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/* SIGF_Single.c - Execute me to compile me with SAS C 5.10b
LC -b1 -Clist -v -y -j73 SIGF_Single.c
Blink FROM LIB:c.o,SIGF_Single.o TO SIGF_Single LIBRARY LIB:LC.lib,LIB:Amiga.lib
quit ;*/

/* This example program illustrates simple usage of the SIGF_SINGLE */
/* signal for "single shot" signalling. This signal is one of the */
/* system private signals, but applications can use it in certain */
/* cases, but only if used carefully. Specifically, applications */
/* should use it only to Wait() on, and using only that signal */
/* (applications cannot Wait() on other signals in the same */
/* Wait()). Not following these rules can cause serious system */
/* problems. For more details, see the Amiga Mail article, */
/* "Signalling with SIGF_SINGLE" from the September/October 1992 */
/* issue of Amiga Mail. */

#include <exec/types.h>
#include <exec/memory.h>
#include <dos/dosextens.h>
#include <dos/dostags.h>

#include <clib/exec_protos.h>
#include <clib/dos_protos.h>
#include <clib/alib_protos.h>
#include "stdio.h"

#ifdef LATTICE
int CXBRK(void) { return(0); } /* Disable Lattice CTRL/C handling. */
int chkabort(void) { return(0); } /* really */
#endif

static UBYTE *VersTag = "$VER: SIGF_Single 38.7 (21.9.92)";

void childprocesscode(void); /* prototype for our childprocess routine. */

struct Process *mainprocess = NULL, *childprocess = NULL;
UBYTE childprocessname[] = "RKM_signal_childprocess";

BPTR output;

void main(int argc, char **argv)
{
    if (output = Open("...", MODE_OLDFILE)) /* Open the console for the */
                                           /* child process. */
    {
        mainprocess = (struct Process *)FindTask(NULL); /* childprocess can */
                                                         /* access this global. */

        if (childprocess = CreateNewProcTags(
            NP_Entry, childprocesscode, /* The child process */
            NP_StackSize, 2000L, /* code. */
            NP_Name, childprocessname,
            NP_Output, output,
            NP_FreeSeglist, FALSE,
            NP_CloseOutput, TRUE,
            TAG_DONE, 0L))
        {
            /* I split the PutStr() into two */
            PutStr("Main Process: Created a child process"); /* to fit code */
            PutStr(" and waiting on SIGF_SINGLE.\n"); /* on an 8.5 by */
                                                    /* 11 page. */

            Flush(Output()); /* Make sure the PutStr() above appears */
                             /* in the console window before the child */
                             /* process start PutStr()ing to the console. */

            SetSignal(0L, SIGF_SINGLE); /* Use SIGF_SINGLE only after */
                                       /* clearing it. */
            Wait(SIGF_SINGLE); /* Only use SIGF_SINGLE for Wait()ing and */
                              /* Wait on that signal alone! */

            PutStr("Main Process: Received signal from child.\n");
        }
        else
            PutStr("Main Process: Can't create child process. Exiting.\n");
    }
    else

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        PutStr("Main Process: Can't open CON:. Exiting.\n");
    }

void childprocesscode(void) /* This function is what CreateNewProcTags() */
{ /* loads as the child process. This child */
    /* signals the parent using SIGF_SINGLE. */

    ULONG x;

    PutStr("Child Process: I'm alive and starting a 5 second TimeDelay()");
    Flush(Output());

    for (x = 0; x < 5; x++)
    {
        TimeDelay(UNIT_VBLANK, 1, 0); /* Delay for 5 seconds, printing a */
        PFPuts(Output(), " ."); /* dot during each second. */
        Flush(Output());
    }

    TimeDelay(UNIT_VBLANK, 1, 0);

    PutStr(" Finished.\n");
    PutStr("Child Process: Signalling main process and exiting. Bye.\n");
    Flush(Output());

    Signal((struct Task *)mainprocess, SIGF_SINGLE); /* Finished waiting, */
                                                    /* signal the main */
                                                    /* process and exit */
                                                    /* child process. */
}

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