

```

1 ; Name      : simple.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 with the basic functionalities and a title
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     %define    FALSE                0
19     %define    TRUE                 1
20     extern     gtk_init
21     extern     gtk_main
22     extern     gtk_main_quit
23     extern     gtk_widget_show
24     extern     gtk_window_new
25     extern     gtk_window_set_title
26     extern     g_signal_connect_data
27     extern     exit
28 [list +]
29 ;
30 section .data
31     window:    dq    0
32     title:     db    "simple",0
33     szDestroy: db    "destroy",0
34 ;
35 section .text
36 global _start
37 ;
38 _start:
39     ;init gtk
40     xor     rdi,rdi
41     xor     rsi,rsi
42     call    gtk_init
43     ;if initialization doesn't succeed then the application
44     ;terminates. If that is unwanted behaviour then we need
45     ;to use gtk_init_check instead.
46     ;https://developer.gnome.org/gtk2/stable/gtk2-General.html#gtk-init
47     ;create a new window
48     mov     rdi,GTK_WINDOW_TOPLEVEL
49     call    gtk_window_new
50     mov     qword[window],rax
51     ;set the title
52     mov     rdi,rax
53     mov     rsi,title
54     call    gtk_window_set_title
55     ;connect the destroy signal to gtk_main_quit event handler
56     xor     r9d,r9d                ; combination of GConnectFlags
57     xor     r8d,r8d                ; a GClosureNotify for data
58     xor     rcx,rcx                ; pointer to the data to pass
59     mov     rdx,gtk_main_quit      ; pointer to the handler
60     mov     rsi,szDestroy          ; pointer to the signal
61     mov     rdi,qword[window]      ; pointer to the widget instance
62     ;C programs uses g_signal_connect, this is not a library
63     ;function.
64     call    g_signal_connect_data
65     ;show the window
66     mov     rdi,qword[window]
67     call    gtk_widget_show
68     ;go into applications main loop
69     call    gtk_main
70 .exit:
71     ;exit program
72     xor     rdi,rdi
73     call    exit

```

