

March 4, 2014 Outline

Reading: §16, 17

Assignment due: Homework #3, due March 4, 2014
Project: due March 21, 2014

1. Compiler-based flow mechanisms (*con't*)
 - a. Exceptions and infinite loops
 - b. Semaphores
 - c. Cobegin/coend
 - d. Soundness
2. Execution-based flow mechanisms
 - a. Fenton's Data Mark Machine
 - b. Variable classes
3. Examples
 - a. Security pipeline interface
 - b. Secure network server mail guard
4. Confinement problem
 - a. What it is
 - b. Covert channels
 - c. Rule of transitive confinement
 - d. Difficulty of preventing leaking
5. Isolation: virtual machines
 - a. What it is
 - b. Example: KVM/370
 - c. Example: VAX/VMM
6. Isolation: sandboxes
 - a. What it is
 - b. Adding mechanisms to libraries or kernel
 - c. Modify program or process to be executed
 - d. Example: Janus