

CSCI 333

Storage Systems

Midterm

Summary of Topics Covered

- FS Interface (system calls)
- I/O Devices (polling vs. interrupts)
- HDDs (physical components, I/O cost, performance, ...)
- VFS & SimpleFS (data structures, behaviors, layers)
- FFS (on-disk structure, allocation heuristics, comparison with SimpleFS)
- LFS (on-disk structure, segments, inode map, checkpoints, GC)
- RAID (striping, mirroring, parity; performance, capacity, faults)
- Consistency (fsck, logging)
- Integrity (checksums)
- SSDs (physical components, I/O cost, performance, ...)

Format

"Graded Quiz" on GLOW

- 24-hours to finish
- Start any day beginning on Thursday (after conference), but must be completed by following Wednesday night

"Open book"

- See instructions for what that means, but
 - Essentially anything directly linked from course website
 - No other humans/AI besides yourself and instructor

Types of Questions

Focus will be on designs and tradeoffs.

Not about recalling facts (open book); instead about applying them

"Thought questions"

- See lecture notes for flavor of questions

Study Advice

- Videos gave overview of topics
- Textbook has "concrete details"
 - Skim slides & ask questions
 - Review chapter in more detail for clarifications
- Check lecture notes for "Learning Objectives" and "Questions"
 - Concise summaries of important parts of each chapter
 - Questions that should trigger thought/require application of ideas