**COAL LAB 5**

**NASHIT BUDHWANI 20K-0274**

**Task1**  
  
INCLUDE Irvine32.inc

.code

main PROC

;ebx is showing the series

mov eax,0

mov ebx,0

mov ecx,8

mov edx,0

call DumpRegs

mov ebx,1

call DumpRegs

L1:

mov edx,ebx

add ebx,eax

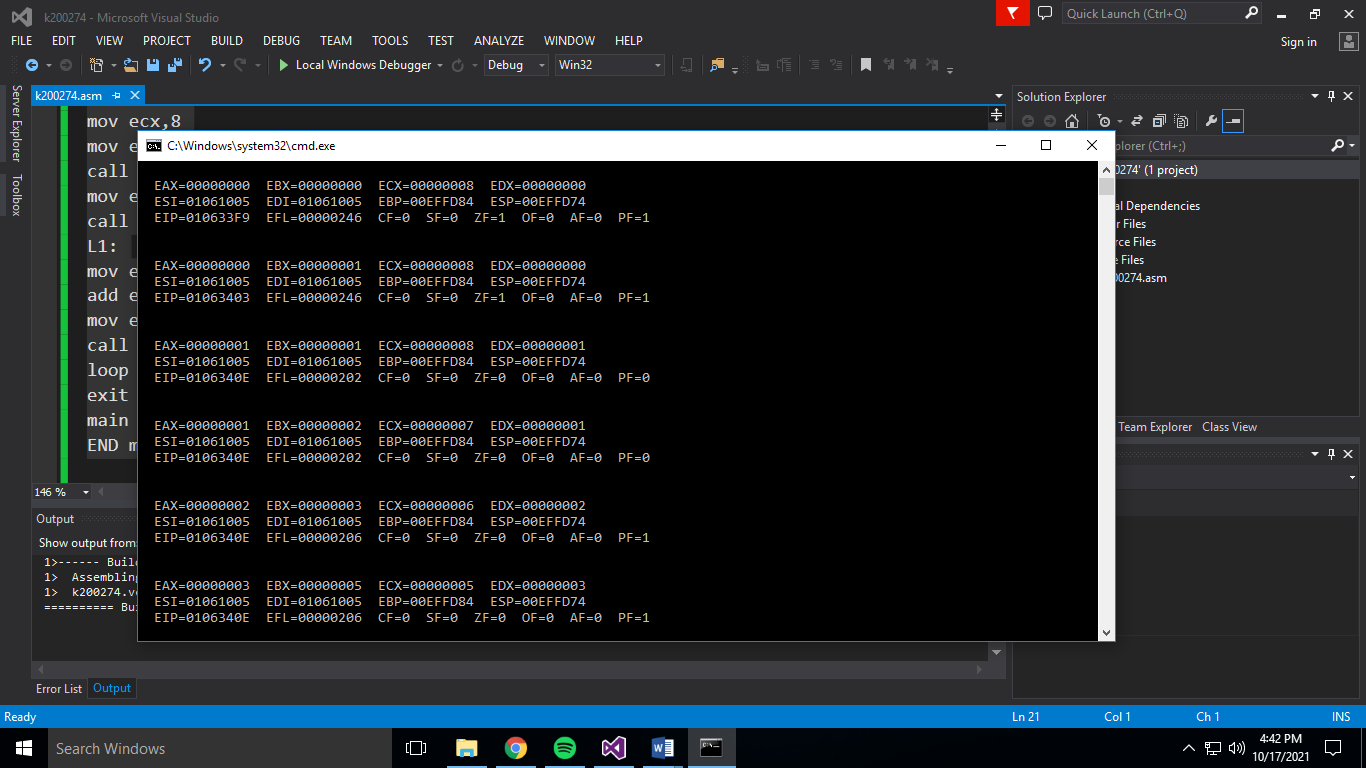
mov eax,edx

call DumpRegs

loop L1

exit

main ENDP



**TASK 2**

INCLUDE Irvine32.inc

.data

array DWORD 8,5,1,2,6

count DWORD (0)

temp DWORD 5 DUP(0)

