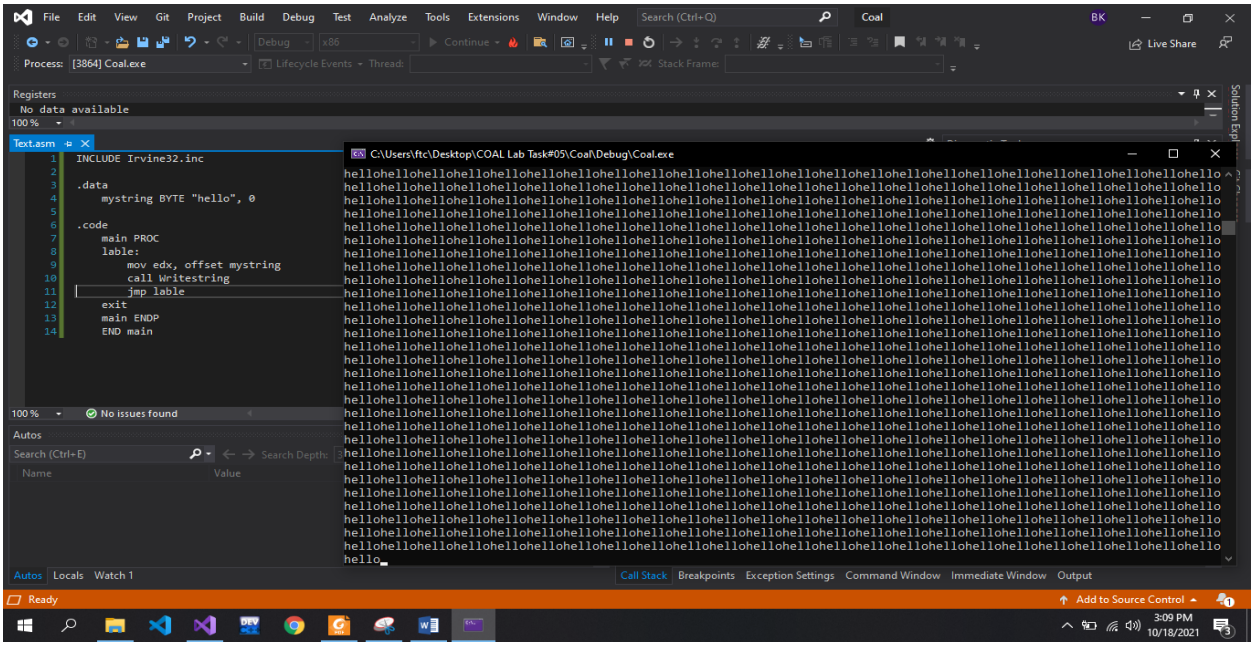
COAL LAB TASK # 05

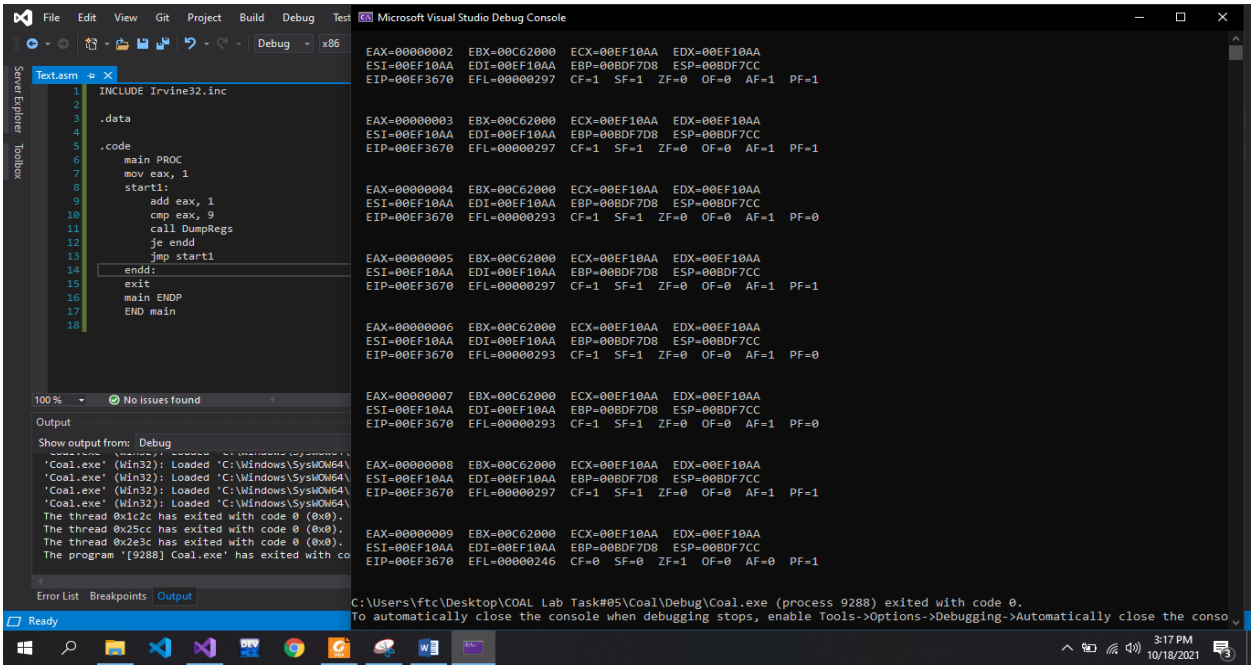
Mohammad Basil Ali Khan

20K-0477

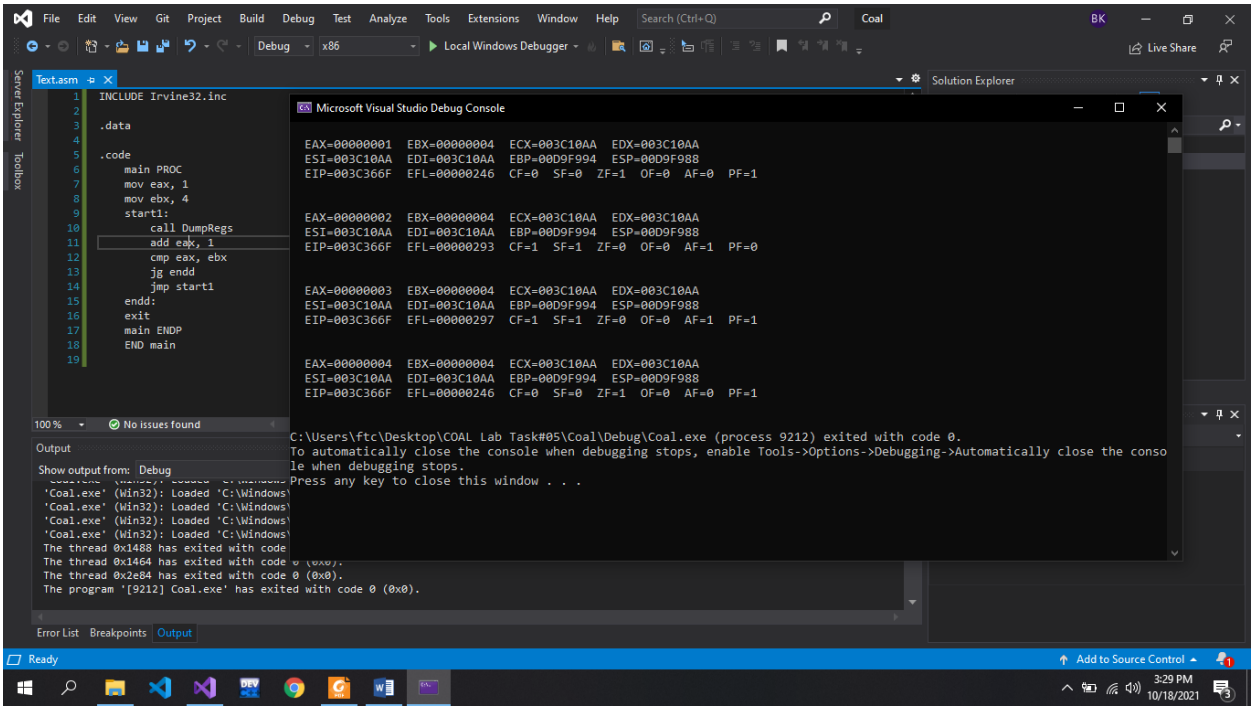
Example#01:



