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Team # 15

Lab 2 - Summary

- **Your priority range and direction. Range is 0 - 100**
- **NEW: Which task(s) you have chosen to complete. *Possible Bonus 1***

Files Changed

- users.h
 - Added function declarations for change_priority
- defs.h
 - Added function declarations for changePriority
 - Added SYSCALL handlers sys_exit_w_int, sys_wait_w_int and sys_waitpid
- proc.c
 - Added functionality of the new function change_priority go into curproc and change the priority int of the proc pcb
 - In scheduler first it goes through each roc in the proc table and an inner for loop of the process table looks to see if there is a another process with a higher priority than it and if so it switches to that process
 - Had to go through 5 iterations due to lots of small issues with each attempt. A big problem was I I did an inner for loop to check for a higher priority process I needed to also check if the p2 process was runnable first
 - Also for change_priority functionality I need to do acquire / release ptable lock to make sure I was changing the correct/current proc priority and not get context switched before
- proc.h
 - Added int priority to PCB
- Usys.S
 - Add new system calls to the list of them in this file
- syscall.h
 - Added SYSCALLs #define for change priority
- syscall.c
 - Added extern int for new syscalls, and to [SYS_syscall] list in syscall.c file
- MakeFile
 - Added lab_2_test to UPROGS
- lab_2_test
 - Test file for testing the new system call functions
 - Use fork in order to test the new scheduler, for example make a fork and change the priority of the parent and child and make sure the one with the highest priority

runs first, then for aging of priority give one of the priorities busy work with nop()
and see the priority ages to get higher priority

- Each test runs 2 times

How to Run Tests

If testing change priority type in
\$lab_2_test 1

If testing aging priority type in
\$lab_2_test 2