

## Assignment – 8 (Overlapped block data transfer)

### # Code

; 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.

; BEGINNING OF CODE

%macro print 2

mov rax,1

mov rdi,1

mov rsi,%1

mov rdx,%2

syscall

%endmacro

section .data

msg1 db 10,"src blk",10,13

msg1len equ \$-msg1

msg2 db 10,"dest blk",10,13

msg2len equ \$-msg2

srcblk db 10h,20h,30h,40h,50h

cnt equ 05h

space db " "

spacelen equ \$-space

section .bss

ans resb 4

destblk resb 5

section .text

global \_start

\_start:

print msg1,msg1len

mov rsi,srcblk

call disp\_block

cld

mov rcx,02h

mov rsi,srcblk

mov rdi,destblk

rep movsb

mov rcx,03h

mov rsi,srcblk

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mov rdi,destblk+2
rep movsb
print msg2,msg2len
mov rsi,destblk
call disp_block
mov rax,60
xor rdi,rdi
syscall
disp_block:
mov rbp,cnt
back:
mov al,[rsi]
push rsi
call disp_8
print space,1
pop rsi
inc rsi
dec rbp
jnz back
ret
disp_8:
mov rsi,ans+1
mov rcx,2
back1:
mov rdx,0
mov rbx,16
div rbx
cmp dl,09h
jbe add_30
add dl ,07h
add_30:
add dl,30h
mov[rsi],dl
dec rsi
dec rcx
jnz back1
print ans,2
ret
; END OF CODE
```

## # Output

```
$ nasm -f elf64 Practical-4.1\ \ (with\ string\).asm && ld -o exec Practical-4.1\  
  \ (with\ string\).o && ./exec
```

```
src blk
```

```
10 20 30 40 50
```

```
dest blk
```

```
10 20 10 20 30
```