

\$ cat 07testmovl.s

```
## =====  
## 07testmovl.s  
## =====  
  
.section ".text"  
  
movl    $0, %eax  
movl    $0, %ebx  
movl    $0, %ecx  
movl    $0, %edx  
movl    $0, %esi  
movl    $0, %edi  
movl    $0, %ebp  
movl    $0, %esp  
  
movl    $1, %eax  
movl    $1, %ebx  
movl    $1, %ecx  
movl    $1, %edx  
movl    $1, %esi  
movl    $1, %edi  
movl    $1, %ebp  
movl    $1, %esp  
  
movl    $2, %eax  
movl    $2, %ebx  
movl    $2, %ecx  
movl    $2, %edx  
movl    $2, %esi  
movl    $2, %edi  
movl    $2, %ebp  
movl    $2, %esp  
  
movl    $-2, %eax  
movl    $-2, %ebx  
movl    $-2, %ecx  
movl    $-2, %edx  
movl    $-2, %esi  
movl    $-2, %edi  
movl    $-2, %ebp  
movl    $-2, %esp  
  
movl    %eax, %eax  
movl    %eax, %ebx  
movl    %eax, %ecx  
movl    %eax, %edx  
movl    %eax, %esi  
movl    %eax, %edi  
movl    %eax, %ebp  
movl    %eax, %esp  
  
movl    %eax, %eax  
movl    %ebx, %eax  
movl    %ecx, %eax  
movl    %edx, %eax  
movl    %esi, %eax  
movl    %edi, %eax  
movl    %ebp, %eax  
movl    %esp, %eax  
  
movl    %eax, 0(%eax)  
movl    %eax, 0(%ebx)  
movl    %eax, 0(%ecx)  
movl    %eax, 0(%edx)  
movl    %eax, 0(%esi)  
movl    %eax, 0(%edi)  
movl    %eax, 0(%ebp)  
# movl  %eax, 0(%esp) # Intel handles as a special case.  
# Your assembler need not handle it.
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movl    %eax, 1(%eax)
movl    %eax, 1(%ebx)
movl    %eax, 1(%ecx)
movl    %eax, 1(%edx)
movl    %eax, 1(%esi)
movl    %eax, 1(%edi)
movl    %eax, 1(%ebp)
# movl  %eax, 1(%esp) # Intel handles as a special case.
# Your assembler need not handle it.

movl    %eax, 2(%eax)
movl    %eax, 2(%ebx)
movl    %eax, 2(%ecx)
movl    %eax, 2(%edx)
movl    %eax, 2(%esi)
movl    %eax, 2(%edi)
movl    %eax, 2(%ebp)
# movl  %eax, 2(%esp) # Intel handles as a special case.
# Your assembler need not handle it.

movl    %eax, -2(%eax)
movl    %eax, -2(%ebx)
movl    %eax, -2(%ecx)
movl    %eax, -2(%edx)
movl    %eax, -2(%esi)
movl    %eax, -2(%edi)
movl    %eax, -2(%ebp)
# movl  %eax, -2(%esp) # Intel handles as a special case.
# Your assembler need not handle it.

movl    %eax, 321(%eax)
movl    %eax, 321(%ebx)
movl    %eax, 321(%ecx)
movl    %eax, 321(%edx)
movl    %eax, 321(%esi)
movl    %eax, 321(%edi)
movl    %eax, 321(%ebp)
# movl  %eax, 321(%esp) # Intel handles as a special case.
# Your assembler need not handle it.

movl    %eax, 321(%eax)
movl    %ebx, 321(%eax)
movl    %ecx, 321(%eax)
movl    %edx, 321(%eax)
movl    %esi, 321(%eax)
movl    %edi, 321(%eax)
movl    %ebp, 321(%eax)
movl    %esp, 321(%eax)

movl    0(%eax), %eax
movl    0(%eax), %ebx
movl    0(%eax), %ecx
movl    0(%eax), %edx
movl    0(%eax), %esi
movl    0(%eax), %edi
movl    0(%eax), %ebp
movl    0(%eax), %esp

movl    1(%eax), %eax
movl    1(%eax), %ebx
movl    1(%eax), %ecx
movl    1(%eax), %edx
movl    1(%eax), %esi
movl    1(%eax), %edi
movl    1(%eax), %ebp
movl    1(%eax), %esp

movl    2(%eax), %eax
movl    2(%eax), %ebx
movl    2(%eax), %ecx
movl    2(%eax), %edx

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movl    2(%eax), %esi
movl    2(%eax), %edi
movl    2(%eax), %ebp
movl    2(%eax), %esp

movl    -2(%eax), %eax
movl    -2(%eax), %ebx
movl    -2(%eax), %ecx
movl    -2(%eax), %edx
movl    -2(%eax), %esi
movl    -2(%eax), %edi
movl    -2(%eax), %ebp
movl    -2(%eax), %esp

movl    321(%eax), %eax
movl    321(%eax), %ebx
movl    321(%eax), %ecx
movl    321(%eax), %edx
movl    321(%eax), %esi
movl    321(%eax), %edi
movl    321(%eax), %ebp
movl    321(%eax), %esp

