

CSE 486/586 Distributed Systems Mid-Semester Overview

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We're at a Mid-Point: What We've Discussed So Far

- Main communication infrastructure: the Internet
- Communication between two processes
 - Socket API
- Failure detection
- Concept of time in distributed systems
- Communication between multiple processes
 - Multicast algorithms
- Organization of distributed systems
 - Server-client
 - Peer-to-peer, DHTs
- Impossibility of consensus

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The Other Half of the Semester

- Consensus algorithms: mutual exclusion, leader election, paxos
- Distributed storage basics: transactions and consistency
- Distributed storage case studies: Amazon Dynamo, NFS, Facebook Haystack, Facebook f4
- Remote procedure call
- Security
- BFT (Byzantine Fault Tolerance)

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- **Midterm: 3/13 (Wednesday) in class**
 - Everything up to the last lecture
 - 1-page cheat sheet is allowed.
 - Blue or black ink pen
- Best way to prepare
 - Read the textbook & go over the slides.
 - Go over the previous exams.
- PA2-B due this Friday
 - Please remember that we'll be running code similarity checkers (automatic F if found too similar).

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Acknowledgements

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