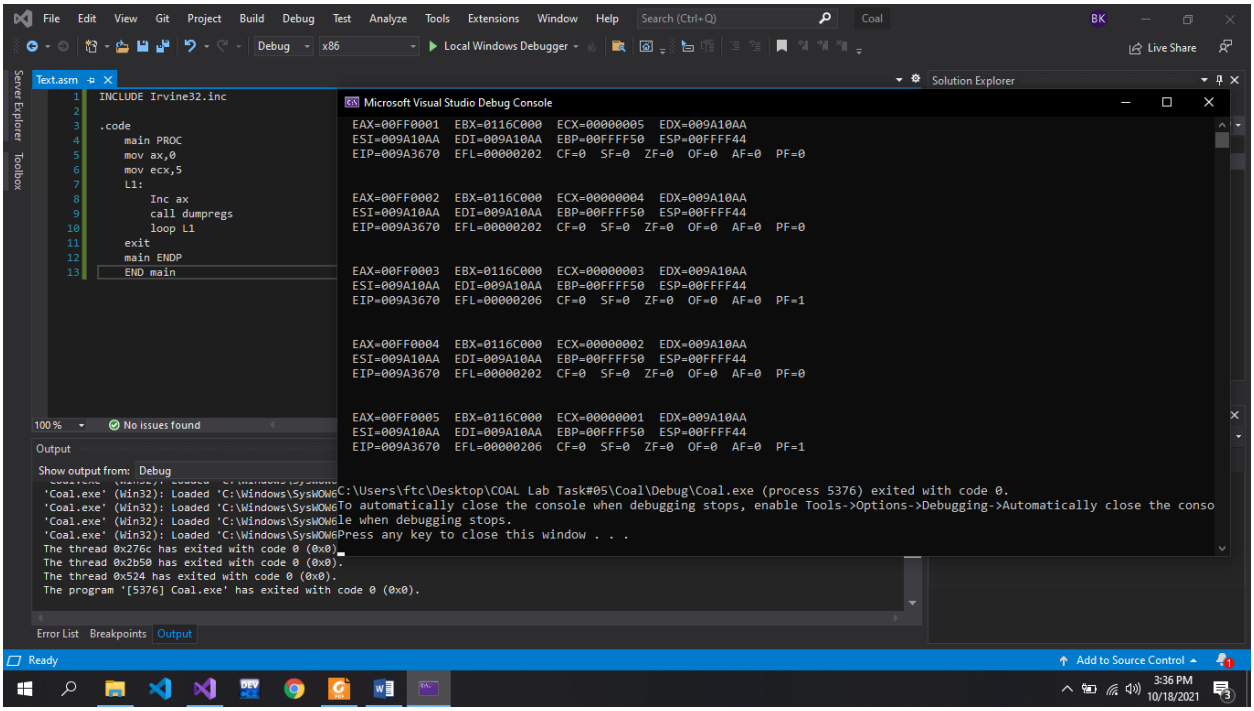
Example#02:



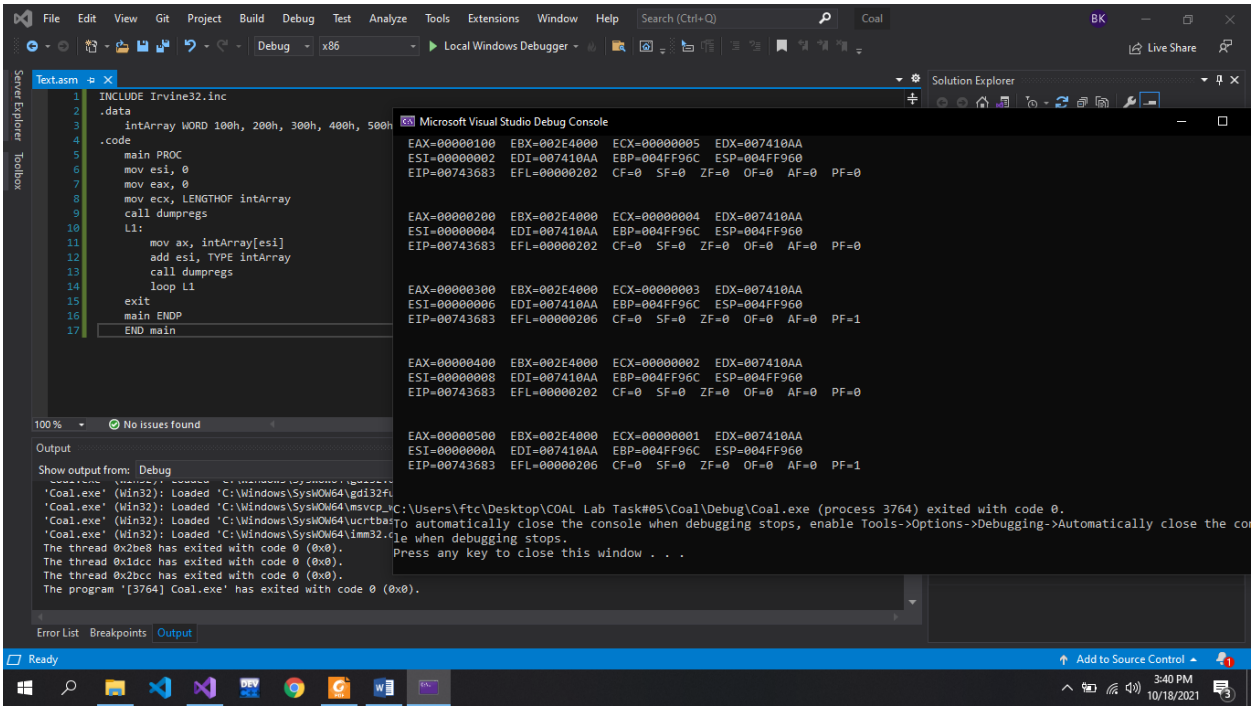
Task#01:



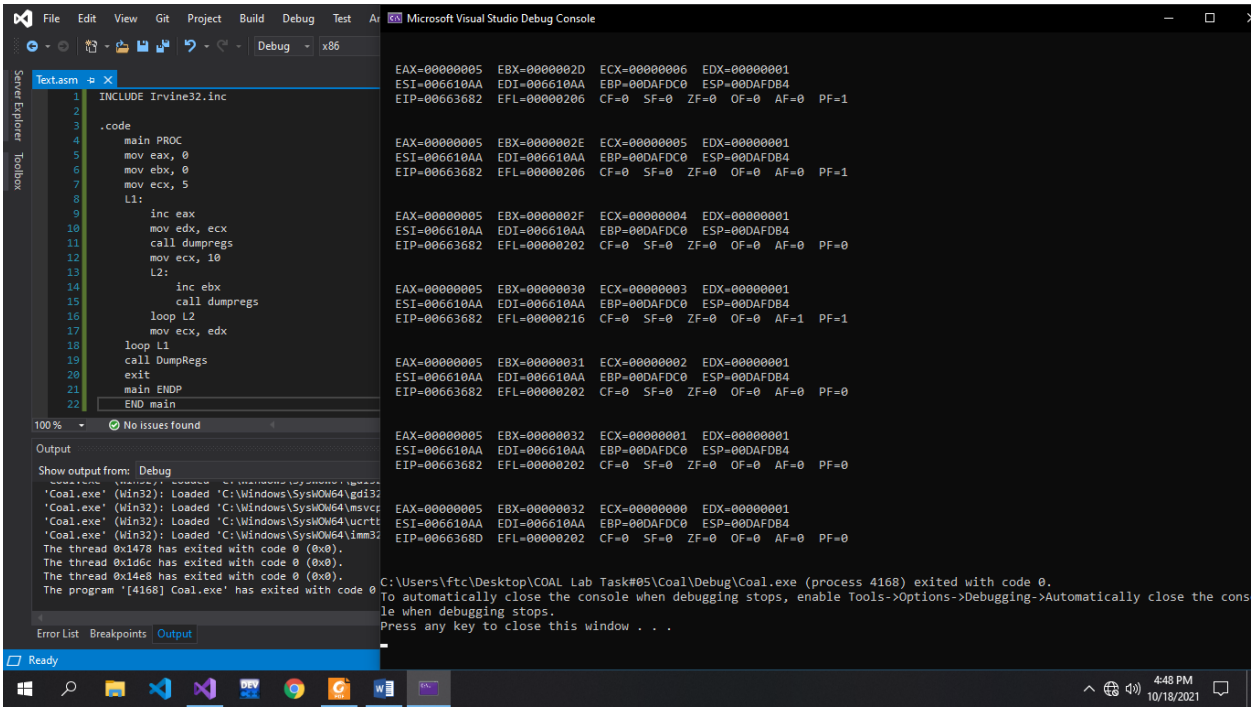
Example#01:



