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CS350
Project 2
Design Doc

kthread.h: added definitions for new functions

proc.c: implemented all functions except kill_others() and updated fork() and exit()

exec.c: implemented kill_others and updated exec()

sysproc.c: added k_thread syscall functions

syscall.c: added definitions for k_thread syscalls

proc.h: added mutexstae and MAX_MUTEXES

For synchronization, I added acquire and release locks to the kthread functions to ensure that no functions were trying to access the same memory at the same time. While a kthread function is being called within a process, the function acquires a lock and only releases it at the end.

For existing system calls like exit, and exec, the kill_all and kill_others functions were added. Kill_all ensures that all threads cease to exist when the process is killed so there aren't any zombies or wasted memory. The kill_others function runs when exec is called to ensure that other threads aren't accessing integral resources while the designated thread is running.