movl    321(%eax), %eax
movl    321(%ebx), %eax
movl    321(%ecx), %eax
movl    321(%edx), %eax
movl    321(%esi), %eax
movl    321(%edi), %eax
movl    321(%ebp), %eax
# movl  321(%esp), %eax # Intel handles as a special case.
#                               # Your assembler need not handle it.

movl    $somelabel, %eax
movl    $somelabel, %ebx
movl    $somelabel, %ecx
movl    $somelabel, %edx
movl    $somelabel, %esi
movl    $somelabel, %edi
movl    $somelabel, %ebp
movl    $somelabel, %esp

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$ assembler -o 07testmovl.o 07testmovl.s
$ objdump -d 07testmovl.o

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07testmovl.o:      file format elf32-i386

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Disassembly of section .text:

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```

00000000 <.text>:
0:  b8 00 00 00 00      mov     $0x0,%eax
5:  bb 00 00 00 00      mov     $0x0,%ebx
a:  b9 00 00 00 00      mov     $0x0,%ecx
f:  ba 00 00 00 00      mov     $0x0,%edx
14: be 00 00 00 00      mov     $0x0,%esi
19: bf 00 00 00 00      mov     $0x0,%edi
1e: bd 00 00 00 00      mov     $0x0,%ebp
23: bc 00 00 00 00      mov     $0x0,%esp
28: b8 01 00 00 00      mov     $0x1,%eax
2d: bb 01 00 00 00      mov     $0x1,%ebx
32: b9 01 00 00 00      mov     $0x1,%ecx
37: ba 01 00 00 00      mov     $0x1,%edx
3c: be 01 00 00 00      mov     $0x1,%esi
41: bf 01 00 00 00      mov     $0x1,%edi
46: bd 01 00 00 00      mov     $0x1,%ebp
4b: bc 01 00 00 00      mov     $0x1,%esp
50: b8 02 00 00 00      mov     $0x2,%eax
55: bb 02 00 00 00      mov     $0x2,%ebx
5a: b9 02 00 00 00      mov     $0x2,%ecx
5f: ba 02 00 00 00      mov     $0x2,%edx
64: be 02 00 00 00      mov     $0x2,%esi

```

69:	bf 02 00 00 00	mov	\$0x2,%edi
6e:	bd 02 00 00 00	mov	\$0x2,%ebp
73:	bc 02 00 00 00	mov	\$0x2,%esp
78:	b8 fe ff ff ff	mov	\$0xffffffff,%eax
7d:	bb fe ff ff ff	mov	\$0xffffffff,%ebx
82:	b9 fe ff ff ff	mov	\$0xffffffff,%ecx
87:	ba fe ff ff ff	mov	\$0xffffffff,%edx
8c:	be fe ff ff ff	mov	\$0xffffffff,%esi
91:	bf fe ff ff ff	mov	\$0xffffffff,%edi
96:	bd fe ff ff ff	mov	\$0xffffffff,%ebp
9b:	bc fe ff ff ff	mov	\$0xffffffff,%esp
a0:	89 c0	mov	%eax,%eax
a2:	89 c3	mov	%eax,%ebx
a4:	89 c1	mov	%eax,%ecx
a6:	89 c2	mov	%eax,%edx
a8:	89 c6	mov	%eax,%esi
aa:	89 c7	mov	%eax,%edi
ac:	89 c5	mov	%eax,%ebp
ae:	89 c4	mov	%eax,%esp
b0:	89 c0	mov	%eax,%eax
b2:	89 d8	mov	%ebx,%eax
b4:	89 c8	mov	%ecx,%eax
b6:	89 d0	mov	%edx,%eax
b8:	89 f0	mov	%esi,%eax
ba:	89 f8	mov	%edi,%eax
bc:	89 e8	mov	%ebp,%eax
be:	89 e0	mov	%esp,%eax
c0:	89 80 00 00 00 00	mov	%eax,0x0(%eax)
c6:	89 83 00 00 00 00	mov	%eax,0x0(%ebx)
