```
a.o:        file format elf64-x86-64


Disassembly of section .text:
0000000000000000 <_start>:
   0:   48 c7 c6 00 00 00 00
   7:   48 8b 14 25 00 00 00
   e:   00
   f:   48 c7 c7 00 00 00 00
  16:   e8 0b 00 00 00
  1b:   48 89 c3
  1e:   e8 00 00 00 00
  23:   48 89 c1
0000000000000026 <foo>:
  26:   b8 06 00 00 00
  2b:   c3


Disassembly of section .data:
0000000000000000 <msg2>:
   0:   08 07
   2:   06
   3:   05 04 03 02 01
```

```
b.o:        file format elf64-x86-64


Disassembly of section .text:
0000000000000000 <cat>:
   0:   48 c7 c0 00 00 00 00
   7:   c3


Disassembly of section .data:
0000000000000000 <msg1>:
   0:   18 17
   2:   16
   3:   15 14 13 12 11
```

```
readelf -r a.o
Relocation section '.rela.text' at offset 0x170 contains 4 entries:
  Offset          Info           Type           Sym. Value    Sym. Name + Addend
000000000003  00070000000b R_X86_64_32S      0000000000000000 msg1 + 0
00000000000b  00070000000b R_X86_64_32S      0000000000000000 msg1 + 0
000000000012  00060000000b R_X86_64_32S      0000000000000000 msg2 + 0
00000000001f  000800000002 R_X86_64_PC32     0000000000000000 cat - 4

readelf -r b.o
Relocation section '.rela.text' at offset 0x108 contains 1 entry:
  Offset          Info           Type           Sym. Value    Sym. Name + Addend
000000000003  00060000000b R_X86_64_32S      0000000000000000 msg2 + 0
```

המשך הנספח בעמוד הבא

תזכורת:

1. R_X86_64_32S – תיקון אבסולוטי 32 ביט
2. R_X86_64_PC32 – תיקון יחסי 32 ביט
3. R_X86_64_64 – תיקון אבסולוטי 64 ביט

```
readelf -s a.o (תצוגה חלקית)
  Num:    Value          Size Type    Bind   Vis      Ndx Name
    4: 0000000000000026     0 NOTYPE  LOCAL  DEFAULT    1 foo
    5: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT    1 _start
    6: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT    3 msg2
    7: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT  UND msg1
    8: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT  UND cat


readelf -s b.o (תצוגה חלקית)
  Num:    Value          Size Type    Bind   Vis      Ndx Name
    4: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT    3 msg1
    5: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT    1 cat
    6: 0000000000000000     0 NOTYPE  GLOBAL DEFAULT  UND msg2


readelf -s ab.out (תצוגה חלקית)
  Num:    Value          Size Type    Bind   Vis      Ndx Name
    4: 00000000004000d6     0 NOTYPE  LOCAL  DEFAULT    1 foo
    5: 00000000004000dc     0 NOTYPE  GLOBAL DEFAULT    1 cat
    6: 00000000006000ec     0 NOTYPE  GLOBAL DEFAULT    2 msg1
    7: 00000000006000e4     0 NOTYPE  GLOBAL DEFAULT    2 msg2
    8: 00000000004000b0     0 NOTYPE  GLOBAL DEFAULT    1 _start



readelf -S a.o (תצוגה חלקית)
Section Headers:
  [Nr] Name              Type             Address           Offset
       Size              EntSize          Flags  Link  Info  Align
  [ 0]                   NULL             0000000000000000  00000000
       0000000000000000  0000000000000000         0      0      0
  [ 1] .text             PROGBITS         0000000000000000  00000040
       000000000000002c  0000000000000000  AX       0      0      1
  [ 2] .rela.text        RELA             0000000000000000  00000170
       0000000000000060  0000000000000018  I        5      1      8
  [ 3] .data             PROGBITS         0000000000000000  0000006c
       0000000000000008  0000000000000000  WA       0      0      1
  [ 4] .bss              NOBITS           0000000000000000  00000074
       0000000000000000  0000000000000000  WA       0      0      1
```

המשך הנספח בעמוד הבא

```
readelf -S b.o (תצוגה חלקית)
  [Nr] Name              Type            Address           Offset
       Size              EntSize         Flags  Link  Info  Align
  [ 0]                   NULL            0000000000000000  00000000
       0000000000000000  0000000000000000         0     0     0
  [ 1] .text             PROGBITS        0000000000000000  00000040
       0000000000000008  0000000000000000  AX     0     0     1
  [ 2] .rela.text        RELA            0000000000000000  00000108
       0000000000000018  0000000000000018  I      5     1     8
  [ 3] .data             PROGBITS        0000000000000000  00000048
       0000000000000008  0000000000000000  WA     0     0     1
  [ 4] .bss              NOBITS          0000000000000000  00000050
       0000000000000000  0000000000000000  WA     0     0     1


readelf -S ab.out (תצוגה חלקית)
Section Headers:
  [Nr] Name              Type            Address           Offset
       Size              EntSize         Flags  Link  Info  Align
  [ 0]                   NULL            0000000000000000  00000000
       0000000000000000  0000000000000000         0     0     0
  [ 1] .text             PROGBITS        00000000004000b0  000000b0
       0000000000000034  0000000000000000  AX     0     0     1
  [ 2] .data             PROGBITS        00000000006000e4  000000e4
```