**Lab 5**

Group 3:

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Video link:

<https://youtu.be/gzfZb8mhkIc>

**Program 1:**

TITLE Program 1 (main.asm)

INCLUDE Irvine32.inc

.data

sideHex1 DWORD ?

sideHex2 DWORD ?

Perimeter\_hexagon1 DWORD ?

Perimeter\_hexagon2 DWORD ?

TotalPerimeter DWORD ?

str1 BYTE "enter a side value for hexagon 1:",0

str2 BYTE "enter a side value for hexagon 2:",0

str3 BYTE "perimeter for hexagon1 with side = ",0

str4 BYTE "perimeter for hexagon2 with side = ",0

str5 BYTE " is : ", 0

str6 BYTE "The total perimeter = ",0

input BYTE 2 DUP(0)

.code

MAIN PROC

mov edx, OFFSET str1

call WriteString

mov edx, OFFSET input

mov ecx,(SIZEOF input)-1

call ReadInt

mov sideHex1,eax

mov edx, OFFSET str2

call WriteString

mov edx, OFFSET input

mov ecx, (SIZEOF input) - 1

call ReadInt

mov sideHex2, eax

mov edx, OFFSET str3

call WriteString

mov eax, sideHex1

call WriteInt

mov ecx, 5

L1:

add eax,sideHex1

loop L1

mov Perimeter\_hexagon1,eax

mov edx, OFFSET str5

call WriteString

mov eax, Perimeter\_hexagon1

call WriteInt

call Crlf

mov edx, OFFSET str4

call WriteString

mov eax, sideHex2

call WriteInt

mov ecx,5

L2:

add eax, sideHex2

loop L2

mov Perimeter\_hexagon2,eax

mov edx, OFFSET str5

call WriteString

mov eax, Perimeter\_hexagon2

call WriteInt

call Crlf

mov edx,OFFSET str6

call WriteString

add eax,Perimeter\_hexagon1

call WriteInt

EXIT

MAIN ENDP

END MAIN

**Program 2:**

TITLE Lab 5 Program 2(main.asm)

INCLUDE Irvine32.inc

.data

Multiplicand DWORD ?

Multiplier DWORD ?

Product DWORD 0

Question1 BYTE "Please enter a multiplicand <1..9> : ", 0

Question2 BYTE "Please enter a multiplier <1..9> : ", 0

Multiplication BYTE "Multiplication of: ", 0

Answer BYTE "The product is: ", 0

Times BYTE " X ", 0

Input BYTE 10 DUP(0)

.code

main PROC

call clrscr

mov edx, OFFSET Question1

call WriteString

mov edx, OFFSET Input

mov ecx, (SIZEOF Input) - 1

call ReadDec

mov Multiplicand, eax

mov edx, OFFSET Question2

call WriteString

mov edx, OFFSET Input

mov ecx, (SIZEOF Input) - 1

call ReadDec

mov Multiplier, eax

mov edx, OFFSET Multiplication

call WriteString

mov eax, Multiplicand

call WriteDec

mov edx, OFFSET Times

call WriteString

mov eax, Multiplier

call WriteDec

mov ebx, Multiplicand

mul ebx

mov Product, ebx

call crlf

mov edx, OFFSET Answer

call WriteString

call WriteDec

call crlf

exit

main ENDP

END main

**Program 3:**

TITLE Lab 5 (main.asm)

INCLUDE Irvine32.inc

.data

val1 dword ?

HELLO dword 0, 4, 8, 12, 16, 20

TotalEVEN dword ?

TotalODD dword ?

str1 BYTE "Enter Integer : ", 0

str2 BYTE "TotalEVEN is : ", 0

str3 BYTE "TotalODD is : ", 0

.code

main PROC

mov ecx, 6; loop counter

mov edi, 0

L1:

mov edx, offset str1

call WriteString

call ReadInt

mov val1, eax

mov eax, val1

mov HELLO[edi], eax

add edi, 4

call Crlf; goto next display line

call Crlf

loop L1; repeat loop

mov edx, offset str2

call WriteString

mov ecx, 2; loop counter

mov edi, 0

mov eax, HELLO[edi]

L2:

add edi, 8

add eax, HELLO[edi]

loop L2;

mov TotalEVEN, eax

call WriteDec

call Crlf

mov edx, offset str3

call WriteString

mov ecx, 2; loop counter

mov edi, 4

mov eax, HELLO[edi]

L3:

add edi, 8

add eax, HELLO[edi]

loop L3;

mov TotalODD, eax

call WriteDec

call Crlf

exit

main ENDP

END main