Solution 1 - Unix fsck (File System Checker)

When system boot, check system looking for inconsistencies

e.g. inode pointers and bitmaps, directory entries and inode reference counts

➡ Try to fix errors automatically

- Cannot fix all crash scenarios
- Poor performance
  - Sometimes takes hours to run on large disk volumes
  - Does fsck have to run upon every reboot?
- Not well-defined consistency

Solution 2 - Log Structure File System (LFS) or (Copy-On-Write Logging)

Idea - treat disk like a tape-drive

1. Buffer all data (including inode) in memory segment
2. Write buffered data to new segment on disk in a sequential log

➡ Existing data is not overwritten
Segment is always written in free location

✓ Best performance from disk for sequential access