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**K17-3922**

**Section: E**

**Coal Lab 7**

**TASK 1a**

INCLUDE irvine32.inc

.data

var dword 5

x dword ?

.code

main PROC

mov ecx,7

mov edx,8

CMP var,ecx

JB a

exit

a:

CMP ecx,edx

JAE z

mov x,0

mov ebx,x ; to chk the value of x

call Dumpregs

exit

z:

mov x,1

mov ebx,x ; to chk the value of x

call Dumpregs

main ENDP

END main

**TASK 1b**

INCLUDE irvine32.inc

.data

var dword 0

str1 byte "HELLO",0

str2 byte "WORLD",0

.code

main PROC

mov edx,10h

mov ecx,11

mov esi,0

L3 :

CMP var,edx

JBE L1

exit

L1 :

mov edx,0h

mov eax,var

mov ebx,2h

div ebx

CMP edx,esi

Je L2

mov edx, OFFSET str2

call writestring

call crlf

mov edx,10h

inc var

loop L3

L2 :

mov edx, OFFSET str1

call writestring

call crlf

mov edx,10h

inc var

loop L3

call Dumpregs

main ENDP

END main

**TASK 3**

INCLUDE irvine32.inc

.data

arr sbyte 0,0,0,0,1,20,35,-12,66,4,0

.code

main PROC

mov al,0

mov esi,0

J1 :

CMP arr[esi],al

ja J2

inc esi

JMP J1

J2 :

mov bl,arr[esi] ;first value in bl

call crlf

call Dumpregs

exit

main ENDP

END main

**TASK 4**

InCLUDE Irvine32.inc

.data

a byte ?

b byte ?

c1 byte ?

d byte ?

str1 byte "Nos are not Equal ",0

str2 byte "Nos are Equal ",0

.code

main PROC

call readdec

mov a, al

call readdec

mov b, al

call readdec

mov c1, al

call readdec

mov d, al

mov eax,0

mov al,a

cmp al ,b

jne notequal

mov al ,b

cmp al,c1

jne notequal

mov al,c1

cmp al,d

je equal

notequal:

mov edx,offset str1

call writestring

jnp endpro

equal:

mov edx,offset str2

call writestring

jnp endpro

endpro:

call crlf

exit

main endP

end main

**TASK 6**

INCLUDE irvine32.inc

.data

str1 byte "found",0

str2 byte "not found",0

str3 byte "enter number to search in array",0

arr DWORD 2,6,8,1,99,34,67,100,59,0

var word ?

.code

main PROC

mov edx,offset str3

call writestring

call crlf

call readdec

mov esi,0

mov ecx,LENGTHOF arr

L1 :

CMP eax,arr[esi]

je L2

add esi,TYPE arr

loop L1

mov edx,offset str2

call writestring

call crlf

exit

L2 :

mov edx,offset str1

call writestring

call crlf

exit

main ENDP

END main

**TASK 7**

Include irvine32.inc

.data

arr byte 3,6,2,8,4,2

.code

Main PROC

mov esi , OFFSET arr

mov ecx ,LENGTHOF arr

mov Eax,0

mov ebx,0

mov ecx,0

mov esi,0

mov edi,0

L1:

mov al,[esi]

mov bl,[esi+1]

Cmp al,bl

JA isnot

Inc esi

Loop L1

Jmp res

isnot:

Xchg Al,bl

inc dl

mov [esi],Al

mov [esi+1],bl

Jmp L1

res:

mov al,dl

Call WriteDec

Call Crlf

exit

Main Endp

End main