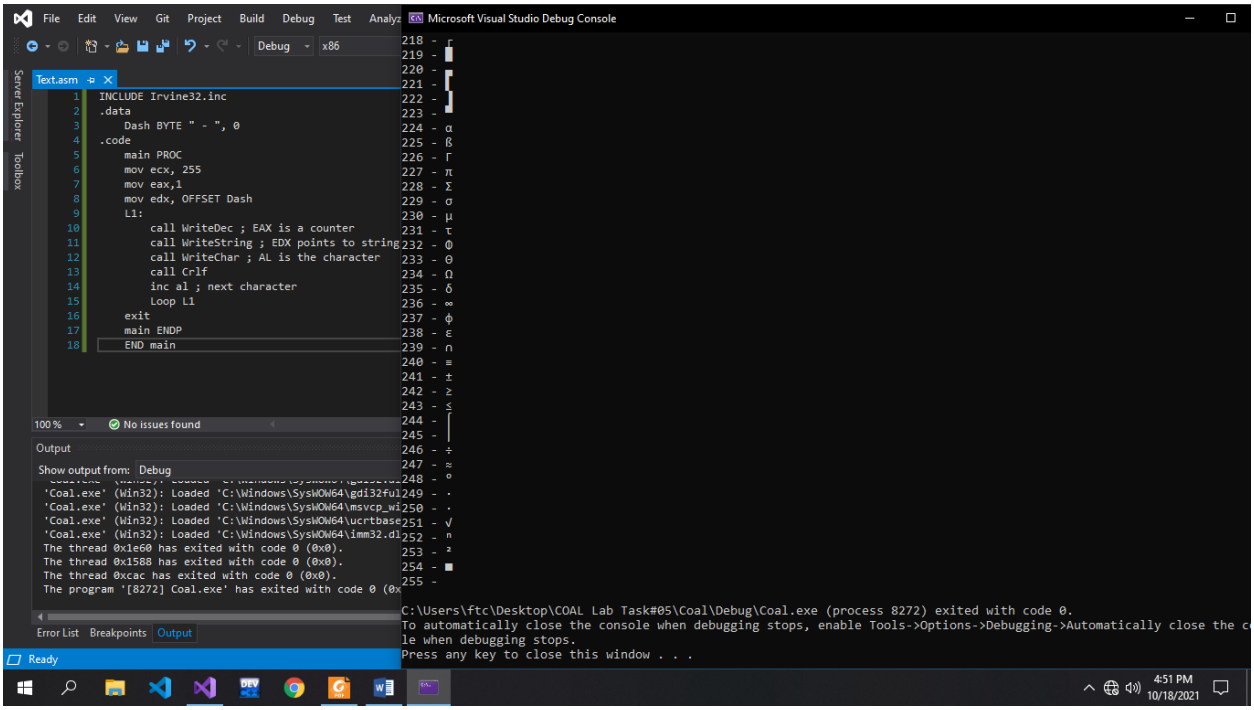
Example#02:



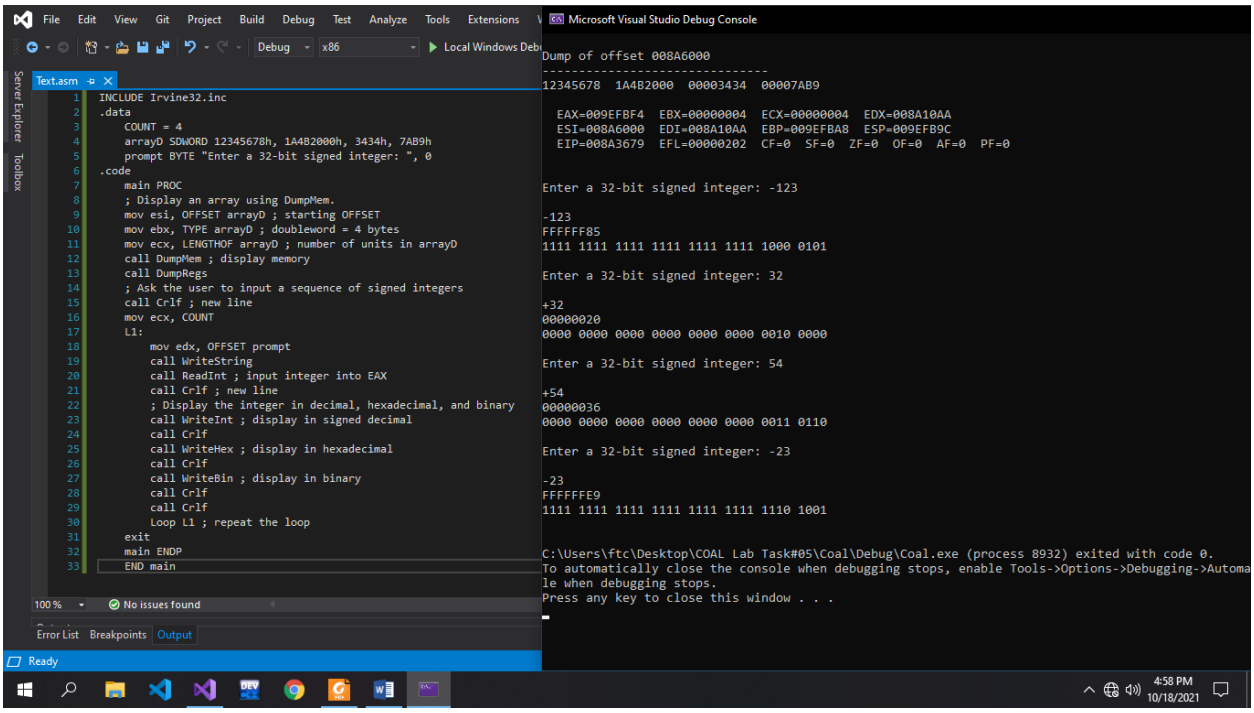
Example#03:



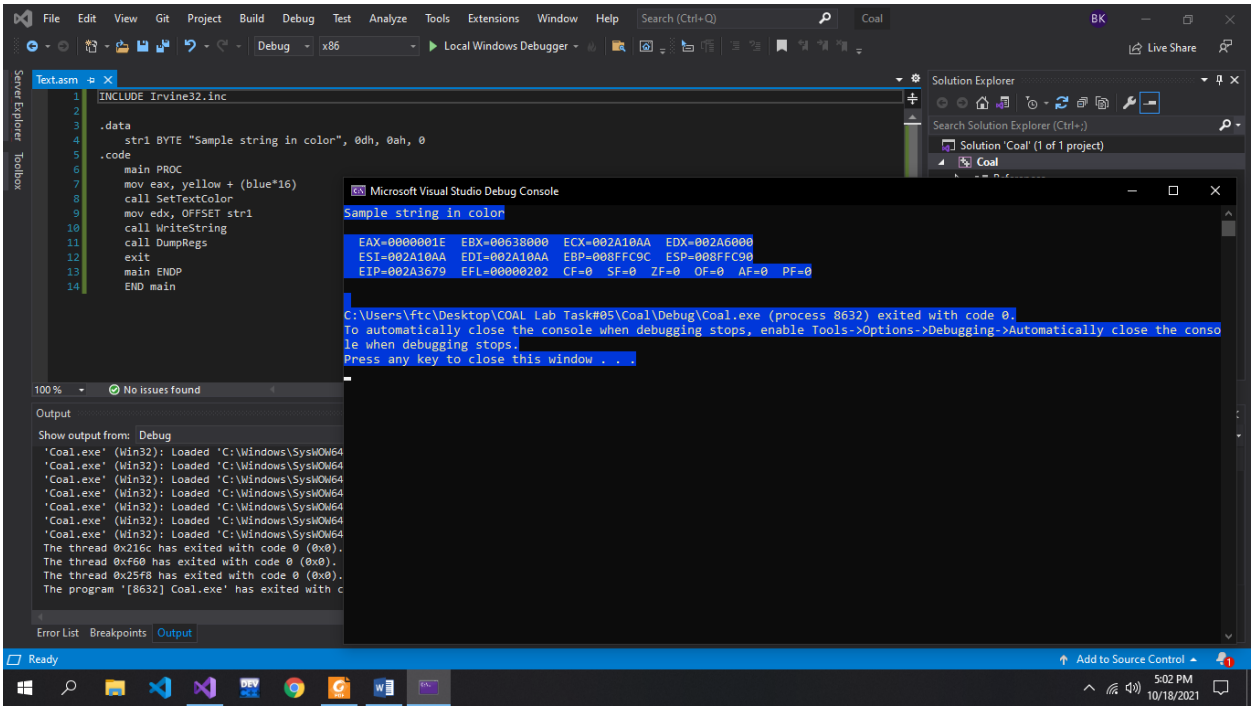
Example#04:



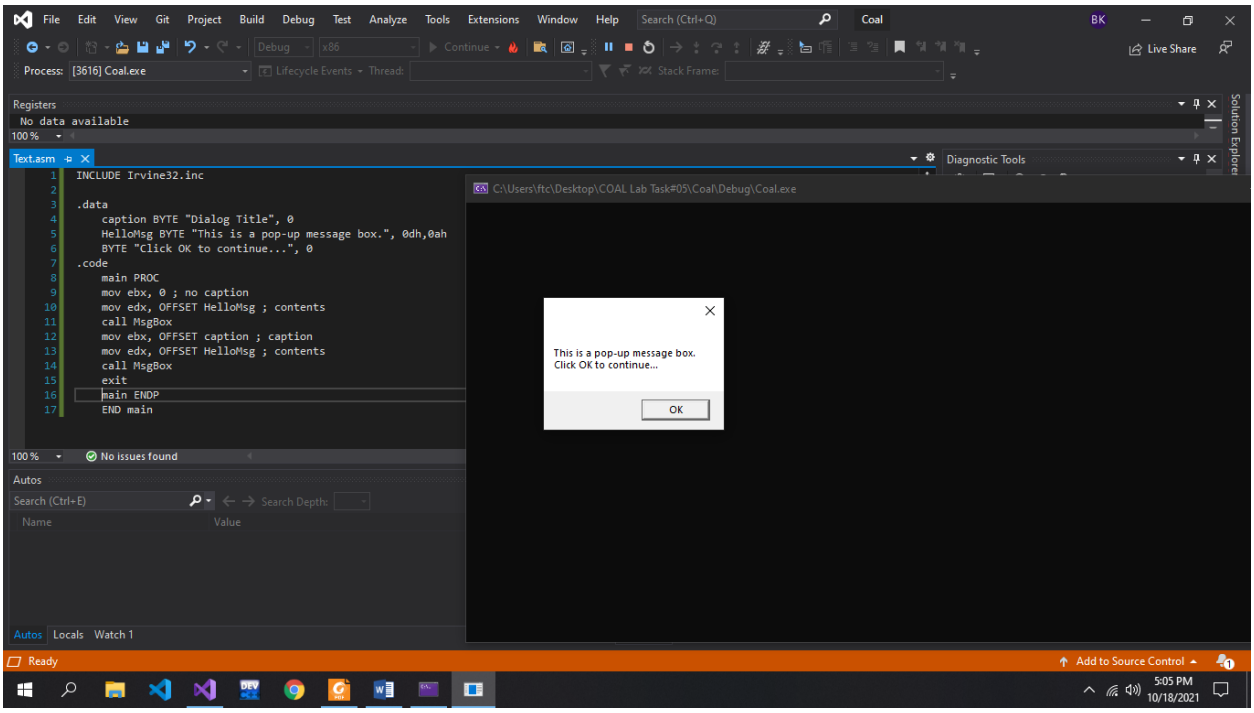
Example#05:



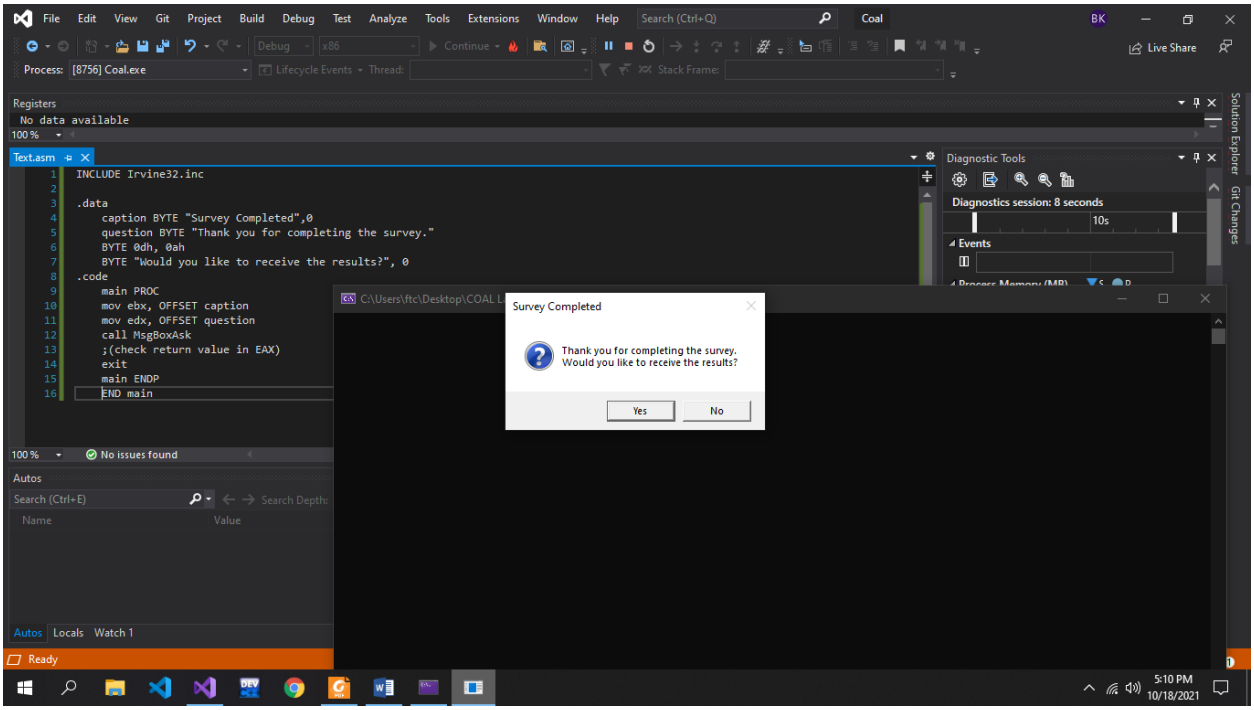
Example#06:



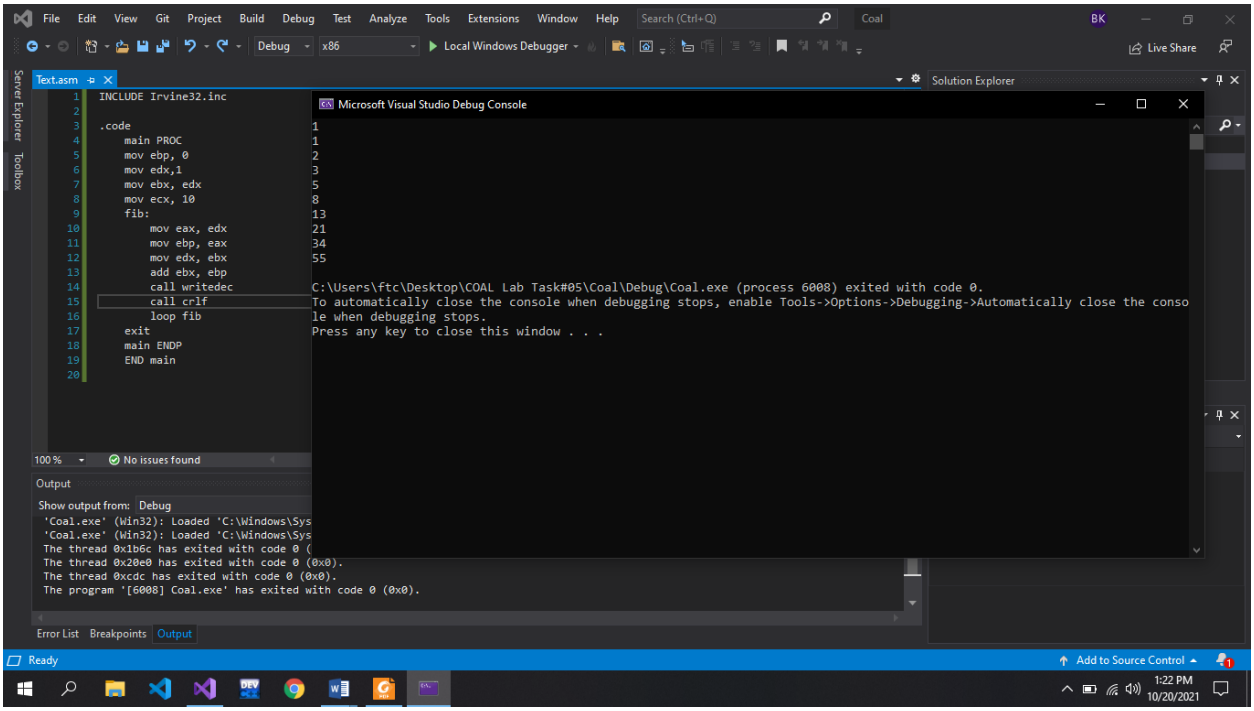
Example#07:



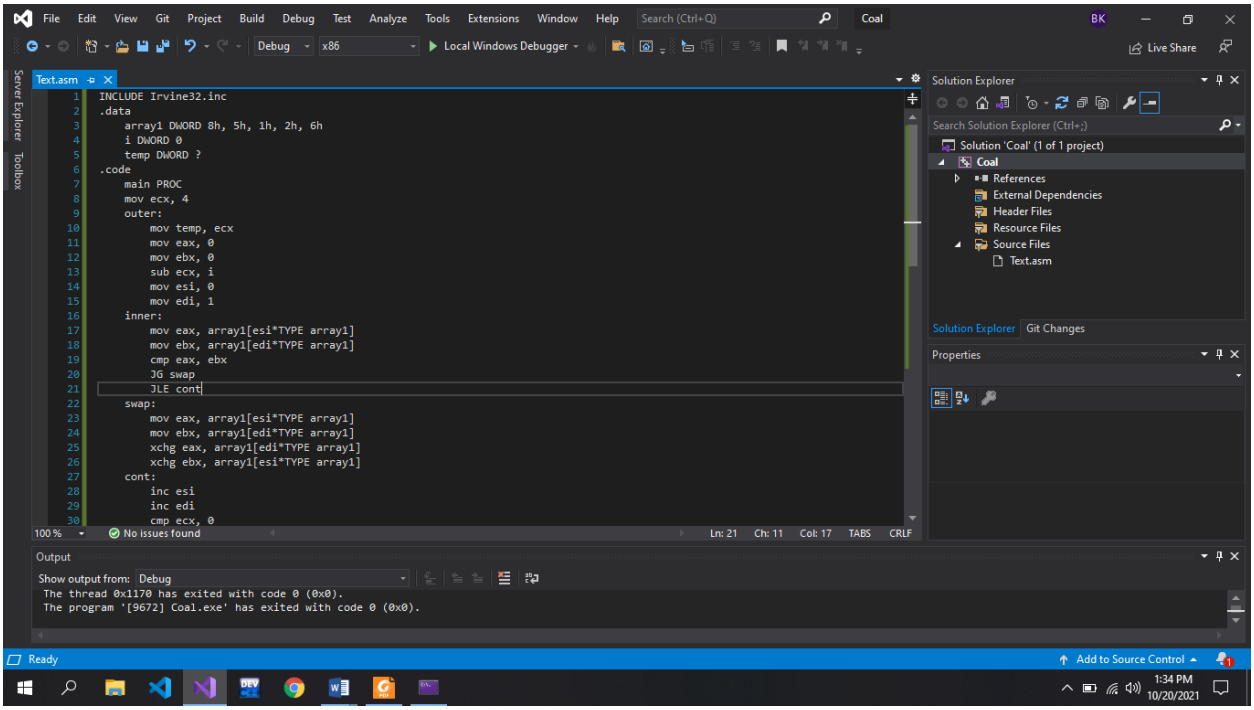
Example#08:

