**CSC-3044 Operating Systems & System Programming**

**Laboratory 2 Report**

**NAME:** Joseph Leskey

1. **Do you see a connection to the above description of strace?**  
     
   Sort of, yes.
2. **If you see a connection, what is it?**

The standard streams are represented by file descriptors, which means that they have roughly the same interface as a stored file. In this way, they are treated as the default I/O files and redirection to some stored file can occur quite smoothly.

1. **Figure out where each symbolic link takes you using the ls -li command and list the result of each in your lab report.**  
     
   /dev/stdin → /proc/self/fd/0 → /dev/pts/3  
   /dev/stdout → /proc/self/fd/1 → /dev/pts/3  
   /dev/stderr → /proc/self/fd/2 → /dev/pts/3  
     
   They link to the first three file descriptors in the context of the current terminal.
2. **Do the three symbolic links for stdin, stdout, and stderr, all point back to one device or different devices?**  
     
   The same device. When I ran the commands, the device was represented by /dev/pts/3.
3. **Where does the device file(s) point to?**  
     
   It points to the current terminal interface. In this case, probably due to my SSH connection, it was pseudoterminal 3.
4. **What type of device is it (character or block) and how would you know?**  
     
   It’s a character device. The file type in the mode string is “c.”
5. **What is the count of system calls before the “clone” system call?**  
     
   It appears to be 27.
6. **What call does clone most closely resemble from the Win32 API?**
7. **When would you want to use clone instead of fork?**
8. **What do you notice about the parent ID value for the child and parent branches?**
9. **From your reading, what type of structure is being formed from this collective group of process identifier associations?**
10. **What does this modification represent?**
11. **What does this modification represent?**
12. **How does the information from the status command compare with what you might get from top or htop?**
13. **Add these observations to your report document.**
14. **What changes do you observe from gathering information using the status file and top/htop programs?**
15. **What can you observe about the CPU utilization of the parent and child process?**