Topics: Internal Structure of Files, Directories, File Systems

Approach: Work from user view to system view, write pwd

Featured Commands:
mkdir, rmdir, rm, ln, mv, pwd

Main Ideas:
Users see a file system as a tree of directories, files, and info
A file system is a sequence of disk blocks
A file is a struct of info (an inode) and a list of data blocks
A directory is a list of inode numbers and names

Agenda

Intro
  What does it mean to be in a directory? Write pwd.

One tree - multiple disks
  How do several disks appear as a single tree of directories?

errno and perror() and strerror()
  system calls return -1 on error; what's the problem?

User View of File System
  directory tree, files, info, moving around, moving files
  mkdir abuse (don't try this at home)

Face Reality
  A disk is a stack of platters, tracks, sectors, just blocks

The Unix File System
  Three (well, four) parts

Inodes and Device ID
  Identifying each item in a tree

Looking at Operations in terms of a Unix File System
  Creating a file
  Building a Tree
  File operations: rm, ln, mv, mkdir, rmdir

Writing pwd
  inodes and names

[Symbolic Links -- if time
  Definition, Examples, Directories, cross-system]