.code

main PROC

mov esi,0

mov ecx,5

L1:

mov eax,[array + ESI]

mov count,ecx

mov ecx,5

L2:

mov edx,esi

add edx,1

mov ebx,[array+edx]

cmp eax,ebx

JL Lable

loop L2

mov [temp+esi],eax

add esi,4

mov ecx,count

loop L1

Lable:

mov [temp+esi],ebx

add esi,4

mov ecx,count

loop L1

mov ecx,5

mov esi,0

C1:

mov eax,[temp+esi]

call dumpregs

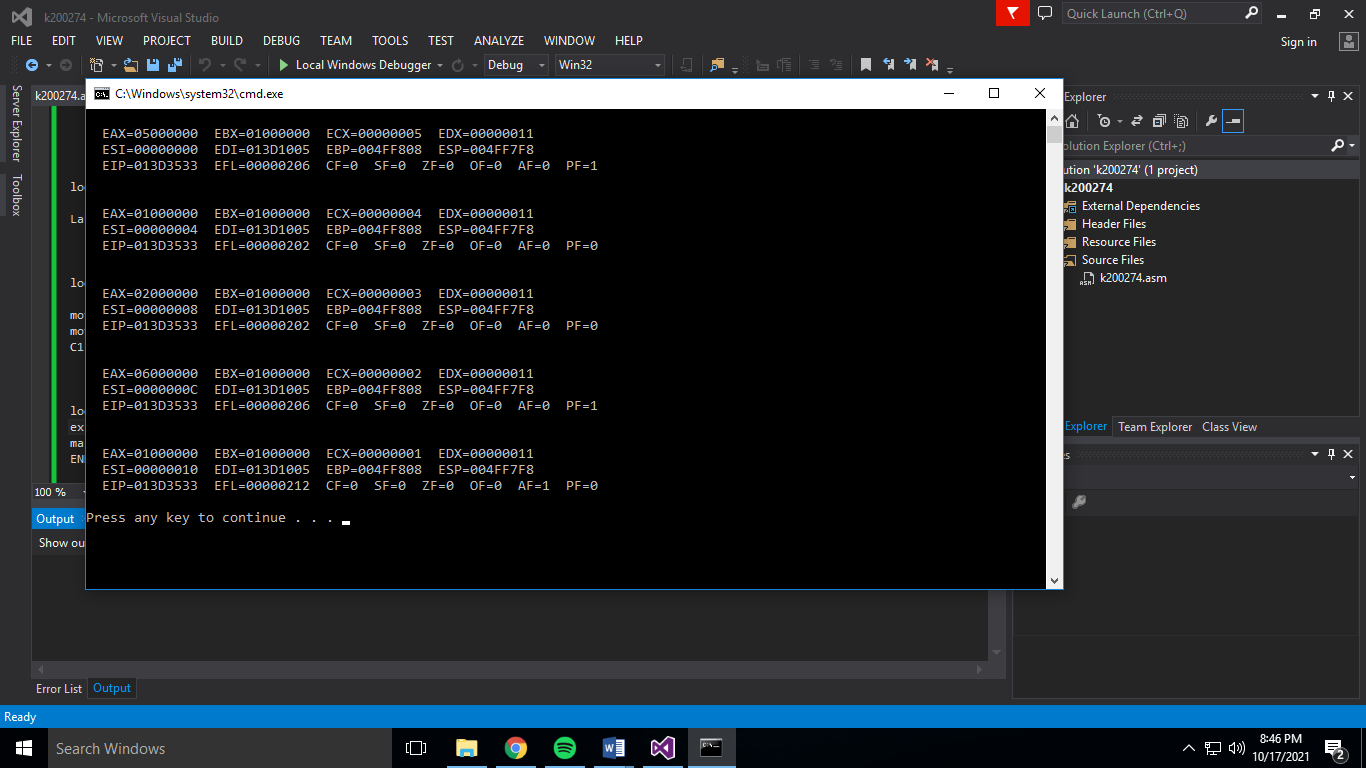
add esi,4

loop C1

exit

main ENDP

END main



**TASK 3**

TITLE Add and Subtract

INCLUDE Irvine32.inc

.data

array1 DWORD 1, 1111, 4321, 1234

array2 DWORD 11, 111, 432, 123

array3 Dword 111, 11, 43, 12

array4 Dword 1111, 1, 4, 1

array5 BYTE " ", 0

.code

main PROC

mov esi, 0

mov ecx, 8

l1:

mov eax, [array1+esi]

call WriteDec

mov ebx, ecx

mov ecx, SIZEOF array5

l2:

mov al, [array5+esi]

call WriteChar

loop l2

mov ecx, ebx

dec ecx

add esi, 4

loop l1

call Crlf

mov esi, 0

mov ecx, 8

R1:

mov eax, [array2+esi]

call WriteDec

mov ebx, ecx

mov ecx, SIZEOF array5

R2:

mov al, [array5+esi]

