ITBU 373, Operating Systems Homework 31

Chapter 39, *Operating Systems, Three Easy Pieces*

Readings

Read chapter 39 in the *Operating Systems, Three Easy Pieces* book.

Discussion Questions

Answer the discussion questions in writing.

1. What is the difference between dynamic memory (DRAM) and *persistent storage*?
2. What is a *file*? What attributes does a file have? Can a file include other files?
3. What is a *directory*? What attributes does a directory have? Can a directory include other directories?
4. What is the *directory tree*? What command(s) can you use to view the directory tree?
5. What is the unique attribute of a *root directory* that makes it the root directory?
6. What are the arguments to `open()`? What is the return value? What does it do?
7. There are eleven flags permitted in a call to `open()`. List them and briefly describe the function of each.
8. What are the arguments to `close()`? What is the return value? What does it do?
9. What are the arguments to `read()`? What is the return value? What does it do?
10. What are the arguments to `write()`? What is the return value? What does it do?
11. What is a *file descriptor* and why is it important?
12. What are the arguments to `fsyc()`? What is the return value? What does it do?
13. What is file *metadata*? Name some of the keys in the `stat` struct.
14. What is the difference between a hard link and a symlink?
15. Read the man page on `chmod`. What are the octal equivalents of the following perissions? What does each mean?
    (a) `-rwxrw-rw-`
    (b) `-rw-rw----`
    (c) `drwxr-xr-x`
    (d) `drwxr--r--`