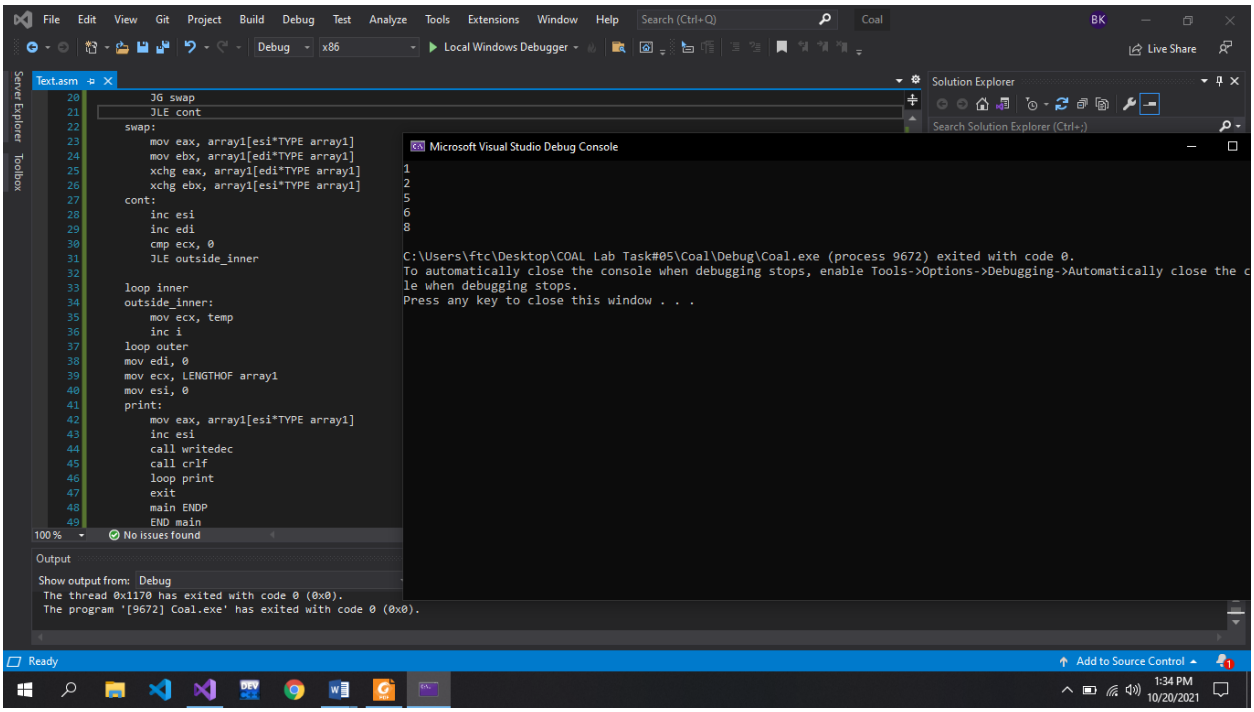


Task#01:



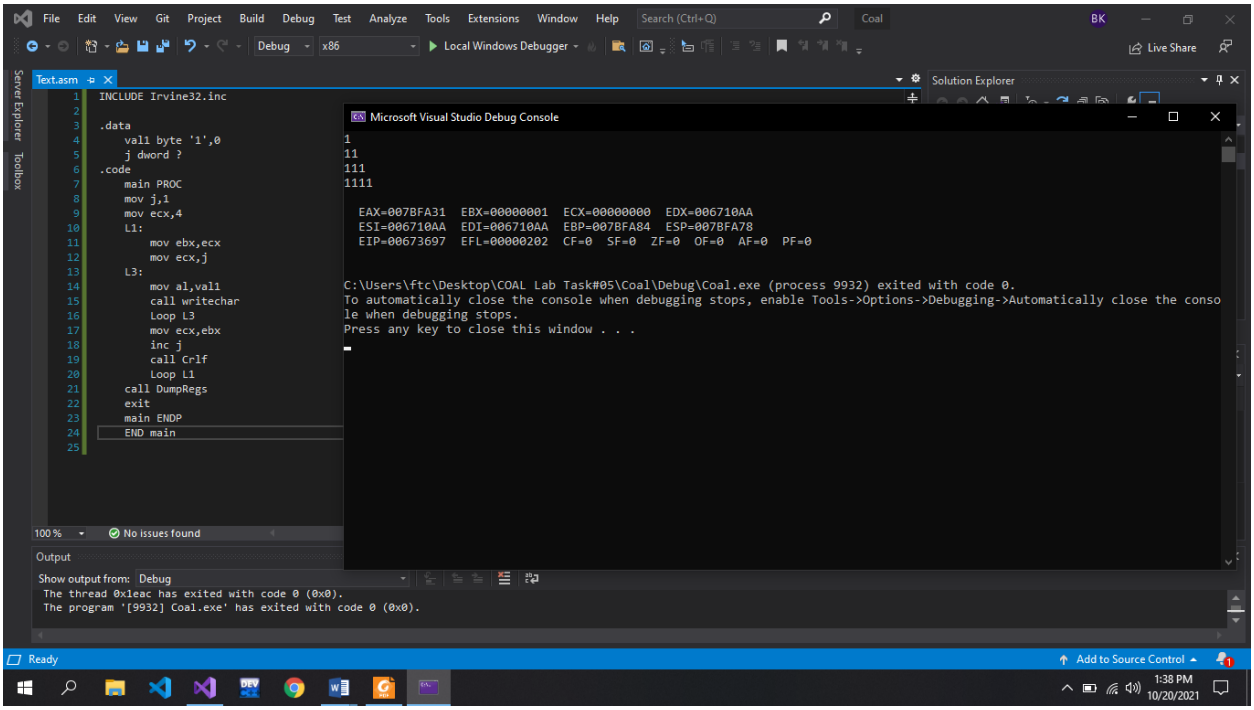
Task#02:


File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
Coal
Debug
x86
Local Windows Debugger
Live Share
Text.asm
INCLUDE Irvine32.inc
.data
array1 DWORD 8h, 5h, 1h, 2h, 6h
i DWORD 0
temp DWORD ?
.code
main PROC
mov ecx, 4
outer:
mov temp, ecx
mov eax, 0
mov ebx, 0
sub ecx, i
mov esi, 0
mov edi, 1
inner:
mov eax, array1[esi*TYPE array1]
mov ebx, array1[edi*TYPE array1]
cmp eax, ebx
JG swap
JLE cont
swap:
mov eax, array1[esi*TYPE array1]
mov ebx, array1[edi*TYPE array1]
xchg eax, array1[edi*TYPE array1]
xchg ebx, array1[esi*TYPE array1]
cont:
inc esi
inc edi
cmp ecx, 0
100 %
No issues found
Ln: 21 Ch: 11 Col: 17 TABS CRLF
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'Coal' (1 of 1 project)
Coal
References
External Dependencies
Header Files
Resource Files
Source Files
Text.asm
Solution Explorer Git Changes
Properties
Output
Show output from: Debug
The thread 0x1170 has exited with code 0 (0x0).
The program '[9672] Coal.exe' has exited with code 0 (0x0).
Ready
Add to Source Control
1:34 PM
10/20/2021

