Overview – What we have done since midterm 2

- Computer Networks
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- **Socket Programming**
  - Sockets, Creating a Socket, Socket Address, Socket Options, connect, listen, accept, Client/Server, Process or Threaded Server Design, Single-Threaded Event-Driven Server Design, Select, epoll

- **Transactions**
  - ACID, Transactions, Write-Ahead Logging, Isolation, Schedule, Conflict Pairs, Conflicts, Conflict-Preserving Serializability, Dependency Graph, Two-Phase Locking, Durability and Atomicity, Two Generals Problem, Ordering, FIFO, Causal Ordering, Two-Phase Commit (2PC), CAP Theorem
Overview – What we have done since midterm 2

- Elective Topics
  - Security
  - MapReduce

- Expected knowledge:
  - What are the fundamental problems of the domain
  - What are the most widely-used solutions (as discussed in class) and how do they work
  - What are the alternatives
What else?

- Everything that we did in class
  - Focus particularly on the core concepts and learn them well
  - Know the most important terms
    - E.g., OS Terms and Concepts
    - Synchronization Terms and Concepts
    - ...
  - Refresh your memory on the concepts covered in the projects
    - Kernel design and architecture
    - Memory management
    - Mutual exclusion, Locks and Condition Variables
    - Threads (and Processes), Virtual Memory
- Try to understand the connections between concepts and the big picture
  - E.g., you want to be able to criticize a design proposal and identify shortcomings / propose a better design