Lecture 15 Outline

Reading: *text*, §6.1–6.2, 6.4   **Assignments due:** Midterm on May 2, 2011 *in class*

1. Greetings and felicitations!
    a. Midterm is on Monday, May 2, 2011 *in class*
    b. Review for midterm in discussion section today
2. Biba Model
    a. Low-water-mark policy
    b. Ring policy
    c. Strict integrity
3. Clark-Wilson Model
    a. Theme: military model does not provide enough controls for commercial fraud, etc. because it does not cover the right aspects of integrity
    b. Components
        i. Constrained Data Items (CDI) to which the model applies
        ii. Unconstrained Data Items (UDIs) to which no integrity checks are applied
        iii. Integrity Verification Procedures (IVP) that verify conformance to the integrity spec when IVP is run
        iv. Transaction Procedures (TP) takes system from one well-formed state to another
4. Certification and enforcement rules
    a. C1. All IVPs must ensure that all CDIs are in a valid state when the IVP is run.
    b. C2. All TPs must be certified to be valid, and each TP is associated with a set of CDIs it is authorized to manipulate.
    c. E1. The system must maintain these lists and must ensure only those TPs manipulate those CDIs.