

## Lecture 4: October 2, 2019

**Reading:** [2,6]

**Assignments:** Homework 1, due October 9, 2019

1. Greetings and felicitations!
2. Puzzle of the Day
3. Robust library
  - (a) Functions
4. Goals of voting
  - (a) Accuracy of count
  - (b) Integrity of ballot
  - (c) Privacy of voter (both from vote selling and from observation)
  - (d) Auditability
  - (e) Usability, both by voters and by election staff
  - (f) Other requirements
5. Overview of process in Yolo County
6. Where electronic voting systems come in; how they work
  - (a) Optical scanning systems
  - (b) Ballot marking devices
  - (c) Direct recording electronic devices
  - (d) Vote tabulation servers
7. Safeguards
  - (a) L&A testing before distribution
  - (b) Voter-verified paper audit trails
  - (c) Certification and testing
  - (d) 1% mandatory manual recount
  - (e) Risk-limiting audit
8. The U. S. and California certification process
  - (a) HAVA
  - (b) FEC certification guidelines
  - (c) State rules and tests
9. Tests and problems
  - (a) Johns Hopkins paper
  - (b) RABA study
  - (c) California update of voting systems—and the consequences
  - (d) Florida CD-13 election
  - (e) Other problems
  - (f) California top-to-bottom review
10. Internet voting
11. Process modeling and election processes