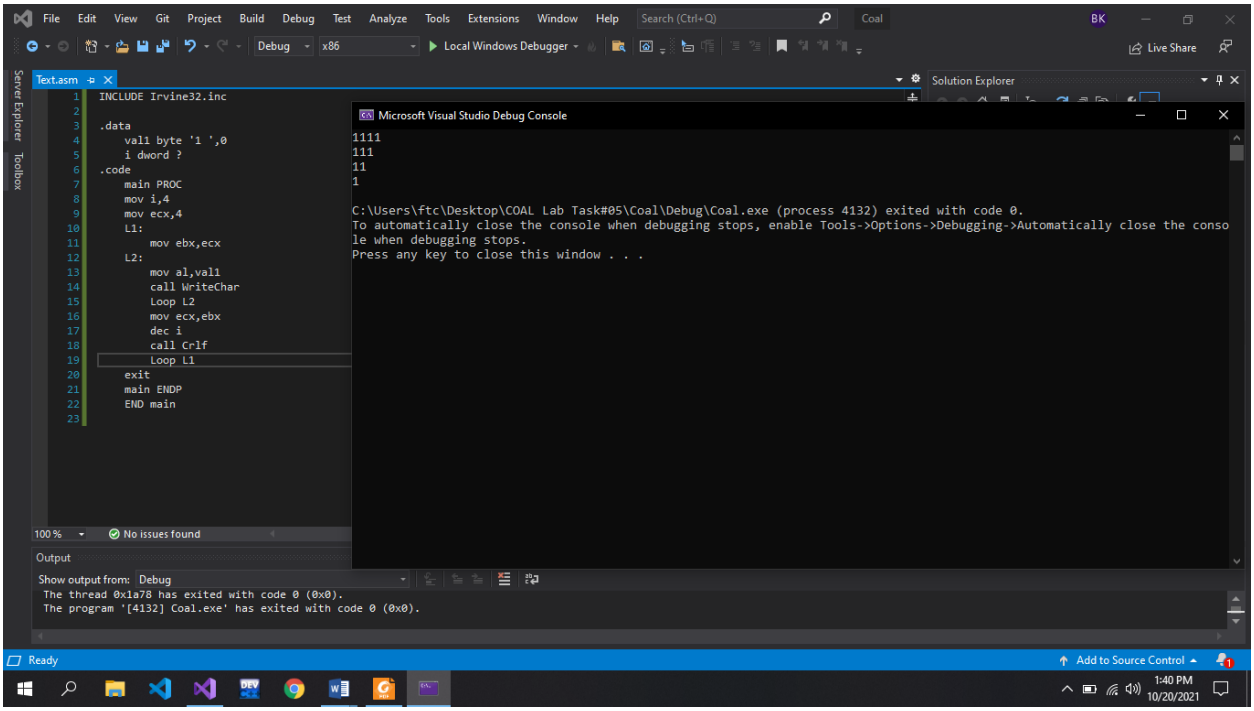

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help
Search (Ctrl+Q)
Coal
Debug
x86
Local Windows Debugger
Live Share
Text.asm
JG swap
JLE cont
swap:
mov eax, array1[esi*TYPE array1]
mov ebx, array1[edi*TYPE array1]
xchg eax, array1[edi*TYPE array1]
xchg ebx, array1[esi*TYPE array1]
cont:
inc esi
inc edi
cmp ecx, 0
JLE outside_inner
loop inner
outside_inner:
mov ecx, temp
inc i
loop outer
mov edi, 0
mov ecx, LENGTHOF array1
mov esi, 0
print:
mov eax, array1[esi*TYPE array1]
inc esi
call writedec
call crlf
loop print
exit
main ENDP
END main
100 %
No issues found
Microsoft Visual Studio Debug Console
1
2
5
6
8
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 9672) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the c
le when debugging stops.
Press any key to close this window . . .
Output
Show output from: Debug
The thread 0x1170 has exited with code 0 (0x0).
The program '[9672] Coal.exe' has exited with code 0 (0x0).
Ready
Add to Source Control
1:34 PM
10/20/2021

Task#03:

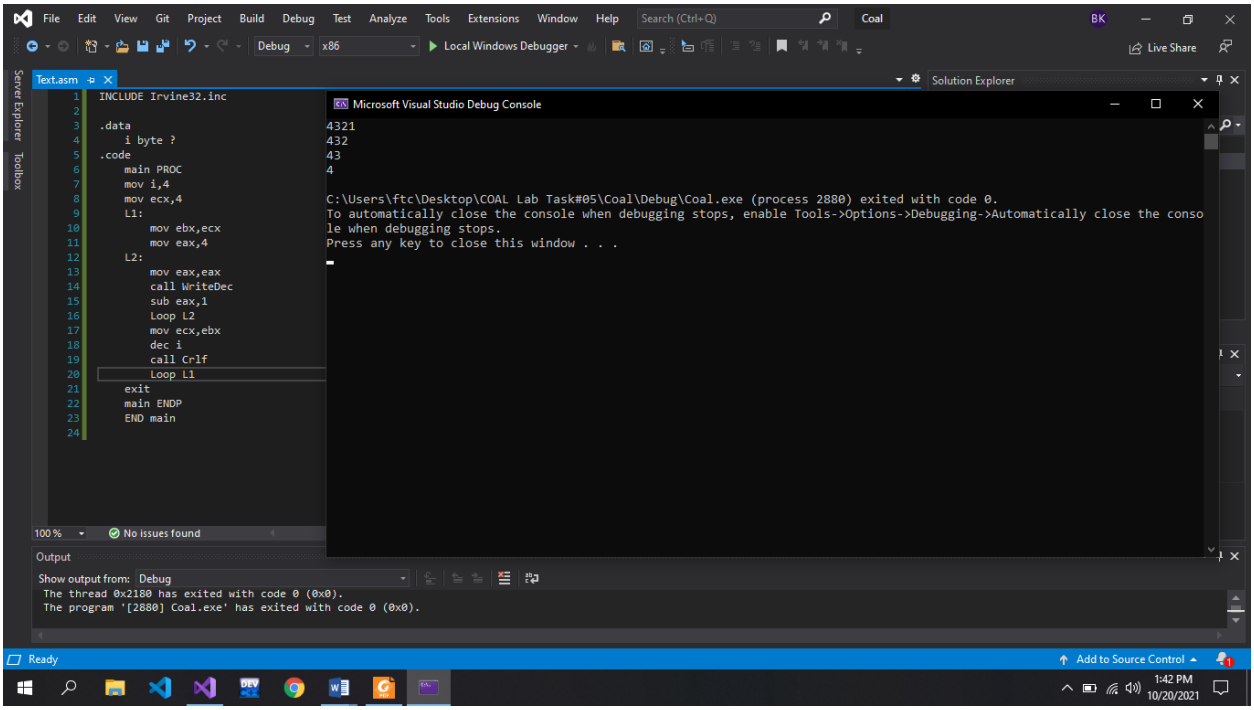
(a)


Text.asm
INCLUDE Irvine32.inc
.data
val1 byte '1',0
j dword ?
.code
main PROC
mov j,1
mov ecx,4
L1:
mov ebx,ecx
mov ecx,j
L3:
mov al,val1
call writechar
Loop L3
mov ecx,ebx
inc j
call Crlf
Loop L1
call DumpRegs
exit
main ENDP
END main
Microsoft Visual Studio Debug Console
1
11
111
1111
EAX=007BFA31 EBX=00000001 ECX=00000000 EDX=006710AA
ESI=006710AA EDI=006710AA EBP=007BFA84 ESP=007BFA78
EIP=00673697 EFL=00000202 CF=0 SF=0 ZF=0 OF=0 AF=0 PF=0
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 9932) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
Output
Show output from: Debug
The thread 0x1eac has exited with code 0 (0x0).
The program '[9932] Coal.exe' has exited with code 0 (0x0).
Ready
Add to Source Control
1:38 PM
10/20/2021

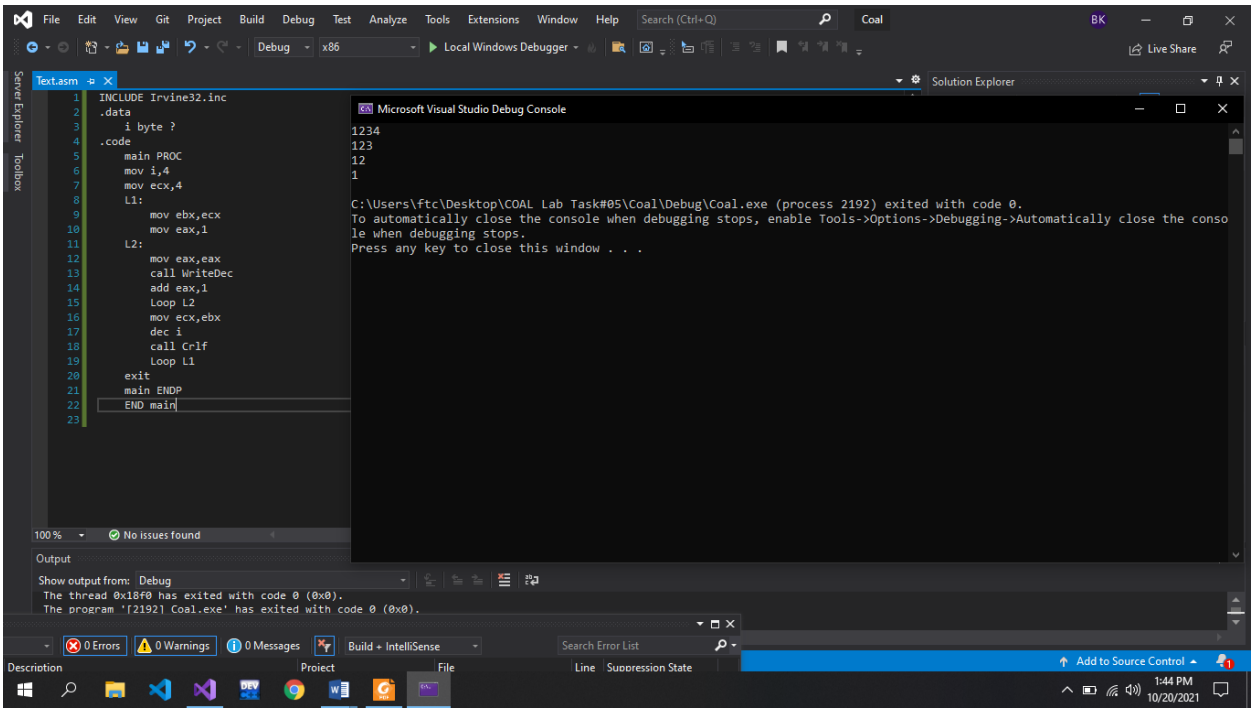
(b)


