

Lab 1 - Writeup

Files changed

- user.h
 - updated function declaration for user-space system calls:
 - `int exit(void) → int exit(int)`
 - `int wait(void) → int wait(void)`
 - new function declaration for function waitpid: `int waitpid(int, int*, int)`
- defs.h
 - Updated the function declarations for user-space system calls:
 - `void exit(void) → void exit(int)`
 - `int wait(void) → int wait(int*)`
 - Added the function declaration `int waitpid(int, int*, int)`
- sysproc.c
 - `sys_exit(void)`, `sys_wait(void)`, `sys_waitpid(void)` uses the `argint` and `argptr` functions to pass in the arguments of the user-space programs into the system call.
- proc.c
 - change signature of `void exit(void)` to `void(int status)`
 - Changed signature of `int wait(void)` to `int wait(int *status)`
 - Write the exit status of the terminating process to memory provided by the address in `int *status`.
 - New function: `int waitpid(int pid, int* status, int options)`
- proc.h
 - Added the “status” member in the struct `proc`.
- Makefile
 - Added “_lab1test\” under UPROGS list
 - added “lab1_test.c” under extra programs
- syscall.c
 - Added `extern_int sys_waitpid(void)` and `[SYS_waitpid] sys_waitpid` in `syscall` array.
- syscall.h
 - Defined `SYS_waitpid (22)` at the bottom of the file to declare the system call
- usys.S
 - Added `SYSCALL(waitpid)` at the bottom of the file.
- alias.txt
 - Added “`exit=exit, wait=wait, waitpid=waitpid`” as requested by submission guidelines.
- cat.c, echo.c, forktest.c, grep.c, init.c, kill.c, ln.c, ls.c, mkdir.c, rm.c, sh.c, stressfs.c, trap.c, usertests.c, wc.c, zombie.c
 - replace `exit()` calls with `exit(0)` to match the new signature
 - replace `wait()` calls with `wait(0)` to match new signature