

Outline for March 30, 2022

Reading: *text*, §5, 39

Assignments: Homework and Extra Credit 1, due Apr 11

1. How system calls work
 - (a) Interaction with the operating system
 - (b) Example of library wrapper
 - (c) Error indicator: `errno`
2. File-oriented Linux system calls
 - (a) Linux file system
 - i. Files and directories
 - ii. Links and symbolic links
 - (b) File descriptors, kernel file pointers
 - (c) Accessing files
 - (d) Reading and writing files: `open()`, `read()`, `write()`, `close()`
 - (e) Getting file status: `stat()`, `lstat()`
 - (f) Move around in a file: `lseek()`
 - (g) Linking and deleting files: `link()`, `symlink()`, `unlink()`
3. Process-oriented Linux system calls
 - (a) Process identification, process table
 - (b) Starting a child process: `fork()`, `execve()`, `wait()`, `waitpid()`
 - (c) Process termination: `_exit()`, **EXIT_SUCCESS**, **EXIT_FAILURE**
 - (d) Get process UID, GID: `getuid()`, `getgid()`
 - (e) Set process UID, GID: `setuid()`, `setgid()`, `setreuid()`, `setregid()`