Outline for November 6, 2023

**Reading:** text, §18.2, 24.3–24.6  
**Assignments:** Homework 3, due November 6; Background Research, due November 3 ([note extension])

1. Penetration Studies  
   (a) Goals  
   (b) Where to start  
      i. Unknown system  
      ii. Known system, no authorized access  
      iii. Known system, authorized access

2. Flaw Hypothesis Methodology  
   (a) System analysis  
   (b) Hypothesis generation  
   (c) Hypothesis testing  
   (d) Generalization

3. System Analysis  
   (a) Learn everything you can about the system  
   (b) Learn everything you can about operational procedures  
   (c) Compare to other systems

4. Hypothesis Generation  
   (a) Study the system, look for inconsistencies in interfaces  
   (b) Compare to other systems’ flaws  
   (c) Compare to vulnerabilities models

5. Hypothesis testing  
   (a) Look at system code, see if it would work (live experiment may be unneeded)  
   (b) If live experiment needed, observe usual protocols

6. Generalization  
   (a) See if other programs, interfaces, or subjects/objects suffer from the same problem  
   (b) See if this suggests a more generic type of flaw

7. Elimination