

## Outline for April 11, 2022

**Reading:** *text*, §28, 29, 31

**Assignments:** Homework and Extra Credit 1, due Apr 13 (Note new due date)

Lab Exercise and Extra Credit 1, due Apr 18

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1. Software solution for  $n$ -process problem: Lamport's Bakery Algorithm
2. Hardware solution for  $n$ -process problem: atomic test-and-set instruction
3. Problems with these
4. Semaphores
  - (a) Definition and basic examples
  - (b) Solution to critical section problem
  - (c) Semaphore solution to readers-writers problem
5. Dining philosopher's problem
6. Problems with semaphores