

POSIX

- Standard for operating systems
- Based on the design of UNIX
- Defines
 - System calls
 - Command line utilities
 - Filesystem structure
- OSes that try to conform to POSIX
 - Linux
 - macOS
 - FreeBSD
 - ...

File Systems

- Used for long-term storage of information
- Essential requirements
 - Store a large amount of information
 - Info must survive when processes die and the computer is off
 - Multiple processes must be able to access the info at once
- Basic model of a disk
 - Linear sequence of fixed-length blocks
 - Support 2 operations:
 - Read block i
 - Write block i

- OS provides abstractions to
 - locate information
 - protect information
 - Manage free space
- File - a logical unit of consistent information created by a process
- File system - the part of the OS that manages files

File naming

- Restrictions are system dependent
 - Limit on length
 - Limit on character set
 - Case sensitivity
- Extensions
 - Last part of a filename after a period
 - Convention in POSIX systems - used by applications, not the OS
 - Registered to applications at a lower level in Windows