CMPUT 379 Reading List (First Term 2018/2019)

1. Introduction to Operating Systems

   - [OSC 9/E] Chapter 1 (Introduction)
   - [OSC 9/E] Chapter 2 (Sections 2.1 to 2.7)

2. Introduction to the UNIX Environment

   - [APUE 3/E] Chapter 1: UNIX System Overview
   - [APUE 3/E] Sections 3.1 to 3.10 (File I/O), 3.14 (fcntl Function)
   - [APUE 3/E] Section 4.5 (File Access Permissions)
   - [APUE 3/E] Chapter 5: Standard I/O Library
   - [APUE 3/E] Section 6.10 (Time and Date Routines)

3. Processes

   - [OSC 9/E] Sections 3.1 to 3.3 (Processes)
   - [APUE 3/E] Sections 7.4 (Command-Line Arguments), 7.5 (Environment List), 7.6 (Memory Layout of a C Program), 7.11 (getrlimit and setrlimit Functions), 8.2 (Process Identifiers), 8.3 (fork Function), 8.6 (wait and waitpid Functions), 8.10 (exec Functions), 8.13 (system Function), 8.17 (Process Times)

4. Threads

   - [OSC 9/E] Chapter 4 (Threads)
   - [APUE 3/E] Sections 11.2 (Thread Concepts), 11.3 (Thread Identification), 11.4 (Thread Creation), 11.5 (Thread Termination)

5. Interprocess Communication

   - [OSC 9/E] Sections 3.4 to 3.7
   - [APUE 3/E] Sections 10.2 (Signal Concepts), 10.3 (signal Function), 10.4 (Unreliable Signals), 10.5 (Interrupted System Calls), 10.14 (sigaction Function: pages 349-351), 07.10 (setjmp and longjmp Functions) 10.15 (sigsetjmp and siglongjmp Functions)
   - [APUE 3/E] Sections 15.2 (Pipes), 03.12 (dup and dup2 Functions), 15.3 (popen and pclose Functions), 15.5 (FIFOs)
   - [APUE 3/E] Sections 14.2 (Nonblocking I/O), 14.5 (I/O Multiplexing: select and poll), 14.7 (readn and writen Functions)
   - [APUE 3/E] Sections 16.1 (Introduction to Sockets) 16.2 (Socket Descriptors), 16.3 (Addressing - you may skip POSIX getaddrinfo()), 16.4 (Connection Establishment)

6. Process Synchronization

   - [OSC 9/E] Chapter 5

   - [APUE 3/E] Sections 11.6 (Thread Synchronization), 15.8 (Semaphores)

7. Deadlocks

   - [OSC 9/E] Chapter 7

8. Memory Management

   - [OSC 9/E] Chapter 8

   - [OSC 9/E] Chapter 9: all sections except 9.7 (Memory-Mapped Files), and 9.8 (Allocating Kernel Memory)

9. CPU Scheduling

   - [OSC 9/E] Chapter 6: all sections except 6.5 (Multiple-Processor Scheduling), and 6.8.2 (Queueing models)

10. File Systems

   - [OSC 9/E] Chapter 10: Sections 10.1 to 10.4 and 10.7 (RAID)

   - [OSC 9/E] Chapter 11: Sections 11.1 to 11.4

   - [OSC 9/E] Chapter 12: Sections 12.1 to 12.5

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