

CS4513 Distributed Computer Systems

Review



Basic Concepts

- What is a *file descriptor*?
- What is a *directory*?
- What is a *partition*?



File Descriptors

- What does a the inode look like?
- What does the file descriptor in a FAT (linked-list with index) look like?



Aliases

- What is an alias?
- What are some issues with implementing aliases?



Disk Block Management

- What is the tradeoff between *block size* and disk space *utilization*?
- Why cache disk blocks?
- Why not always cache disk data in strict Least Recently Used (LRU) fashion?



Distributed Systems Intro

- What is a *distributed system*?
- What are some forms of transparency a distributed system might achieve?
- Why are centralized solutions bad for distributed systems?
 - Give an example



Clock Synchronization

- Why do clocks need to be synchronized?
- Why is it difficult?
- How does Cristian's algorithm work?



Global Ordering and State

- How does Lamport's algorithm work?



Election Algorithms

- What is the "Bully" algorithm used for?
- How does it work?



Misc Web Review

- How is XML different than HTML?
- How is a Web client made more "fat"?
- Communication
 - What are persistent connections?
 - What are parallel requests?



Web Naming

- What are the components of a URL?
- How can you make a URL less location specific using DNS?



Web Caching

- Why have strong cache consistency?
- Why have weak cache consistency?
 - Name one heuristic
- Where does the Secure Socket Layer "reside" in the network protocol stack?