cc:	89 81 00 00 00 00	mov	%eax,0x0(%ecx)
d2:	89 82 00 00 00 00	mov	%eax,0x0(%edx)
d8:	89 86 00 00 00 00	mov	%eax,0x0(%esi)
de:	89 87 00 00 00 00	mov	%eax,0x0(%edi)
e4:	89 85 00 00 00 00	mov	%eax,0x0(%ebp)
ea:	89 80 01 00 00 00	mov	%eax,0x1(%eax)
f0:	89 83 01 00 00 00	mov	%eax,0x1(%ebx)
f6:	89 81 01 00 00 00	mov	%eax,0x1(%ecx)
fc:	89 82 01 00 00 00	mov	%eax,0x1(%edx)
102:	89 86 01 00 00 00	mov	%eax,0x1(%esi)
108:	89 87 01 00 00 00	mov	%eax,0x1(%edi)
10e:	89 85 01 00 00 00	mov	%eax,0x1(%ebp)
114:	89 80 02 00 00 00	mov	%eax,0x2(%eax)
11a:	89 83 02 00 00 00	mov	%eax,0x2(%ebx)
120:	89 81 02 00 00 00	mov	%eax,0x2(%ecx)
126:	89 82 02 00 00 00	mov	%eax,0x2(%edx)
12c:	89 86 02 00 00 00	mov	%eax,0x2(%esi)
132:	89 87 02 00 00 00	mov	%eax,0x2(%edi)
138:	89 85 02 00 00 00	mov	%eax,0x2(%ebp)
13e:	89 80 fe ff ff ff	mov	%eax,0xffffffff(%eax)
144:	89 83 fe ff ff ff	mov	%eax,0xffffffff(%ebx)
14a:	89 81 fe ff ff ff	mov	%eax,0xffffffff(%ecx)
150:	89 82 fe ff ff ff	mov	%eax,0xffffffff(%edx)
156:	89 86 fe ff ff ff	mov	%eax,0xffffffff(%esi)
15c:	89 87 fe ff ff ff	mov	%eax,0xffffffff(%edi)
162:	89 85 fe ff ff ff	mov	%eax,0xffffffff(%ebp)
168:	89 80 41 01 00 00	mov	%eax,0x141(%eax)
16e:	89 83 41 01 00 00	mov	%eax,0x141(%ebx)
174:	89 81 41 01 00 00	mov	%eax,0x141(%ecx)
17a:	89 82 41 01 00 00	mov	%eax,0x141(%edx)
180:	89 86 41 01 00 00	mov	%eax,0x141(%esi)
186:	89 87 41 01 00 00	mov	%eax,0x141(%edi)
18c:	89 85 41 01 00 00	mov	%eax,0x141(%ebp)
192:	89 80 41 01 00 00	mov	%eax,0x141(%eax)
198:	89 98 41 01 00 00	mov	%ebx,0x141(%eax)
19e:	89 88 41 01 00 00	mov	%ecx,0x141(%eax)
1a4:	89 90 41 01 00 00	mov	%edx,0x141(%eax)
1aa:	89 b0 41 01 00 00	mov	%esi,0x141(%eax)
1b0:	89 b8 41 01 00 00	mov	%edi,0x141(%eax)
1b6:	89 a8 41 01 00 00	mov	%ebp,0x141(%eax)
1bc:	89 a0 41 01 00 00	mov	%esp,0x141(%eax)
1c2:	8b 80 00 00 00 00	mov	0x0(%eax),%eax

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1c8: 8b 98 00 00 00 00    mov     0x0(%eax),%ebx
1ce: 8b 88 00 00 00 00    mov     0x0(%eax),%ecx
1d4: 8b 90 00 00 00 00    mov     0x0(%eax),%edx
1da: 8b b0 00 00 00 00    mov     0x0(%eax),%esi
1e0: 8b b8 00 00 00 00    mov     0x0(%eax),%edi
1e6: 8b a8 00 00 00 00    mov     0x0(%eax),%ebp
1ec: 8b a0 00 00 00 00    mov     0x0(%eax),%esp
1f2: 8b 80 01 00 00 00    mov     0x1(%eax),%eax
1f8: 8b 98 01 00 00 00    mov     0x1(%eax),%ebx
1fe: 8b 88 01 00 00 00    mov     0x1(%eax),%ecx
204: 8b 90 01 00 00 00    mov     0x1(%eax),%edx
20a: 8b b0 01 00 00 00    mov     0x1(%eax),%esi
210: 8b b8 01 00 00 00    mov     0x1(%eax),%edi
216: 8b a8 01 00 00 00    mov     0x1(%eax),%ebp
21c: 8b a0 01 00 00 00    mov     0x1(%eax),%esp
222: 8b 80 02 00 00 00    mov     0x2(%eax),%eax
