



A.Y. 2022-2023

Subject: Process Organization and Architecture

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Experiment 7:

Aim: ALP to transfer n block of data from one segment to another segment.

Code:

```
01 data segment
02 seg1 db 1h,2h,3h
03 ends
04 extra segment
05 seg2 db ?
06 ends
07 code segment
08 start:
09
10 mov ax, data
11 mov ds, ax
12 mov ax, extra
13 mov es, ax
14
15 lea si, seg1
16 lea di, seg2
17 mov cx, 03h
18 x: mov ah, ds:[si]
19 mov es:[di], ah
20
21 inc si
22 inc di
23 dec cx
24 jnz x
25 int 3
26
27 ends
28 end start
```

Output:

The screenshot displays the 8086 emulator interface. The registers window shows the following values:

Register	H	L
AX	03	11
BX	00	00
CX	00	00
DX	00	00
CS	0712	
IP	0033	
SS	0710	
SP	0000	
BP	0000	
SI	0003	
DI	0003	
DS	0710	
ES	0711	

The memory window shows the following data:

Address	Value
0713F	90 144 E
07140	90 144 E
07141	90 144 E
07142	90 144 E
07143	90 144 E
07144	90 144 E
07145	90 144 E
07146	90 144 E
07147	90 144 E
07148	90 144 E
07149	90 144 E
0714A	90 144 E
0714B	90 144 E
0714C	90 144 E
0714D	90 144 E
0714E	90 144 E
0714F	90 144 E
07150	90 144 E
07151	90 144 E
07152	90 144 E
07153	14 244 F
07154	00 000 NULL

The source code window shows the following code:

```
start:
mov ax, data
mov ds, ax
mov ax, extra
mov es, ax

lea si, seg1
lea di, seg2
mov cx, 03h
x: mov ah, ds:[si]
  mov es:[di], ah

inc si
inc di
dec cx
jnz x
int 3
```

The variables window shows the following data:

Variable	Value
SEG1	01h, 02h, 03h, 00h, 00h
SEG2	01h, 02h, 03h