Outline for April 18, 2022

**Reading:** text, §30, 33

**Assignments:** Lab Exercise and Extra Credit 1, due Apr 18

1. Remote procedure calls (RPC)
2. Common concurrency problems
   (a) Atomicity violation bugs
   (b) Order violation bugs
3. Livelock
4. Deadlock
   (a) Resource allocation
   (b) Policies to handle deadlock
      i. Ignore it
      ii. Prevention
      iii. Avoidance
      iv. Detection and recovery
5. Deadlock prevention
   (a) Mutual exclusion
   (b) No preemption
   (c) Circular wait, resource waiting
   (d) Hold and wait, partial allocation