call WriteChar

loop R2

mov ecx, ebx

dec ecx

add esi, 4

loop R1

call Crlf

mov esi, 0

mov ecx, 8

T1:

mov eax, [array3+esi]

call WriteDec

mov ebx, ecx

mov ecx, SIZEOF array5

T2:

mov al, [array5+esi]

call WriteChar

loop T2

mov ecx, ebx

dec ecx

add esi, 4

loop T1

call Crlf

mov esi, 0

mov ecx, 8

S1:

mov eax, [array4+esi]

call WriteDec

mov ebx, ecx

mov ecx, SIZEOF array5

S2:

mov al, [array5+esi]

call WriteChar

loop S2

mov ecx, ebx

dec ecx

add esi, 4

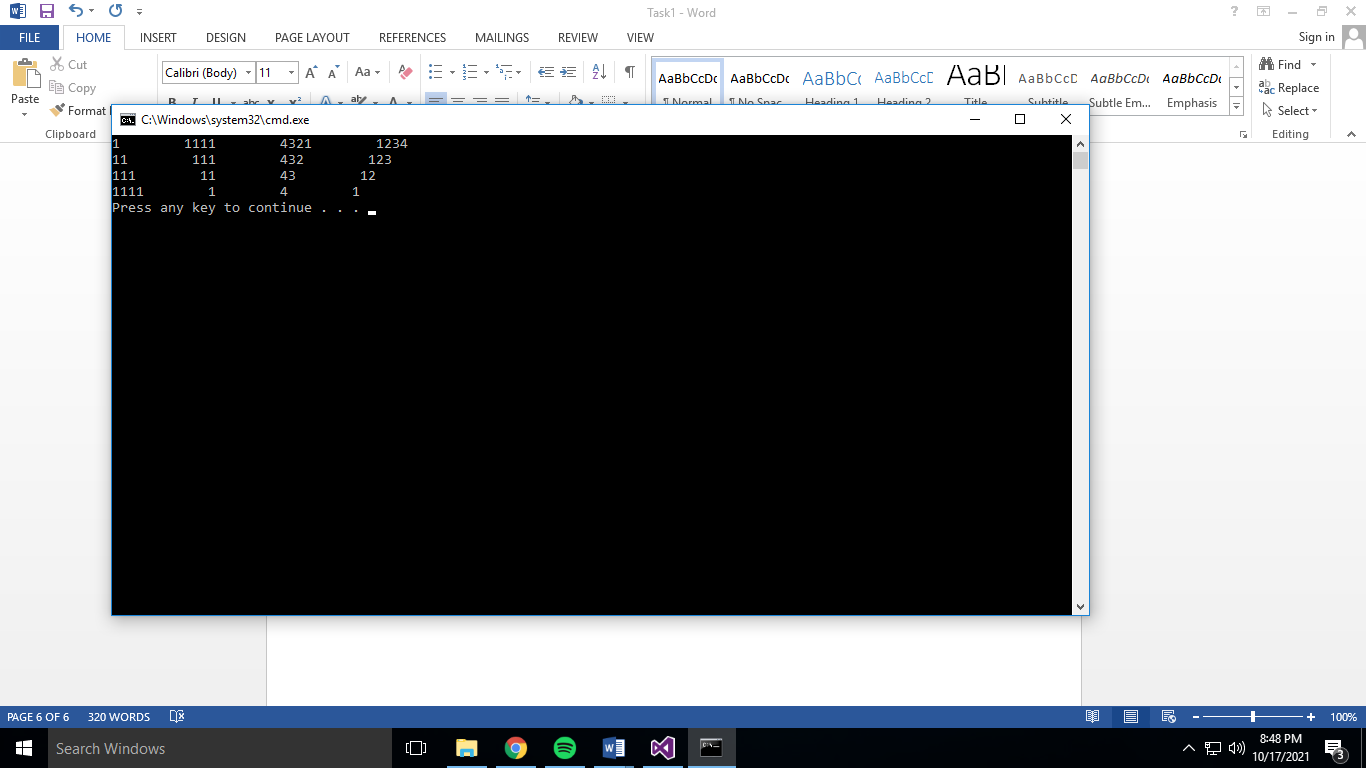
loop S1

call Crlf

exit

main ENDP

END main



**TASK 4**  
  
TITLE Add and Subtract

INCLUDE Irvine32.inc

.data

EMP\_ID DWORD 4 DUP(0)

EMP\_Name DWORD 4 DUP(0)

EMP\_YearofBirth DWORD 4 DUP(0)

