

Linux System Prog'g

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CSE775 – Distributed Objects

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References

- Advanced Programming in the Unix Environment, Second Edition, Stevens and Rago, Addison-Wesley, 2005
- <https://blog.packagecloud.io/eng/2016/04/05/the-definitive-guide-to-linux-system-calls/>

Topics

- Important header files
- Errors
- Linux API

Important Linux Header Files

- `dirent.h` directory entries
- `fcntl.h` file control
- `mqueue.h` message queues
- `pthread.h` threads
- `regex.h` regular expressions
- `termios.h` terminal I/O
- `unistd` symbolic constants
- `utime.h` file times
- `arpa/inet.h` internet definitions
- `netinet/in.h` internet address family
- `netinet/tcp.h` TCP definitions
- `strings.h` string operations
- `ulimit.h` user limits

Linux Sys Header Files

- `sys/ipc.h` IPC
- `sys/msg.h` message queues
- `sys/mman.h` memory management
- `sys/sem.h` semaphores
- `sys/shm.h` shared memory
- `sys/socket.h` sockets interface
- `sys/stat.h` file status
- `sys/time.h` time types
- `sys/times.h` process times
- `sys/types.h` primitive system types
- `sys/wait.h` process control

Linux API Error Protocols

- Integer returns:
 - Success returns 0
 - Failure returns a small integer, often -1
- Pointer
 - Success returns pointer to content
 - Failure returns 0 (null)
- Find symbolic error names with
 - man 3 errno, and scroll down a little

Linux System Calls

- [System calls list](#)
- [Annotated list of system calls](#)
- [Quick Reference for Linux System Calls](#)
- [Anatomy of Linux System Calls](#)

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