

```

1 ; Name      : center.asm
2 ;
3 ; Build     : aclocal && autoconf && automake --add-missing --foreign
4 ;           mkdir build
5 ;           cd build
6 ;           ../configure
7 ;           make
8 ;
9 ; Description : a simple window centered on screen
10 ;
11 ; Source    : http://zetcode.com/gui/gtk2/firstprograms/
12
13 bits 64
14
15 [list -]
16     %define    GTK_WINDOW_TOPLEVEL 0
17     %define    GTK_WIN_POS_CENTER 1
18     extern    exit
19     extern    gtk_init
20     extern    gtk_main
21     extern    gtk_main_quit
22     extern    gtk_window_new
23     extern    gtk_window_set_title
24     extern    gtk_window_set_default_size
25     extern    gtk_window_set_position
26     extern    gtk_widget_show
27     extern    g_signal_connect_data
28 [list +]
29
30 section .rodata
31     szTitle:    db    "center",0
32     szDestroy:  db    "destroy",0
33
34 section .data
35     window:     dq    0
36
37 section .text
38
39 global _start
40 _start:
41     ;init gtk
42     xor     rsi, rsi                ;argv
43     xor     rdi, rdi                ;argc
44     call    gtk_init
45     ;create new window
46     mov     rdi, GTK_WINDOW_TOPLEVEL
47     call    gtk_window_new
48     mov     qword[window], rax
49     ;set window title
50     mov     rdi, qword[window]
51     mov     rsi, szTitle
52     call    gtk_window_set_title
53     ;set the window size
54     mov     rdi, qword[window]
55     mov     rsi, 230
56     mov     rdx, 150
57     call    gtk_window_set_default_size
58     ;set window position
59     mov     rdi, qword[window]
60     mov     rsi, GTK_WIN_POS_CENTER
61     call    gtk_window_set_position
62     ;connect signal destroy to event handler gtk_main_quit
63     xor     r9d, r9d                ;combination of GConnectFlags
64     xor     r8d, r8d                ;a GClosureNotify for data
65     xor     rcx, rcx                ;pointer to the data to pass
66     mov     rdx, gtk_main_quit      ;pointer to the handler, exit = c function
67     mov     rsi, szDestroy          ;pointer to the signal
68     mov     rdi, qword[window]      ;pointer to the widget instance
69     call    g_signal_connect_data   ;the value in RAX is the handler, but we don't store
70     ;it now
71     ;show the window
72     mov     rdi, qword[window]
73     call    gtk_widget_show

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73      ;enter main loop
74      call    gtk_main
75      ;exit program
76      xor     rdi, rdi
77      call    exit
78
```