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proc.c

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#include <sys/types.h>
#include <sys/wait.h>
#include <stdio.h>

#define errprint(S)      fprintf(stderr, "*** %s\n", S);

#define NUMBER_OF_PROCS 2
#define MAX_COUNT        100000

int sharedCounter=0;

void MyCounterPlus()
{
    int i;
    for (i = 0; i < MAX_COUNT; i++)
    {
        sharedCounter++;
    }
}

void MyCounterMinus()
{
    int i;
    for (i = 0; i < MAX_COUNT; i++)
    {
        sharedCounter--;
    }
}

int main(void)
{
    int i;
    int retval;
    pid_t pid;
    for (i = 0; i < NUMBER_OF_PROCS; i++)
    {
        pid = fork();
        if (pid == 0) {
            printf("SCB=%d,", sharedCounter);
            MyCounterPlus();
            printf("i=%d,PID=%d,m_pid=%d,SCA=%d\n",
                i, pid, getpid(), sharedCounter);
        }
        else {
            waitpid(pid, &retval, 0);
            printf("SCB=%d,", sharedCounter);
            MyCounterMinus();
            printf("i=%d,PID=%d,my_pid=%d,SCA=%d\n",
                i, pid, getpid(), sharedCounter);
        }
    }
}

////////// OUTPUT
/*
SCB = 0, i = 0, PID = 0, m_pid = 9179, SCA= 100000
SCB = 100000, i = 1, PID = 0, m_pid = 9180, SCA= 200000
SCB = 100000, i = 1, PID = 9180, my_pid = 9179, SCA = 0
SCB = 0, i = 0, PID = 9179, my_pid = 9178, SCA = -100000
SCB = -100000, i = 1, PID = 0, m_pid = 9181, SCA= 0
SCB = -100000, i = 1, PID = 9181, my_pid = 9178, SCA = -200000
*/
////////// End of Output

```