CSE 4253/6253 - Secure Software Engineering

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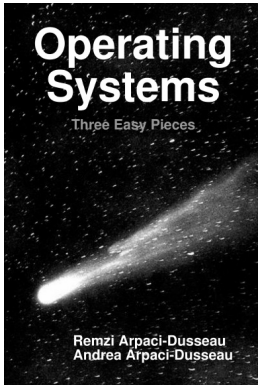
Study Guide

Mid-Term



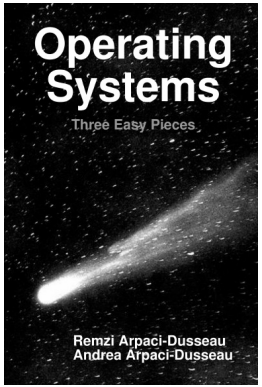
- Online in Canvas
- Multiple Choice
- Open Book

Study Guide
Mid-Term
Operating Systems
Online in Canvas
Multiple Choice
Open Book

1. Study is required
   - You can't learn the chapters during a test
   - Basic history of Operating Systems - Batch vs Timesharing
   - Know what a kernel does, relative speeds and be prepared to synthesize

Study Guide

Mid-Term



- Chapters 4-7
- Chapter 10
- Chapters 13-22

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1. Chapters 4-5
   - Why code the kernel in a high level language?
   - Process state transitions
   - PCB
   - fork() - define and be prepared to follow a code sample
   - C.O.W. - Copy On Write
2. Chapter 6-7,10
   - Barriers/Cooling
   - Locality of Reference/Multi-core/Affinity
   - Deadlock
   - Asymmetric and Symmetric MP
   - Scheduling - Non-preemptive vs Preemptive

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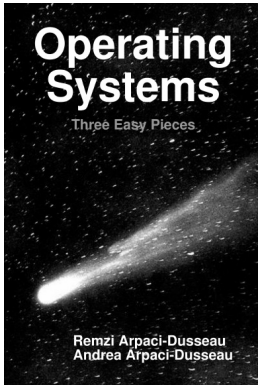

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1. Chapter 13-17
   - Addressing/Translation/MMU
   - Memory Fragmentation/Compaction
   - Segmentation
   - Placement Algorithms (first fit, etc.) expect trace questions.
   - Free Space Mgmt

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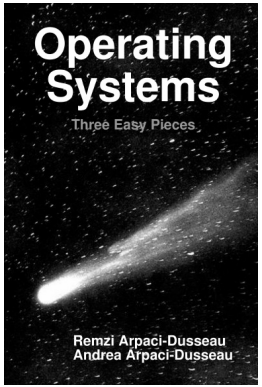

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1. Chapter 18-22
   - Page vs Frame
   - Paging/Fragmentation
   - TLB
   - Page Tables
   - Swapping
   - Algorithms – Clock/LRU/FIFO/Clock/Optimal – Expect trace question(s)