

## MICROPROCESSOR LABORATORY

Assignment No. 7



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**DIVISION:-A** 

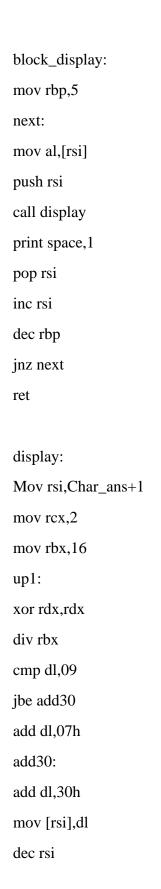
## Assignment No. 7

## Program: ;Non Overlapped Block Transfer %macro print 2 Mov rax,1 Mov rdi,1 Mov rsi,%1 Mov rdx,%2 syscall %endmacro %macro exit 0 mov rax,60 mov rdi,0 syscall %endmacro section .data sblock db 10h,20h,30h,40h,50h dblock times 5 db 0 msg1 db 10,13,"Before Non Overlapped Block Transfer :- ",10,13 msg1\_len equ \$-msg1

```
msg2 db 10,13,"After Non Overlapped Block Transfer :- ",10,13
msg2_len equ $-msg2
new_line db 10,13
smsg db 10, "Source Block is:"
smsg_len equ $-smsg
dmsg db 10,"Destination Block is: "
dmsg_len equ $-dmsg
space db " "
section .bss
Char_ans resb 2
Section .text
global _start
_start:
print msg1,msg1_len
print smsg,smsg_len
mov rsi,sblock
call block_display
print dmsg,dmsg_len
mov rsi,dblock
call block_display
```

```
call block_transfer
print new_line,1
print msg2,msg2_len
print smsg,smsg_len
mov rsi,sblock
call block_display
print dmsg,dmsg_len
mov rsi,dblock
call block_display
print new_line,1
exit
block_transfer:
mov rsi,sblock
mov rdi,dblock
mov rcx,5
up:
mov al,[rsi]
mov [rdi],al
inc rsi
inc rdi
dec rcx
jnz up
```

ret



```
dec rcx
jnz up1
print Char_ans,2
ret
```

```
⟨→ Code 

□ Input 

→ Output

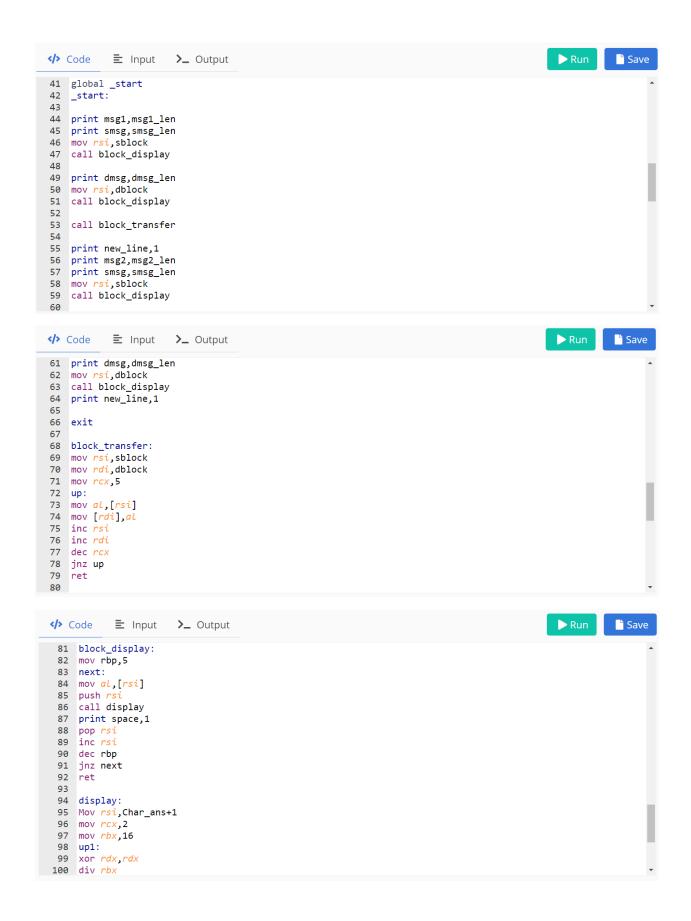
                                                                                        Run
                                                                                                  Save
1 ;Non Overlapped Block Transfer
 3 %macro print 2
4 Mov rax,1
 5 Mov rdi,1
6 Mov rsi,%1
7 Mov rdx,%2
8 syscall
9 %endmacro
10
11 %macro exit 0
12 mov rax,60
13 mov rdi,0
14 syscall
15 %endmacro
17 section .data
18 sblock db 10h,20h,30h,40h,50h
19 dblock times 5 db 0
20

⟨→ Code 

□ Input 

→ Output

                                                                                        Run
                                                                                                  Save
21 msg1 db 10,13, "Before Non Overlapped Block Transfer :- ",10,13
22 msg1_len equ $-msg1
24 msg2 db 10,13,"After Non Overlapped Block Transfer :- ",10,13
25 msg2_len equ $-msg2
26
27 new_line db 10,13
28
29 smsg db 10, "Source Block is : "
30 smsg_len equ $-smsg
31
32 dmsg db 10, "Destination Block is : "
33 dmsg_len equ $-dmsg
34
35 space db " "
36
37 section .bss
38 Char_ans resb 2
39
40 Section .text
```



```
⟨→ Code 

□ Input 

→ Output

                                                                                            Run
                                                                                                       Save
  93
  94 display:
  95 Mov rsi, Char_ans+1
 96 mov rcx,2
97 mov rbx,16
 98 up1:
 99 xor rdx, rdx
 100 div rbx
 101 cmp dL,09
 102 jbe add30
103 add dL,07h
 104 add30:
 105 add dL,30h
 106 mov [rsi],dL
 107 dec rsi
 108 dec rcx
 109 jnz up1
 110 print Char_ans,2
 111 ret
112
```

## Output:

