February 27, 2019 Outline

Reading: text, §17, 14

Assignments: Homework 4, due March 8, 2019

1. Compiler-based flow mechanisms
   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. Android taint analysis
   b. Firewalls

4. Principles of secure design
   a. Principle of least privilege
   b. Principle of fail-safe defaults
   c. Principle of economy of mechanism
   d. Principle of complete mediation
   e. Principle of open design
   f. Principle of separation of privilege
   g. Principle of least common mechanism
   h. Principle of least astonishment