

```

1 ; Name      : icon.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 application icon
10 ;
11 ; Remark     : when copying the application to another location you need to copy the image
12 ;           file 'logo.png' with it in
13 ;           the same directory.
14 ; Source     : http://zetcode.com/gui/gtk2/firstprograms/
15
16 bits 64
17
18 [list -]
19     extern    exit
20     extern    printf
21     extern    gtk_init
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_window_set_icon
27     extern    gtk_widget_show
28     extern    gtk_main
29     extern    gtk_main_quit
30     extern    g_signal_connect_data
31     extern    gdk_pixbuf_new_from_file
32     %define    GTK_WINDOW_TOPLEVEL    0
33     %define    GTK_WIN_POS_CENTER    1
34 [list +]
35
36 section .rodata
37     szTitle:    db    "icon",0
38     szDestroy:  db    "destroy",0
39     szFile:     db    "agguro.png",0
40     szErrPixbuf: db    "ERROR loading %s",10,0
41
42 section .data
43     window:     dq    0
44     icon:       dq    0
45     pixbuffer:  dq    0
46     error:      dq    0
47
48 section .text
49     global _start
50
51 _start:
52     ;init gtk
53     xor     rsi,rsi
54     xor     rdi,rdi
55     call    gtk_init
56     ;create a new window
57     mov     rdi,GTK_WINDOW_TOPLEVEL
58     call    gtk_window_new
59     mov     qword [window],rax
60     ;set the title
61     mov     rdi,qword [window]
62     mov     rsi,szTitle
63     call    gtk_window_set_title
64     ;set the size
65     mov     rdi,qword [window]
66     mov     rsi,230
67     mov     rdx,150
68     call    gtk_window_set_default_size
69     ;set the position
70     mov     rdi,qword [window]
71     mov     rsi,GTK_WIN_POS_CENTER
72     call    gtk_window_set_position

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;must reside in the same directory

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73     ;load imagefile in a pixbuffer
74     mov     rdi,szFile
75     mov     rsi,error
76     call    gdk_pixbuf_new_from_file
77     mov     qword [pixbuffer],rax
78     and     rax,rax
79     jnz     .no_icon_file_error
80     ;print error to terminal if there was an error
81     mov     rsi,szFile
82     mov     rdi,szErrPixbuf
83     xor     rax,rax
84     call    printf
85     jmp     .skiploadicon
86     ;if no erro then the image is in the pixel buffer
87     ;and we can set the icon
88 .no_icon_file_error:
89     mov     rdi,qword [window]
90     mov     rsi,qword [pixbuffer]
91     call    gtk_window_set_icon
92 .skiploadicon:
93     ;connect signal destroy with gtk_main_quit event handler
94     xor     r9d,r9d                ; combination of GConnectFlags
95     xor     r8d,r8d                ; a GClosureNotify for data
96     xor     rcx,rcx                ; pointer to the data to pass
97     mov     rdx,gtk_main_quit      ; pointer to the handler
98     mov     rsi,szDestroy           ; pointer to the signal
99     mov     rdi,qword[window]       ; pointer to the widget instance
100    call    g_signal_connect_data   ; the value in RAX is the handler, but we don't store it
101    now
102    ;show the window
103    mov     rdi,qword [window]
104    call    gtk_widget_show
105    ;enter process loop
106    call    gtk_main
107    ;exi program
108    xor     rdi,rdi
109    call    exit

```