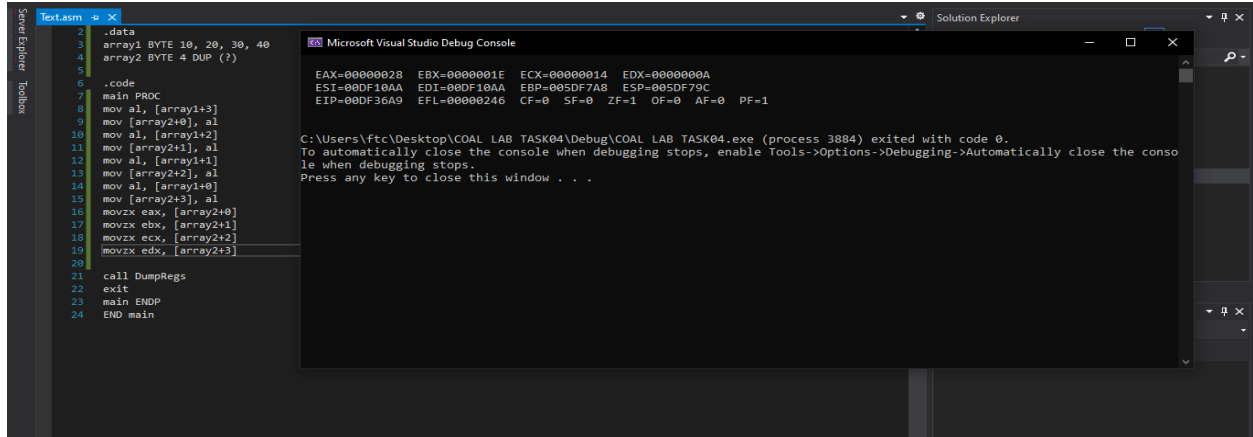


REMAINING LAB TASK # 04

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20K-0477

Task#05:



The screenshot shows the Visual Studio IDE with the assembly code for Task#05 in the Text.asm file and the Microsoft Visual Studio Debug Console open. The assembly code defines two arrays, array1 and array2, and a main procedure that moves values between them and calls DumpRegs. The debug console shows the register values and a message indicating the process exited with code 0.

```
.data
array1 BYTE 10, 20, 30, 40
array2 BYTE 4 DUP (?)

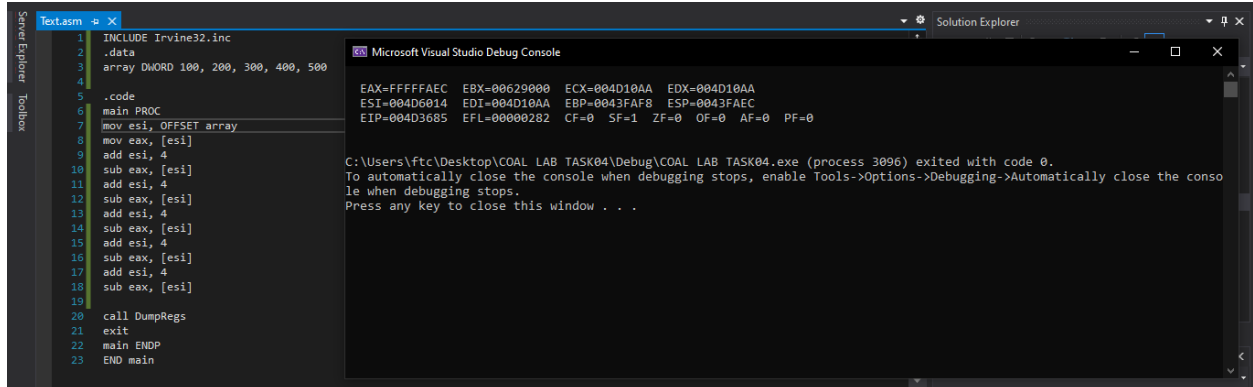
.code
main PROC
    mov al, [array1+3]
    mov [array2+0], al
    mov al, [array1+2]
    mov [array2+1], al
    mov al, [array1+1]
    mov [array2+2], al
    mov al, [array1+0]
    mov [array2+3], al
    movzx eax, [array2+0]
    movzx ebx, [array2+1]
    movzx ecx, [array2+2]
    movzx edx, [array2+3]
    call DumpRegs
    exit
main ENDP
END main
```

Microsoft Visual Studio Debug Console

```
EAX=00000028  EBX=0000001E  ECX=00000014  EDX=0000000A
ESI=00DF10AA  EDI=00DF10AA  EBP=005DF7A8  ESP=005DF79C
EIP=00DF36A9  EFL=00000246  CF=0  SF=0  ZF=1  OF=0  AF=0  PF=1

C:\Users\ftc\Desktop\COAL LAB TASK04\Debug\COAL LAB TASK04.exe (process 3884) 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#06:



The screenshot shows the Visual Studio IDE with the assembly code for Task#06 in the Text.asm file and the Microsoft Visual Studio Debug Console open. The assembly code includes Irvine32.inc, defines an array, and a main procedure that increments the array elements and calls DumpRegs. The debug console shows the register values and a message indicating the process exited with code 0.