Text.asm
INCLUDE Irvine32.inc
.data
val1 byte '1 ',0
i dword ?
.code
main PROC
mov i,4
mov ecx,4
L1:
mov ebx,ecx
L2:
mov al,val1
call WriteChar
Loop L2
mov ecx,ebx
dec i
call Crlf
Loop L1
exit
main ENDP
END main
Microsoft Visual Studio Debug Console
1111
111
11
1
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 4132) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
Output
Show output from: Debug
The thread 0x1a78 has exited with code 0 (0x0).
The program '[4132] Coal.exe' has exited with code 0 (0x0).
Ready
Add to Source Control
1:40 PM
10/20/2021

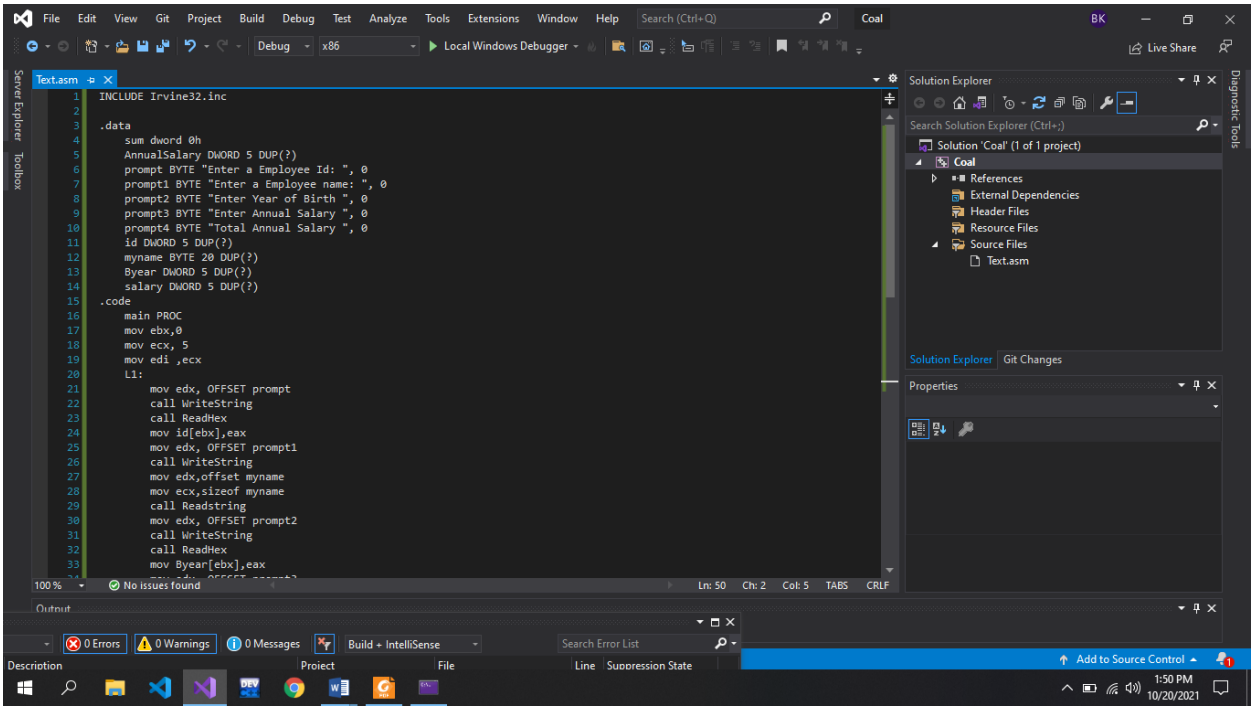
(c)

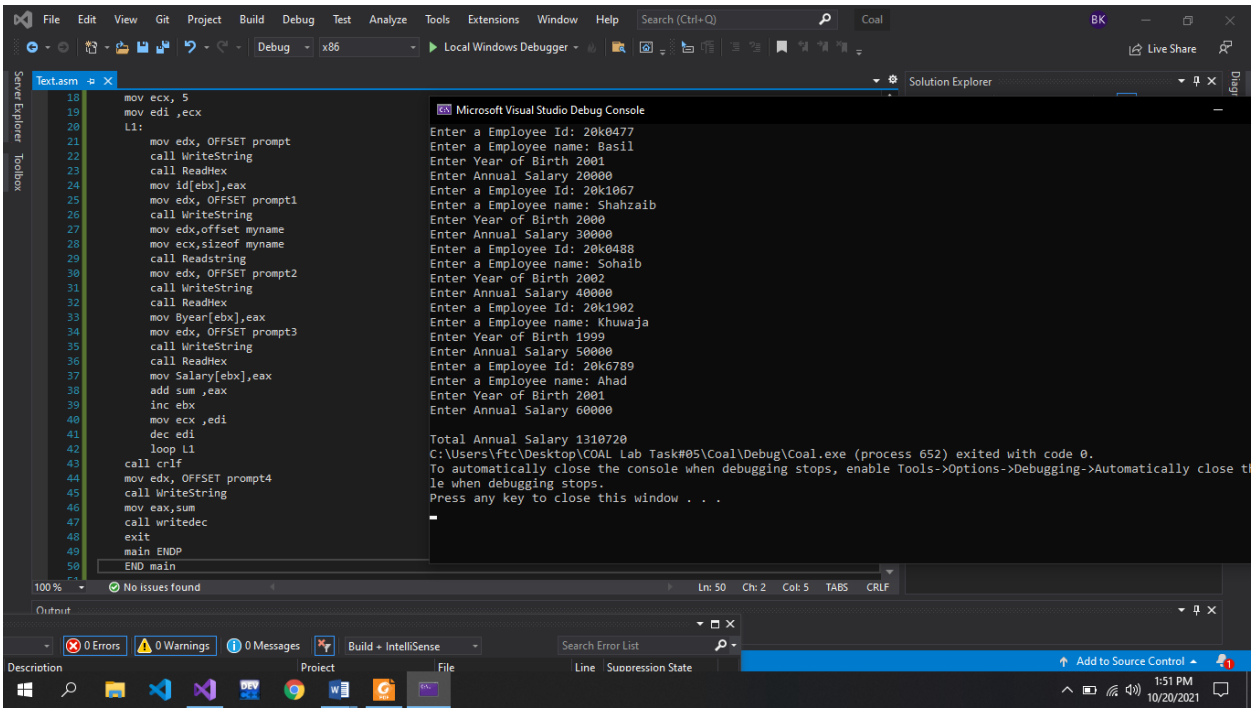

Text.asm
INCLUDE Irvine32.inc
.data
i byte ?
.code
main PROC
mov i,4
mov ecx,4
L1:
mov ebx,ecx
mov eax,4
L2:
mov eax,eax
call WriteDec
sub eax,1
Loop L2
mov ecx,ebx
dec i
call Crlf
Loop L1
exit
main ENDP
END main
Microsoft Visual Studio Debug Console
4321
432
43
4
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 2880) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
No issues found
Output
Show output from: Debug
The thread 0x2180 has exited with code 0 (0x0).
The program '[2880] Coal.exe' has exited with code 0 (0x0).
Ready
Add to Source Control
1:42 PM
10/20/2021

(d)

