Condition Variables (Ch 30)
Discussion Questions

- What problems do condition variables solve that locks cannot?
    - efficiently wait for a condition to be true
- What is a mutex?
- Why must a thread be holding a lock to wait on a condition variable?
    - usually (almost always) waiting for some variable to change state, must be sure of its value before waiting because otherwise variable might change state right before thread blocks
    - similarly, without the lock, cannot guarantee some other thread isn't signaling right now
    - in short, deadlock
- Why can't wait & unlock be separate calls done back-to-back?
    - unlock(…); (variable may change here) wait(…);
- Why should a wait always occur in a loop?
    - what does Mesa semantics mean?
        - signaled condition a hint, not a guarantee
    - what is a spurious wakeup?
- Why must we have a separate condition variable per desired condition? (illustrate your answer using producer/consumer problem)
- What would be better names for the condition variables empty and fill in the producer/consumer solution in the book?