section .data

menumsg db 10,10,'\*\*program for Non-overlapped Block Transfer without using string instructions\*\*',10

menumsg\_len equ $-menumsg

blk\_bfrmsg db 10,'Block contents before transfer'

blk\_bfrmsg\_len equ $-blk\_bfrmsg

blk\_afrmsg db 10,'Block contents after transfer'

blk\_afrmsg\_len equ $-blk\_afrmsg

srcmsg db 10,'Source block contents::'

srcmsg\_len equ $-srcmsg

dstmsg db 10,'Destination block contents::'

dstmsg\_len equ $-dstmsg

srcblk db 01h,02h,03h,04h,05h

dstblk db 00,00,00,00,00

spacechar db 20h

spchlength equ $-spacechar

section .bss

optionbuff resb 02

dispbuff resb 02

%macro display 2

mov rax,01

mov rdi,01

mov rsi,%1

mov rdx,%2

syscall

%endmacro

%macro accept 2

mov rax,00

mov rdi,00

mov rsi,%1

mov rdx,%2

syscall

%endmacro

section .text

global \_start

\_start:

display blk\_bfrmsg,blk\_bfrmsg\_len

call dispsrc\_blk\_proc

call dispdest\_blk\_proc

display menumsg,menumsg\_len

mov rsi,srcblk

mov rdi,dstblk

mov rcx,05

again: mov bl,[rsi]

mov [rdi],bl

inc rsi

inc rdi

loop again

display blk\_afrmsg,blk\_afrmsg\_len

call dispsrc\_blk\_proc

call dispdest\_blk\_proc

exit: mov rax,60 ;Exit

mov rbx,00

syscall

dispsrc\_blk\_proc:

display srcmsg,srcmsg\_len

mov rsi,srcblk

mov rcx,05h

up1: push rcx

mov bl,[rsi]

push rsi

call disp8\_proc

display spacechar,spchlength

pop rsi

inc rsi

pop rcx

loop up1 ; this instructin automatically decrement contents of rcx reg. and compared

with zero

ret

dispdest\_blk\_proc:

display dstmsg,dstmsg\_len

mov rdi,dstblk

mov rcx,05

up2: push rcx

mov bl,[rdi]

push rdi

call disp8\_proc

display spacechar,spchlength

pop rdi

inc rdi

pop rcx

loop up2

ret

disp8\_proc:

mov rsi,dispbuff

mov rcx,02

dup1:

rol bl,4

mov dl,bl

and dl,0Fh

cmp dl,09H

jbe dskip

add dl,07h

dskip: add dl,30h

mov [rsi],dl

inc rsi

loop dup1

display dispbuff,02

ret

**Output:**

ubuntu@ubuntu-V530S-07ICB:~$ nasm -f elf64 over.asm

ubuntu@ubuntu-V530S-07ICB:~$ ld -o over over.o

ubuntu@ubuntu-V530S-07ICB:~$ ./over

Block contents before transfer

Source block contents::01 02 03 04 05

Destination block contents::00 00 00 00 00

\*\*\*\*program for Non-overlapped Block Transfer without using string instructions\*\*\*\*

Block contents after transfer

Source block contents::01 02 03 04 05

Destination block contents::01 02 03 04 05 ubuntu@ubuntu-V530S-07ICB:~$