section .data

menumsg db 10,'## Program for Overlapped Block Transfer with string Specific Instruction ##',10

menumsg\_len equ $-menumsg

blk\_bfrmsg db 10,10,'Block contents before Overlap::'

blk\_bfrmsg\_len equ $-blk\_bfrmsg

blk\_afrmsg db 10,'Block contents after Overlap::',10

blk\_afrmsg\_len equ $-blk\_afrmsg

srcmsg db 10,'Source block contents::'

srcmsg\_len equ $-srcmsg

posmsg db 10,10,10,'Enter position to overlap::'

posmsg\_len equ $-posmsg

spacechar db 20h

spchlength equ $-spacechar

srcblk db 01h,02h,03h,04h,05h,00h,00h,00h,00h,00h

;\*\*\*\*\*\*\*\*\*\*.bss Section\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

section .bss

optionbuff resb 02

dispbuff resb 02

numascii resb 03

pos resb 00

%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

;\*\*\*\*\*\*\*\*\*\*Text Section\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

section .text

global \_start

\_start:

display blk\_bfrmsg,blk\_bfrmsg\_len

call disp\_src\_blk\_proc

display posmsg,posmsg\_len

accept numascii,3

call packnum\_proc

menu: display menumsg,menumsg\_len

;\*\*\*\*\*\*\*\*\*\*\*\*Using String Procedure\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mov esi,srcblk+4

mov edi,esi

add edi,[pos]

mov ecx,05

std

rep movsb

display blk\_afrmsg,blk\_afrmsg\_len

call disp\_src\_blk\_proc

exit:

mov rax,60 ;Exit

mov rbx,00

syscall

;\*\*\*\*\*\*\*\*\*\*Display Block Procedure\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

disp\_src\_blk\_proc:

display srcmsg,srcmsg\_len

mov rsi,srcblk

mov rcx,05h

add cl,[pos]

up1: push rcx

mov bl,[rsi]

push rsi

call disp8\_proc

display spacechar,spchlength

pop rsi

inc rsi

pop rcx

loop up1

ret

;\*\*\*\*\*\*\*\*\*\*\*\*Display Procedure\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

disp8\_proc:

mov ecx,2

mov edi,dispbuff

dup1:

rol bl,4

mov al,bl

and al,0fh

cmp al,09

jbe dskip

add al,07h

dskip: add al,30h

mov [edi],al

inc edi

loop dup1

display dispbuff,2

ret

;\*\*\*\*\*\*\*\*\*\*\*\*Packnum Procedure\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

packnum\_proc:

mov bx,0

mov ecx,2

mov esi,numascii

up2: rol bl,4

mov al,[esi]

sub al,30h

cmp al,09h

jbe skip5

sub al,07h

skip5:

add bl,al

inc esi

loop up2

mov [pos],bl

ret

;OUTPUT:

;\*\*\*\*\*\*\*\*\*\*\*\*\*Output\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

;ubuntu@ubuntu-ThinkCentre-E73:~$ nasm -f elf64 prog8.asm

;ubuntu@ubuntu-ThinkCentre-E73:~$ ld -o prog8 prog8.o

;ubuntu@ubuntu-ThinkCentre-E73:~$ ./prog8

;Block contents before Overlap::

;Source block contents::01 02 03 04 05

;Enter position to overlap::02

;## Program for Overlapped Block Transfer with string Specific Instruction ##

;Block contents after Overlap::

;Source block contents::01 02 01 02 03 04 05