

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