EMP\_Salary DWORD 4 DUP(0)

.code

main PROC

mov ecx, 3

mov edx, OFFSET EMP\_ID

call ReadString

add edx, 4

call ReadString

add edx, 4

call ReadString

add edx, 4

call ReadString

mov ecx, 6

mov edx, OFFSET EMP\_Name

call ReadString

add edx, 4

call ReadString

add edx, 4

call ReadString

add edx, 4

call ReadString

mov esi, 0

mov eax, 0

call ReadDec

mov [EMP\_YearofBirth+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_YearofBirth+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_YearofBirth+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_YearofBirth+esi], eax

mov esi, 0

mov eax, 0

call ReadDec

mov [EMP\_Salary+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_Salary+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_Salary+esi], eax

add esi, 4

mov eax, 0

call ReadDec

mov [EMP\_Salary+esi], eax

mov esi, 0

mov eax, [EMP\_Salary+esi]

mov edi, 4

mov ecx, 4

L1:

add eax, [EMP\_Salary+edi]

add esi, 4

add edi, 4

dec ecx

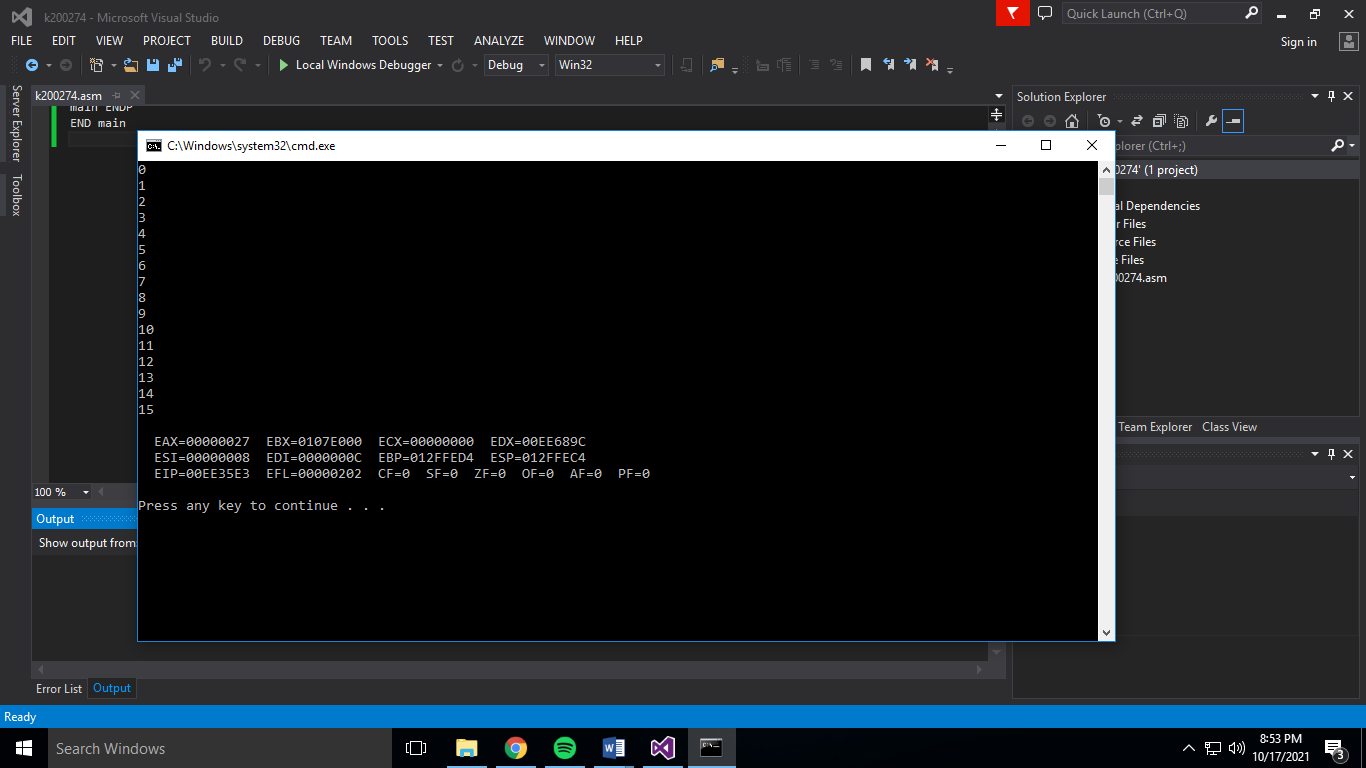
loop L1

call DumpRegs

exit

main ENDP

END main



**TASK 5**

INCLUDE Irvine32.inc

.data

array BYTE "H","e","l","l","o",0

target BYTE 6 DUP(0)

