**Code:**

section .data

input db "Enter number: "

len1 equ $-input

output db "Factorial is: "

len2 equ $-output

section .bss

num resb 4

i resb 4

fact resb 4

section .text

global \_start

\_start:

mov eax,4

mov ebx,1

mov ecx,input

mov edx,len1

int 0x80

mov eax,3

mov ebx,2

mov ecx,num

mov edx,4

int 0x80

mov eax,4

mov ebx,1

mov ecx,output

mov edx,len2

int 0x80

call FACTORIAL

mov eax,4

mov ebx,1

mov ecx,fact

mov edx,4

int 0x80

mov eax,1

xor ebx,ebx

int 0x80

FACTORIAL:

mov byte[i],'1'

mov byte[fact],'1'

L1:

mov eax,[fact]

sub eax,'0'

mov ebx,[i]

sub ebx,'0'

mul ebx

add eax,'0'

mov [fact],eax

inc byte[i]

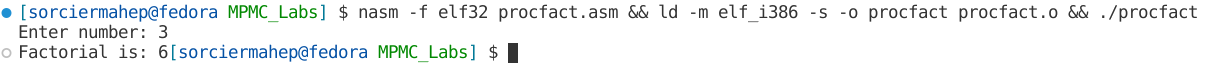
mov al, [i]

CMP al, byte[num]

JLE L1

ret

**Output:**

****

**Code:**

section .bss

n resb 4

a resb 4

b resb 4

c resb 4

i resb 4

section .data

str1 db 'Enter a number: '

str1len equ $-str1

str2 db 'Fibonacci series: '

str2len equ $-str2

nl db "", 10

nllen equ $-nl

spa db " "

spalen equ $-spa

section .text

global \_start

\_start:

mov eax,4

mov ebx,1

mov ecx,str1

mov edx,str1len

int 0x80

mov eax,3

mov ebx,2

mov ecx,n

mov edx,4

int 0x80

mov eax,4

mov ebx,1

mov ecx,str2

mov edx,str2len

int 0x80

call FIBO

mov eax,1

xor ebx,ebx

int 0x80

FIBO:

mov byte[i], '0'

mov byte[a], '0'

mov byte[b], '1'

mov al,byte[i]

cmp al,byte[n]

JL L1

JMP L4

L1:

mov eax,4

mov ebx,1

mov ecx,a

mov edx,4

int 0x80

mov eax,4

mov ebx,1

mov ecx,spa

mov edx,spalen

int 0x80

inc byte[i]

mov al, [i]

cmp al, byte[n]

JL L2

JMP L4

L2:

mov eax,4

mov ebx,1

mov ecx,b

mov edx,4

int 0x80

mov eax,4

mov ebx,1

mov ecx,spa

mov edx,spalen

int 0x80

inc byte[i]

mov al, [i]

cmp al, byte[n]

JL L3

JMP L4

L3:

call formula

mov eax,4

mov ebx,1

mov ecx,c

mov edx,4

int 0x80

mov eax,4

mov ebx,1

mov ecx,spa

mov edx,spalen

int 0x80

mov al, [b]

mov [a], al

mov al, [c]

mov [b], al

inc byte[i]

mov al, [i]

cmp al, byte[n]

JL L3

JMP L4

L4:

ret

formula:

mov eax,[a]

sub eax,'0'

mov ebx,[b]

sub ebx,'0'

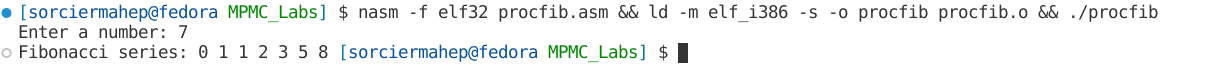
add eax,ebx

add eax,'0'

mov [c],eax

ret

**Output:**

****

**Code:**

section .data

str1 db "Enter the numbers: "

str1len equ $-str1

sumstr db "Sum is: "

sumlen equ $-sumstr

diffstr db "Diff is: "

difflen equ $-diffstr

prodstr db "Prod is: "

prodlen equ $-prodstr

quostr db "Quotient is: "

quolen equ $-quostr

remstr db "Remainder is: "

remlen equ $-remstr

nl db "", 10

nllen equ $-nl

section .bss

num1 resb 4

num2 resb 4

prod resb 4

quo resb 4

rem resb 4

sum resb 4

diff resb 4

section .text

global \_start

\_start:

mov eax,4

mov ebx,1

mov ecx,str1

mov edx,str1len

int 0x80

mov eax,3

mov ebx,2

mov ecx,num1

mov edx,4

int 0x80

mov eax,3

mov ebx,2

mov ecx,num2

mov edx,4

int 0x80

call SUM

mov eax,4

mov ebx,1

mov ecx,sumstr

mov edx,sumlen

int 0x80

mov eax,4

mov ebx,1

mov ecx,sum

mov edx,4

int 0x80

call NEWLINE

call DIFF

mov eax,4

mov ebx,1

mov ecx,diffstr

mov edx,difflen

int 0x80

mov eax,4

mov ebx,1

mov ecx,diff

mov edx,4

Int 0x80

call NEWLINE

call PROD

mov eax,4

mov ebx,1

mov ecx,prodstr

mov edx,prodlen

int 0x80

mov eax,4

mov ebx,1

mov ecx,prod

mov edx,4

int 0x80

call NEWLINE

call DIV

mov eax,4

mov ebx,1

mov ecx,quostr

mov edx,quolen

int 0x80

mov eax,4

mov ebx,1

mov ecx,quo

mov edx,4

int 0x80

call NEWLINE

mov eax,4

mov ebx,1

mov ecx,remstr

mov edx,remlen

int 0x80

mov eax,4

mov ebx,1

mov ecx,rem

mov edx,4

int 0x80

call NEWLINE

mov eax,1

xor ebx,ebx

int 0x80

SUM:

mov eax, [num1]

sub eax, '0'

mov ebx, [num2]

sub ebx, '0'

add eax, ebx

add eax, '0'

mov [sum], eax

ret

DIFF:

mov eax, [num1]

sub eax, '0'

mov ebx, [num2]

sub ebx, '0'

sub eax, ebx

add eax, '0'

mov [diff], eax

ret

PROD:

mov al, [num1]

sub al, '0'

mov bl, [num2]

sub bl, '0'

mul bl

add al, '0'

mov [prod], al

ret

DIV:

mov al, [num1]

sub al, '0'

mov bl, [num2]

sub bl, '0'

div bl

add al, '0'

mov [quo], al

add ah, '0'

mov [rem], ah

ret

NEWLINE:

mov eax,4

mov ebx,1

mov ecx,nl

mov edx,nllen

int 0x80

ret

**Output:**

