COAL LAB 4 20k1898

2023

Task1:

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TITLE QUESTION # 3  
INCLUDE Irvine32.inc  
.data  
Array DWORD 7,4,1,5,2  
.code  
MAIN PROC  
mov eax ,[Array + 8]  
mov ebx ,[Array]  
mov Array,eax  
mov [Array+8],ebx  
mov eax,[Array+16]  
mov ebx , [Array+4]  
mov [Array+4], eax  
mov [Array+16],ebx  
mov eax,[Array+16]  
mov ebx,[Array+8]  
mov [Array+8],eax  
mov [Array+16],ebx  
mov eax,[Array]  
call writeint  
mov eax,[Array+4]  
call writeint  
mov eax,[Array+8]  
call writeint  
mov eax,[Array+12]  
call writeint  
mov eax,[Array+16]  
call writeint  
exit  
MAIN ENDP  
END MAIN

Task 2:

INCLUDE Irvine32.inc

.data

arrayB BYTE 10,20,30

arrayW WORD 150,250,350

arrayD DWORD 600, 1200, 1800

SUM1 DWORD ?

SUM2 DWORD ?

SUM3 DWORD ?

.code

MAIN PROC

mov eax,0

mov ebx,0

movsx eax,arrayB

movsx ebx,arrayW

add eax,ebx

add eax,arrayD

mov SUM1,eax

mov eax,0

mov ebx,0

movsx eax,[arrayB+1]

movsx ebx,[arrayW+2]

add eax,ebx

add eax,[arrayD+4]

mov SUM2,eax

mov eax,0

mov ebx,0

movsx eax,[arrayB+2]

movsx ebx,[arrayW+4]

add eax,ebx

add eax,[arrayD+8]

mov SUM3,eax

; Print Sum 1

mov eax,SUM1

call writeInt

; Print Sum 2

mov eax,SUM2

call writeInt

; Print Sum 3

mov eax,SUM3

call writeInt

exit

MAIN ENDP

END MAIN

Task 3:

INCLUDE Irvine32.inc

.data

v SBYTE -101

w SBYTE 121

x SBYTE 22

u SBYTE -70

y SBYTE -12

Z SBYTE ?

.code

main proc

mov ah, x

add ah, y

add ah, w

sub ah, v

add ah, u

mov Z, ah

movzx eax, Z

call writeint

exit

main endp

end main

Task 4:

INCLUDE Irvine32.inc

.data

array1 BYTE 10,20,30,40

array2 BYTE DUP(?)

.code

MAIN PROC

mov eax,0

mov esi,OFFSET array1

mov al,[esi+3]

mov array2,al

mov al,[esi+2]

mov [array2+1],al

mov al,[esi+1]

mov [array2+2],al

mov al,[esi]

mov [array2+3],al

; printing the reversed array

mov al,array2

call writeInt

mov al,[array2+1]

call writeInt

mov al,[array2+2]

call writeInt

mov al,[array2+3]

call writeInt

exit

MAIN ENDP

END MAIN