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1 ; Name      : version.asm
2 ;
3 ; Build     : aclocal && autoconf && automake --add-missing --foreign
4 ;           mkdir build
5 ;           cd build
6 ;           ../configure
7 ;           make
8 ;
9 ; Description : The program is restricted to show some data stored in the glib and gtk
10 ;              shared libraries.
11 ;              these strings can be obtained with
12 ;              objdump -t -T /usr/lib/x86_64-linux-gnu/libglib-2.0.so | grep .rodata
13 ;              objdump -t -T /usr/lib/x86_64-linux-gnu/libgtk-x11-2.0.so | grep .rodata
14 ;              and so on for other libraries.
15 ;
16 ; Source     : http://zetcode.com/gui/gtk2/introduction/
17
18 bits 64
19
20 [list -]
21     ;glib parameters
22     extern glib_minor_version
23     extern glib_micro_version
24     extern glib_major_version
25     ;gtk params
26     extern gtk_micro_version
27     extern gtk_major_version
28     extern gtk_minor_version
29     ;stdio
30     extern printf
31     extern exit
32 [list +]
33
34 section .rodata
35     ;to have the possibility to extend this program I prefer to work with lists
36
37     params: dq    glib_major_version, glib_minor_version, glib_micro_version
38             dq    gtk_major_version, gtk_minor_version, gtk_micro_version
39             dq    0
40
41     msgs:   dq    szglib_major_version, szglib_minor_version, szglib_micro_version
42             dq    szgtk_major_version, szgtk_minor_version, szgtk_micro_version
43
44     ;messages:
45     messages:
46     szglib_major_version: db    "Glib version: %d",0
47     szglib_minor_version: db    ".%d",0
48     szglib_micro_version: db    ".%d",10,0
49     szgtk_major_version:  db    "Gtk version: %d",0
50     szgtk_minor_version:  db    ".%d",0
51     szgtk_micro_version:  db    ".%d",10,0
52
53 section .text
54 global _start
55
56 _start:
57     ;r14 isn't changed by printf and holds the pointer in the message list
58     mov     r14,msgs
59     ;r15 isn't changed by printf holds the pointer in the param list
60     mov     r15,params
61     ;we're gonna loop through the parameters in params list until we got the null
62     ;pointer at the end and we exit the program
63 .repeat:
64     mov     rax,[r15]
65     test    rax,rax
66     jz      .exit
67     mov     esi,dword[rax]      ;read value in esi
68     mov     rdi,qword[r14]     ;read pointer to message in rdi
69     xor     rax,rax             ;rax = indicating no extra parameters
70     call    printf
71     add     r14,8               ;next pointer in msgs list
72     add     r15,8               ;next pointer in params list

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73     jmp      .repeat
74 .exit:
75     ;exit program
76     xor      rdi,rdi
77     call     exit
78
```