Outline for February 28, 2008

1. Shared resource matrix methodology
   a. Identify shared resources, attributes
   b. Operations accessing those attributes
   c. Building the matrix
      i. Covert storage channels
      ii. Covert timing channels
   d. Issues about the methodology
2. Covert flow trees
   a. What it is
   b. Node types
   c. Example for construction
   d. Construction
      i. Determine what attributes primitive operations reference, modify, return
      ii. Locate covert storage channel that uses some attribute
      iii. Construct lists: sequences of operations that modify, recognize modifications
   e. Analysis
3. Capacity and noninterference
   a. When is bandwidth of covert channel 0?
   b. Noninterference sufficient
   c. Noninterference not necessary
   d. Analysis
4. Measuring capacity
   a. Intuitive, formal definitions of capacity
   b. Example
5. Mitigating covert channels
   a. Preallocation and hold until process terminates
   b. Impose uniformity
   c. Randomize resource allocation
   d. Efficiency/performance vs. security