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**LAB: 05**

**ROLL No: 17K-3795**

**Question: 01**

TITLE Task 1

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 esi,LENGTHOF arrayB-1

mov ebx,OFFSET arrayB

mov al,arrayB

add al,arrayB[esi\*TYPE arrayB]

call writedec

call crlf

mov eax,0

mov esi,LENGTHOF arrayW-1

mov ebx,OFFSET arrayW

mov ax,arrayW

add ax,arrayW[esi\*TYPE arrayW]

call writedec

call crlf

mov eax,0

mov esi,LENGTHOF arrayD-1

mov ebx,OFFSET arrayD

mov eax,arrayD

add eax,arrayD[esi\*TYPE arrayD]

call writedec

call crlf

exit

main ENDP

END main

**Question: 02**

TITLE Task 2

INCLUDE Irvine32.inc

.data

arr DWORD 1000,2000,4000,6000

ptr0 DWORD OFFSET arr

ptr1 DWORD OFFSET arr+TYPE arr

ptr2 DWORD OFFSET arr+2\*TYPE arr

ptr3 DWORD OFFSET arr+3\*TYPE arr

.code

main proc

mov eax,[ptr0]

call writedec

call crlf

exit

main ENDP

END main

**Question: 03**

TITLE Task 3

INCLUDE Irvine32.inc

.data

arrayB DWORD 1,9,2,5,2,3,4,6,0,8,5

.code

main PROC

mov ecx,LENGTHOF arrayB/2

mov esi,OFFSET arrayB

mov ebx,LENGTHOF arrayB-1

mov eax,0

mov edi,0

l1:

mov eax,[esi]

xchg [arrayB+ebx\*TYPE arrayB],eax

mov [arrayB+edi\*TYPE arrayB],eax

add esi,TYPE arrayB

INC edi

DEC ebx

loop l1

mov ecx,LENGTHOF arrayB

mov esi,OFFSET arrayB

mov eax,0

l2:

mov eax,[esi]

call writedec

call crlf

add esi,TYPE arrayB

loop l2

exit

main ENDP

END main

**Question: 04**

TITLE Task 4

INCLUDE Irvine32.inc

.data

string BYTE "ENTER THE NUMBER : "

.code

main PROC

mov edx,OFFSET string

call writestring

call readint

mov ecx,eax

mov eax,1

mov ebx,1

l1:

call writedec

call crlf

mov edx,eax

add eax,ebx

mov ebx,edx

loop l1

exit

main ENDP

END main

**Question: 05**

TITLE Task 5

INCLUDE Irvine32.inc

.data

arrayB BYTE 1,9,5,2,3,4,6,0,8,7

string BYTE "BEFORE SORT : ",0

string1 BYTE "AFTER SORT : ",0

.code

main PROC

mov edx,OFFSET string

call writestring

call crlf

mov ecx,LENGTHOF arrayB

mov ebx,OFFSET arrayB

mov eax,0

l4:

mov al,[ebx]

call writedec

call crlf

add ebx,TYPE arrayB

loop l4

mov ecx,LENGTHOF arrayB

mov eax,0

l1:

PUSH ecx

mov ecx,LENGTHOF arrayB-1

mov esi,0

l2:

mov al,arrayB[esi]

CMP al,arrayB[esi+TYPE arrayB]

jl common

xchg arrayB[esi+TYPE arrayB],al

mov arrayB[esi],al

common :

add esi,TYPE arrayB

loop l2

POP ecx

loop l1

mov edx,OFFSET string1

call writestring

call crlf

mov ecx,LENGTHOF arrayB

mov ebx,OFFSET arrayB

mov eax,0

l3:

mov al,[ebx]

call writedec

call crlf

add ebx,TYPE arrayB

loop l3

exit

main ENDP

END main