SC165

PROBLEM STATEMENT: Write X86/64 ALP to perform overlapped block transfer with string specific instructions Block containing data can be defined in the data segment.

```
%macro print 2 ; macro for print
mov rax,1
mov rdi,1
mov rsi,%1
mov rdx,%2
syscall
%endmacro

section .data
src db 11h,22h,33h,44h,55h ; declaring array 1
arrcnt1 equ 07
msg1 db "Sourse block contents are: ",10
len1 equ $-msg1
msg2 db "Destination block contains are: ",10
len2 equ $-msg2
msg3 db "",10
len3 equ $-msg3

section .bss
result resb 2
section .text
global _start
_start:
print msg1,len1

;display of source block
mov rbp,05
mov rsi,src
l1:
mov bl,[rsi]
push rsi
call display
print msg3,len3
pop rsi
inc rsi
dec rbp
jnz l1
;shifting the element of source block to destination block
```

```
        mov rsi,src
        add rsi,5
        dec rsi
        mov rdi,rsi
        add rdi,2
        mov rcx,05
        std
        rep movsb

        ;Display of destination block
        print msg2,len2
        mov rbp,07h
        mov rsi,src
l2:
        mov bl,[rsi]
        push rsi
        call display
        print msg3,len3
        pop rsi
        inc rsi
        dec rbp
        jnz l2

        ;exit procedure
        mov rax,60
        mov rdi,0
        syscall

        ;Display procedure
display:

        mov rcx,16
        mov rdi,result
up1:
        rol bl,4
        mov al,bl
        and al,0fh
        cmp al,09h
        jbe skip
        and al,07h
skip:
        add al,30h
        mov [rdi],al
        inc rdi
```
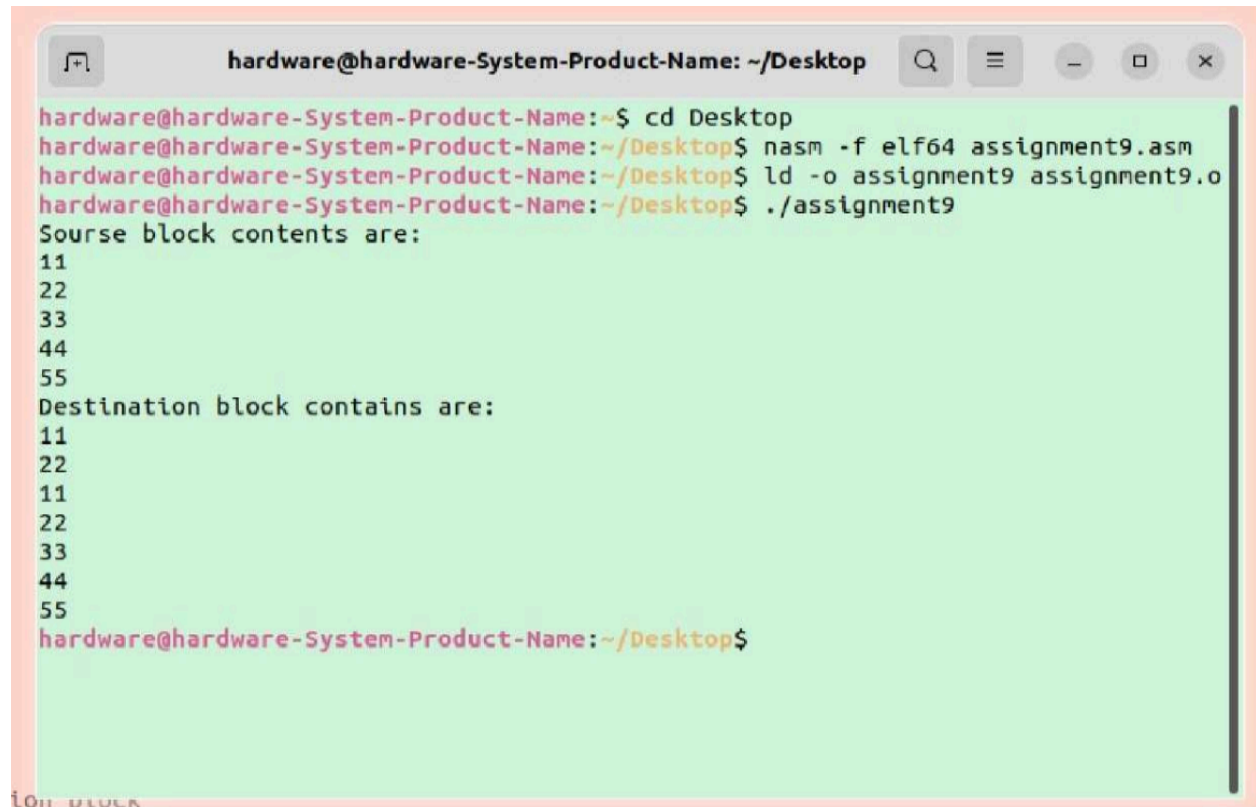
```
loop up1
print result,2
ret
```