Outline for May 12, 1997

1. Greetings and Felicitations
   a. Please remember to give me write-ups of your vulnerabilities, both what worked and what didn't, in the format discussed earlier
2. Take-Grant
   a. Show bridges (as a combination of terminal and initial spans)
   b. Show islands (maximal subject-only tg-connected subgraphs)
   c. can•share(r, **x**, **y**, G_0) iff there is an edge from **x** to **y** labelled r in G_0, or all of the following hold: (1) there is a vertex **y"** with an edge from **y'** to **y** labelled r; (2) there is a subject **y'** which terminally spans to **y"**, or **y'** = **y"**; (3) there is a subject **x'** which initially spans to **x**, or **x'** = **x**; and (4) there is a sequence of islands I_1, ..., I_n connected by bridges for which **x'** is in I_1 and **y'** is in I_n .
   d. Describe can•steal; don't state theorem
3. Lattice models
   a. poset, ≤ the relation
   b. highest and lowest
   c. Set of classes SC is a partially ordered set under relation ≤ with GLB (greatest lower bound), LUB (least upper bound) operators
   d. Note: is reflexive, transitive, antisymmetric
   e. Examples: (A, C) ≤ (A', C') iff A ≤ A' and C is a subset of C'; LUB((A, C), (A', C')) = (max(A, A'), union(C, C')) GLB((A, C), (A', C')) = (min(A, A'), intersection(C, C'))
4. Bell-LaPadula (informal)
   a. Go through security levels, categories, compartments
   b. Describe simple security property (no reads up) and *-property (no writes down)
   c. State Basic Security Theorem: if it's secure and transformations follow these rules, it's still secure