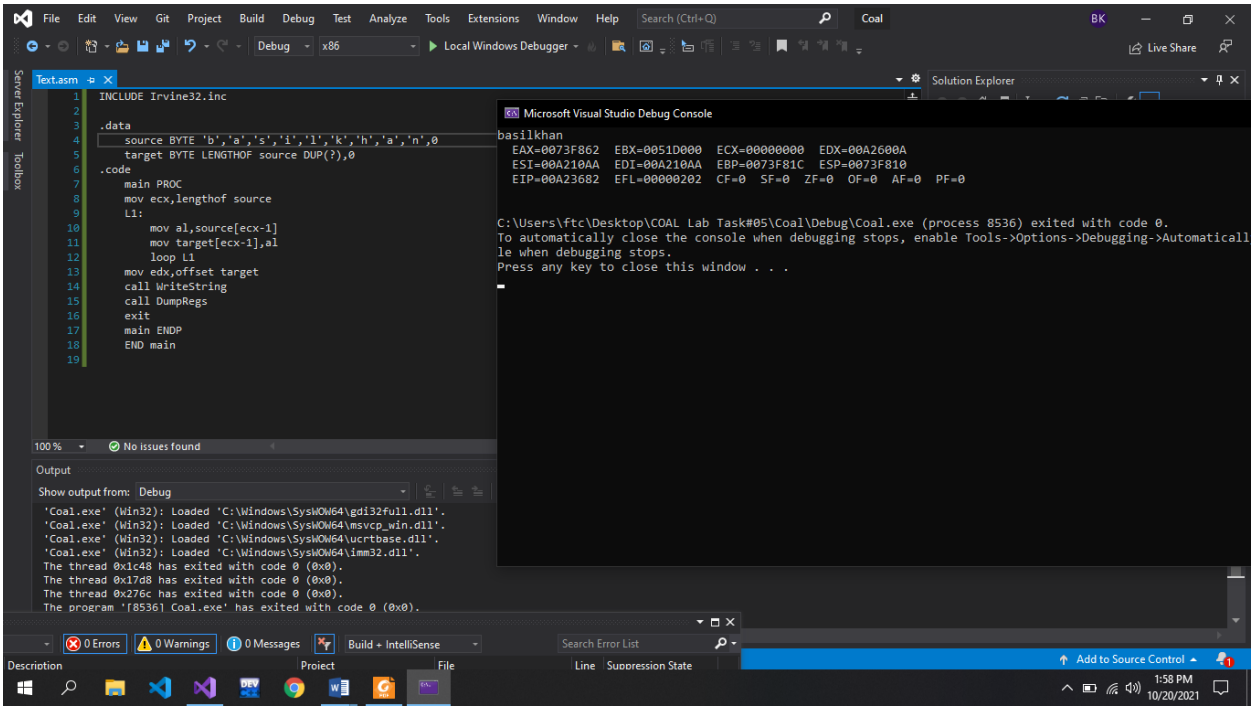
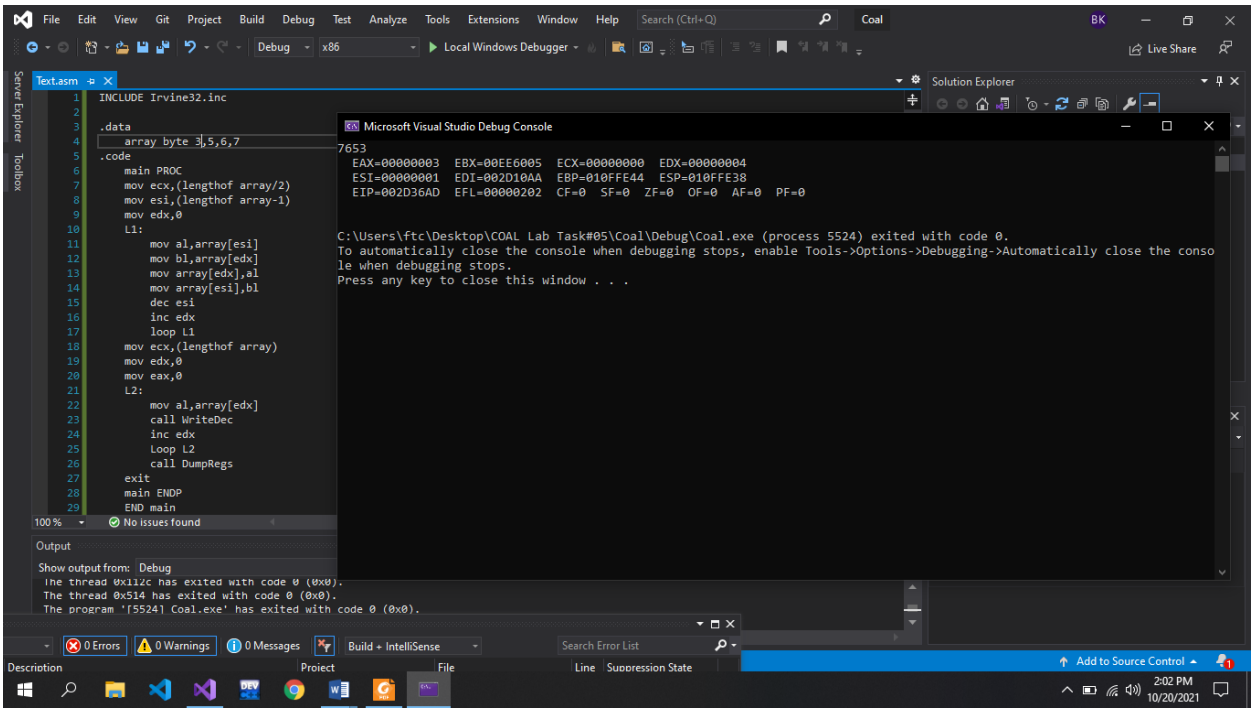

Text.asm
INCLUDE Irvine32.inc
.data
i byte ?
.code
main PROC
mov i,4
mov ecx,4
L1:
mov ebx,ecx
mov eax,1
L2:
mov eax,eax
call WriteDec
add eax,1
Loop L2
mov ecx,ebx
dec i
call Crlf
Loop L1
exit
main ENDP
END main
Microsoft Visual Studio Debug Console
1234
123
12
1
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 2192) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
No issues found
Output
Show output from: Debug
The thread 0x18f0 has exited with code 0 (0x0).
The program '[2192] Coal.exe' has exited with code 0 (0x0).
0 Errors
0 Warnings
0 Messages
Build + IntelliSense
Search Error List
Description
Project
File
Line
Suppression State
Add to Source Control
1:44 PM
10/20/2021

Task#04:


INCLUDE Irvine32.inc
.data
sum dword 0h
AnnualSalary DWORD 5 DUP(?)
prompt BYTE "Enter a Employee Id: ", 0
prompt1 BYTE "Enter a Employee name: ", 0
prompt2 BYTE "Enter Year of Birth ", 0
prompt3 BYTE "Enter Annual Salary ", 0
prompt4 BYTE "Total Annual Salary ", 0
id DWORD 5 DUP(?)
myname BYTE 20 DUP(?)
Byear DWORD 5 DUP(?)
salary DWORD 5 DUP(?)
.code
main PROC
mov ebx,0
mov ecx, 5
mov edi ,ecx
L1:
mov edx, OFFSET prompt
call WriteString
call ReadHex
mov id[ebx],eax
mov edx, OFFSET prompt1
call WriteString
mov edx,offset myname
mov ecx,sizeof myname
call Readstring
mov edx, OFFSET prompt2
call WriteString
call ReadHex
mov Byear[ebx],eax
Solution Explorer
Solution 'Coal' (1 of 1 project)
Coal
References
External Dependencies
Header Files
Resource Files
Source Files
Text.asm
Properties
No issues found
Output
0 Errors
0 Warnings
0 Messages
Build + IntelliSense
Add to Source Control
1:50 PM
10/20/2021


mov ecx, 5
mov edi ,ecx
L1:
mov edx, OFFSET prompt
call WriteString
call ReadHex
mov id[ebx],eax
mov edx, OFFSET prompt1
call WriteString
mov edx,offset myname
mov ecx,sizeof myname
call Readstring
mov edx, OFFSET prompt2
call WriteString
call ReadHex
mov Byear[ebx],eax
mov edx, OFFSET prompt3
call WriteString
call ReadHex
mov Salary[ebx],eax
add sum ,eax
inc ebx
mov ecx ,edi
dec edi
loop L1
call crlf
mov edx, OFFSET prompt4
call WriteString
mov eax,sum
call writedec
exit
main ENDP
END main
Microsoft Visual Studio Debug Console
Enter a Employee Id: 20k0477
Enter a Employee name: Basil
Enter Year of Birth 2001
Enter Annual Salary 20000
Enter a Employee Id: 20k1067
Enter a Employee name: Shahzaib
Enter Year of Birth 2000
Enter Annual Salary 30000
Enter a Employee Id: 20k0488
Enter a Employee name: Sohaib
Enter Year of Birth 2002
Enter Annual Salary 40000
Enter a Employee Id: 20k1902
Enter a Employee name: Khuwaja
Enter Year of Birth 1999
Enter Annual Salary 50000
Enter a Employee Id: 20k6789
Enter a Employee name: Ahad
Enter Year of Birth 2001
Enter Annual Salary 60000
Total Annual Salary 1310720
C:\Users\ftc\Desktop\COAL Lab Task#05\Coal\Debug\Coal.exe (process 652) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close t
le when debugging stops.
Press any key to close this window . . .
No issues found
0 Errors
0 Warnings
0 Messages
Build + IntelliSense
Add to Source Control
1:51 PM
10/20/2021

Task#05:



Task#06: