File-System — A Layered Design

APPs
⇓
Logical FS
⇓
File-org module
⇓
Basic FS
⇓
I/O ctrl
⇓
Devices
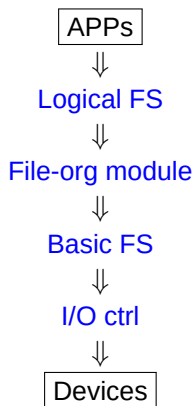
▶ logical file system — manages metadata information
- maintains all of the file-system structure (directory structure, FCB)
- responsible for protection and security

▶ file-organization module
- logical block address $\xrightarrow{translate}$ physical block address
- keeps track of free blocks

▶ basic file system issues generic commands to device driver, e.g
- "read drive 1, cylinder 72, track 2, sector 10"

▶ I/O Control — device drivers, and INT handlers
- device driver: high-level commands $\xrightarrow{translate}$ hardware-specific instructions