```
INCLUDE Irvine32.inc

.data
array DWORD 100, 200, 300, 400, 500

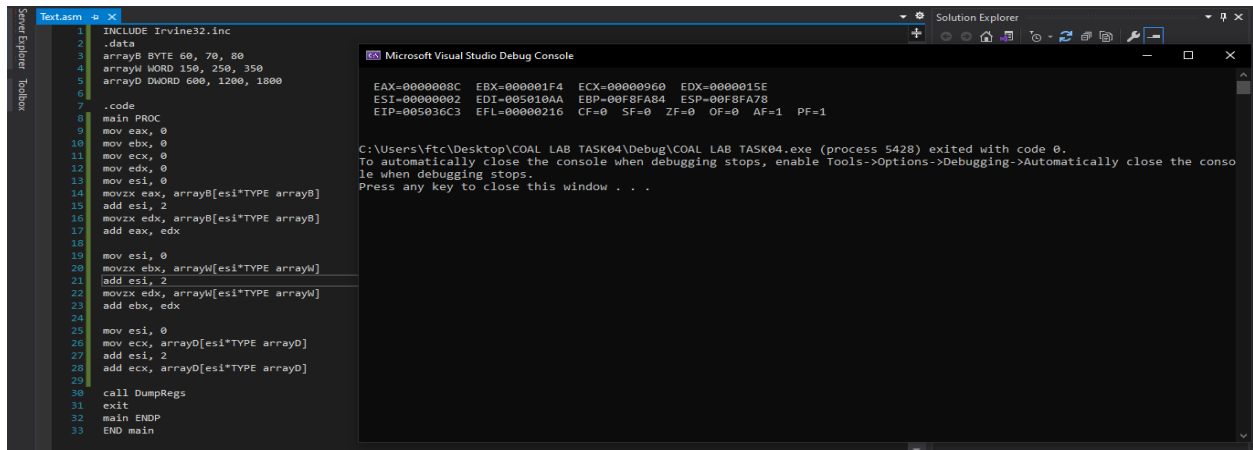
.code
main PROC
    mov esi, OFFSET array
    mov eax, [esi]
    add esi, 4
    sub eax, [esi]
    add esi, 4
    sub eax, [esi]
    add esi, 4
    sub eax, [esi]
    add esi, 4
    sub eax, [esi]
    add esi, 4
    sub eax, [esi]
    add esi, 4
    sub eax, [esi]
    call DumpRegs
    exit
main ENDP
END main
```

Microsoft Visual Studio Debug Console

```
EAX=FFFFFFAEC  EBX=00629000  ECX=004D10AA  EDX=004D10AA
ESI=004D6014  EDI=004D10AA  EBP=0043FAF8  ESP=0043FAEC
EIP=004D36B5  EFL=00000282  CF=0  SF=1  ZF=0  OF=0  AF=0  PF=0

C:\Users\ftc\Desktop\COAL LAB TASK04\Debug\COAL LAB TASK04.exe (process 3096) 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#07:



The screenshot shows the Visual Studio IDE with the assembly code for Task#07 in the Text.asm file and the Microsoft Visual Studio Debug Console open. The assembly code includes Irvine32.inc, defines three arrays, and a main procedure that performs various operations on them and calls DumpRegs. The debug console shows the register values and a message indicating the process exited with code 0.

```
INCLUDE Irvine32.inc

.data
arrayB BYTE 60, 70, 80
arrayW WORD 150, 250, 350
arrayD DWORD 600, 1200, 1800

.code
main PROC
    mov ebx, 0
    mov ecx, 0
    mov edx, 0
    mov esi, 0
    movzx eax, arrayB[esi*TYPE arrayB]
    add esi, 2
    movzx edx, arrayB[esi*TYPE arrayB]
    add eax, edx

    mov esi, 0
    movzx ebx, arrayW[esi*TYPE arrayW]
    add esi, 2
    movzx edx, arrayW[esi*TYPE arrayW]
    add ebx, edx

    mov esi, 0
    mov ecx, arrayD[esi*TYPE arrayD]
    add esi, 2
    add ecx, arrayD[esi*TYPE arrayD]
    call DumpRegs
    exit
main ENDP
END main
```

Microsoft Visual Studio Debug Console

```
EAX=0000008C  EBX=000001F4  ECX=00000060  EDX=0000015E
ESI=00000002  EDI=005010AA  EBP=00FBFA84  ESP=00FBFA78
EIP=005036C3  EFL=00000216  CF=0  SF=0  ZF=0  OF=0  AF=1  PF=1

C:\Users\ftc\Desktop\COAL LAB TASK04\Debug\COAL LAB TASK04.exe (process 5428) 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 . . .
```