1. Addition of multi digit numbers

section .data

msg1 db 'The sum is:',10

msg1len equ $-msg1

msg2 db 'Enter a number:',10

msg2len equ $-msg2

msg3 db 'Enter another number:',10

msg3len equ $-msg3

section .bss

num1 resb 5

num2 resb 5

sum resb 5

section .text

global \_start

\_start:

mov eax,4

mov ebx,1

mov ecx,msg2

mov edx,msg2len

int 80h

mov eax,3

mov ebx,2

mov ecx,num1

mov edx,5

int 80h

mov eax,4

mov ebx,1

mov ecx,msg3

mov edx,msg3len

int 80h

mov eax,3

mov ebx,2

mov ecx,num2

mov edx,5

int 80h

mov esi,3

mov ecx,4

clc

add\_loop:

mov al,[num1+esi]

add al,[num2+esi]

aaa

pushf

or al,30h

popf

mov [sum+esi],al

dec esi

loop add\_loop

mov eax,4

mov ebx,1

mov ecx,msg1

mov edx,msg1len

int 80h

mov eax,4

mov ebx,1

mov ecx,sum

mov edx,5

int 80h

mov eax,1

mov ebx,0

int 80h

1. Subtraction of multi digit numbers

section .data

msg1 db 'The difference is:',10

msg1len equ $-msg1

msg2 db 'Enter a number:',10

msg2len equ $-msg2

msg3 db 'Enter another number:',10

msg3len equ $-msg3

section .bss

num1 resb 5

num2 resb 5

sum resb 5

section .text

global \_start

\_start:

mov eax,4

mov ebx,1

mov ecx,msg2

mov edx,msg2len

int 80h

mov eax,3

mov ebx,2

mov ecx,num1

mov edx,5

int 80h

mov eax,4

mov ebx,1

mov ecx,msg3

mov edx,msg3len

int 80h

mov eax,3

mov ebx,2

mov ecx,num2

mov edx,5

int 80h

mov esi,3

mov ecx,4

clc

sub\_loop:

mov al,[num1+esi]

sbb al,[num2+esi]

aaa ;ascii adjust after addition

pushf

or al,30h

popf

mov [sum+esi],al

dec esi

loop sub\_loop

mov eax,4

mov ebx,1

mov ecx,msg1

mov edx,msg1len

int 80h

mov eax,4

mov ebx,1

mov ecx,sum

mov edx,5

int 80h

mov eax,1

mov ebx,0

int 80h