.code

main PROC

mov esi,0

mov ecx,5

L1:

mov ah,[array+esi]

mov [target+esi],ah

add esi,1

loop L1

mov ecx,5

mov esi,0

C1:

mov ah,[target+esi]

call dumpregs

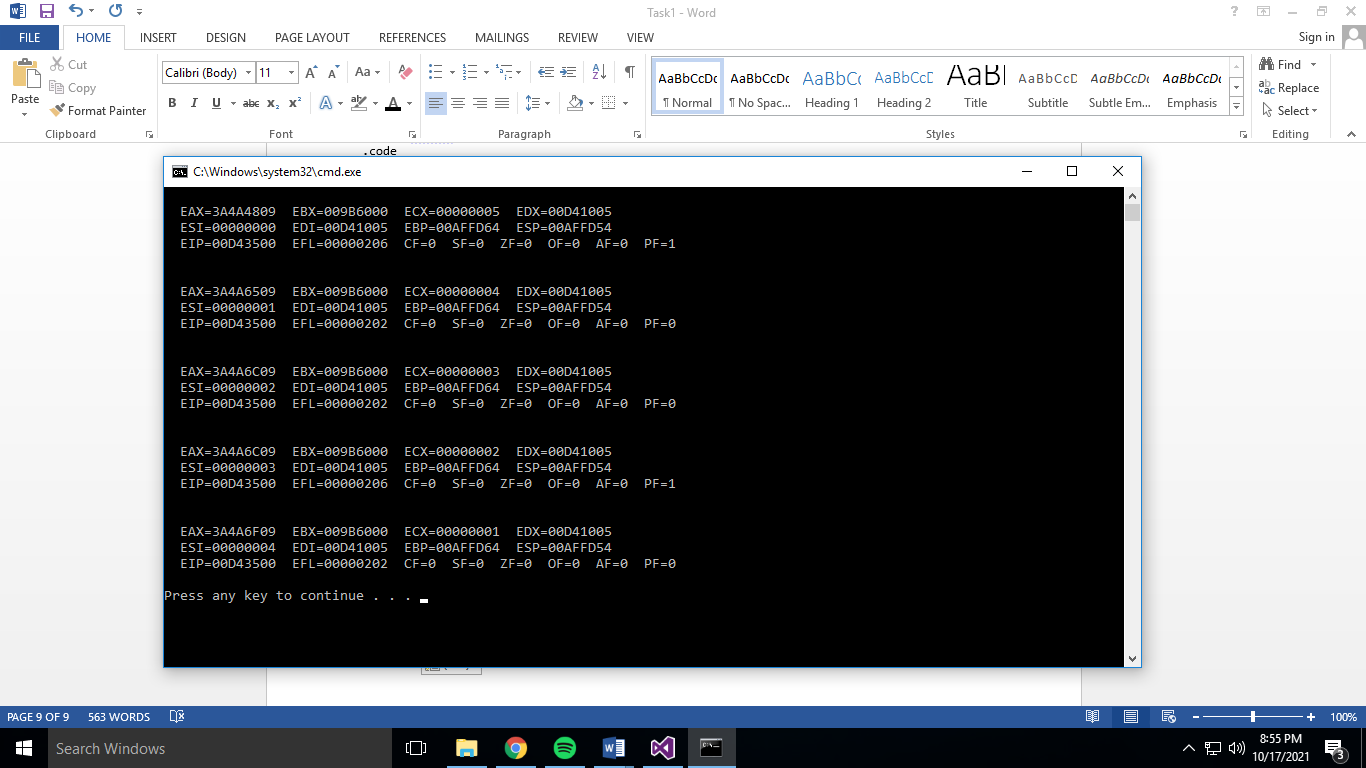
add esi,1

Loop C1

exit

main ENDP

END main



**Task 6**

INCLUDE Irvine32.inc

.data

array BYTE 1,2,3,4,5

target BYTE 5 DUP(0)

.code

main PROC

mov eax,0

mov esi,0

mov ecx,5

L1:

mov al,[array+esi]

mov [target+ecx],al

add esi,1

loop L1

mov ecx,5

mov esi,0

C1:

add esi,1

mov al,[target+esi]

call dumpregs

Loop C1

exit

main ENDP

END main

