**Abdullah Qadri**

**K17-3922**

**Section: E**

**Coal Lab 5**

**Q1:**

INCLUDE Irvine32.inc

.data

arrayB byte 60,70,80

arrayW word 150,250,350

arrayD dword 600,1200,1800

.code

main PROC

mov eax,0

mov ebx,0

mov edx,0

mov al,arrayB

mov bx,arrayW

mov edx,arrayD

mov esi,2

add al,arrayB[2]

add bx,arrayW[4]

add edx,arrayD[8]

call writedec

call crlf

mov eax,ebx

call writedec

call crlf

mov eax,edx

call writedec

call crlf

exit

main ENDP

END main

**Q2:**

INCLUDE Irvine32.inc

.data

arrayD DWORD 1000,2000,4000,6000

ptr1 DWORD OFFSET [arrayD]

ptr2 DWORD OFFSET [arrayD+4]

ptr3 DWORD OFFSET [arrayD+8]

ptr4 DWORD OFFSET [arrayD+12]

.code

main PROC

mov eax,[ptr1]

mov ebx,[ptr2]

mov ecx,[ptr3]

mov edx,[ptr4]

call DumpRegs

exit

main ENDP

END main

**Q3:**

INCLUDE Irvine32.inc

.data

arrayD DWORD 1, 2, 3, 4

.code

main PROC

mov esi,OFFSET arrayD

mov edi,OFFSET arrayD + SIZEOF arrayD - TYPE arrayD

mov ecx,LENGTHOF arrayD / 2

loop1 :

mov eax,[esi]

mov ebx,[edi]

xchg eax,ebx

mov [esi],eax

mov [edi],ebx

add esi,TYPE arrayD

sub edi, TYPE arrayD

LOOP loop1

call DumpRegs

exit

main ENDP

END main

**Q4:**

INCLUDE Irvine32.inc

.data

.code

main PROC

mov edx, 1

mov eax,1

mov ecx,8

mov ebx,0

L1 :

mov eax,ebx

add eax,edx

mov ebx,edx

mov edx, eax

call writedec

call crlf

loop L1

exit

main endp

end main