**Lab 10 (Portal 11)**

**Aamir Sohail**

**18F-0215**

# TASK1

include Irvine32.inc

.data

input db "Please enter your number: ",0

result db "Binary number is: ",0

one db "1",0

zero db "0",0

.code

main proc

mov edx,offset input

call writestring

mov eax,0

mov ebx,0

call readhex

call crlf

mov edx,offset result

call writestring

call CONVERT\_BINARY

exit

main endp

CONVERT\_BINARY proc

mov ecx,32

l1:

shl eax,1

jc move\_one

jmp move\_zero

move\_one:

mov edx,offset one

call writestring

jmp here

move\_zero:

mov edx,offset zero

call writestring

here:

clc

loop l1

ret

CONVERT\_BINARY endp

# TASK 2

include Irvine32.inc

.data

input db "Please enter your Binary number: ",0

result db "Hexadecimal number is: ",0

str1 db 16 dup(?)

sum db 0

.code

main proc

mov edx,offset input

call writestring

mov eax,0

mov ebx,0

call IN\_PROC1

call crlf

mov edx,offset result

call writestring

call CONVERT\_HEX

exit

main endp

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IN\_PROC1 proc

mov esi,0

mov ecx,16

l1:

call readchar

call writechar

mov [str1+esi],al

loop l1

ret

IN\_PROC1 endp

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CONVERT\_HEX proc

mov edx,0

mov esi,0

mov ax,8

mov bl,2

mov ecx,4

l2:

clc

cmp [str1+esi],1

je hexa

jmp zero

hexa:

add sum,bl

zero:

div bl

add esi,type str1

loop l2

mov al,sum

call writedec

ret

CONVERT\_HEX endp

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End

# TASK 3

include irvine32.inc

.data

result db "Reversed number is: ",0

.code

main proc

mov ebx,0

mov eax,0

mov al,01001011b

mov bl,al

mov ecx,8

l2:

rcr al,1

rcl bl,1

loop l2

call crlf

mov edx,offset result

call writestring

mov al,bl

call writehex

exit

main endp

end main