228: 8b 98 02 00 00 00    mov     0x2(%eax),%ebx
22e: 8b 88 02 00 00 00    mov     0x2(%eax),%ecx
234: 8b 90 02 00 00 00    mov     0x2(%eax),%edx
23a: 8b b0 02 00 00 00    mov     0x2(%eax),%esi
240: 8b b8 02 00 00 00    mov     0x2(%eax),%edi
246: 8b a8 02 00 00 00    mov     0x2(%eax),%ebp
24c: 8b a0 02 00 00 00    mov     0x2(%eax),%esp
252: 8b 80 fe ff ff ff    mov     0xffffffff(%eax),%eax
258: 8b 98 fe ff ff ff    mov     0xffffffff(%eax),%ebx
25e: 8b 88 fe ff ff ff    mov     0xffffffff(%eax),%ecx
264: 8b 90 fe ff ff ff    mov     0xffffffff(%eax),%edx
26a: 8b b0 fe ff ff ff    mov     0xffffffff(%eax),%esi
270: 8b b8 fe ff ff ff    mov     0xffffffff(%eax),%edi
276: 8b a8 fe ff ff ff    mov     0xffffffff(%eax),%ebp
27c: 8b a0 fe ff ff ff    mov     0xffffffff(%eax),%esp
282: 8b 80 41 01 00 00    mov     0x141(%eax),%eax
288: 8b 98 41 01 00 00    mov     0x141(%eax),%ebx
28e: 8b 88 41 01 00 00    mov     0x141(%eax),%ecx
294: 8b 90 41 01 00 00    mov     0x141(%eax),%edx
29a: 8b b0 41 01 00 00    mov     0x141(%eax),%esi
2a0: 8b b8 41 01 00 00    mov     0x141(%eax),%edi
2a6: 8b a8 41 01 00 00    mov     0x141(%eax),%ebp
2ac: 8b a0 41 01 00 00    mov     0x141(%eax),%esp
2b2: 8b 80 41 01 00 00    mov     0x141(%eax),%eax
2b8: 8b 83 41 01 00 00    mov     0x141(%ebx),%eax
2be: 8b 81 41 01 00 00    mov     0x141(%ecx),%eax
2c4: 8b 82 41 01 00 00    mov     0x141(%edx),%eax
2ca: 8b 86 41 01 00 00    mov     0x141(%esi),%eax
2d0: 8b 87 41 01 00 00    mov     0x141(%edi),%eax
2d6: 8b 85 41 01 00 00    mov     0x141(%ebp),%eax
2dc: b8 00 00 00 00    mov     $0x0,%eax
2e1: bb 00 00 00 00    mov     $0x0,%ebx
2e6: b9 00 00 00 00    mov     $0x0,%ecx
2eb: ba 00 00 00 00    mov     $0x0,%edx
2f0: be 00 00 00 00    mov     $0x0,%esi
2f5: bf 00 00 00 00    mov     $0x0,%edi
2fa: bd 00 00 00 00    mov     $0x0,%ebp
2ff: bc 00 00 00 00    mov     $0x0,%esp

```

**\$ readelf -s 07testmovl.o**

Symbol table '.symtab' contains 3 entries:

Num:	Value	Size	Type	Bind	Vis	Ndx	Name
0:	00000000	0	NOTYPE	LOCAL	DEFAULT	UND	
1:	00000000	0	SECTION	LOCAL	DEFAULT	4	
2:	00000000	0	NOTYPE	GLOBAL	DEFAULT	UND	somelabel

**\$ readelf -r 07testmovl.o**

Relocation section '.rel.text' at offset 0x3a0 contains 8 entries:

Offset	Info	Type	Sym.Value	Sym. Name
000002dd	00000201	R_386_32	00000000	somelabel
000002e2	00000201	R_386_32	00000000	somelabel
000002e7	00000201	R_386_32	00000000	somelabel
000002ec	00000201	R_386_32	00000000	somelabel
000002f1	00000201	R_386_32	00000000	somelabel
000002f6	00000201	R_386_32	00000000	somelabel

000002fb	00000201 R_386_32	00000000	someLabel
00000300	00000201 R_386_32	00000000	someLabel