January 19, 2024 Outline

Reading: *text*, §3.4–3.6, 4.7
Assignments: Homework #1, due January 19; Project selection, due January 26

Module 10 (Reading: *text*, §3.4)

1. Schematic Protection Model
   (a) Protection type, ticket, function, link predicate, filter function
   (b) Take-Grant as an instance of SPM
   (c) Create rules and attenuation
   (d) Definitions
   (e) $path^h$ predicate
   (f) Capacity flow function
   (g) Maximal state: definition, existence, derivability
2. Acyclic attenuating schemes and decidability

Module 11 (Reading: *text*, §3.5–3.5.3)

3. Expressive power
   (a) SPM and HRU

Module 12 (Reading: *text*, §3.5.4)

4. Typed access control model (TAM)

Module 15 (Reading: *text*, §4.7)

5. Secure, precise
   (a) Observability postulate
   (b) Theorem: for any program p and policy c, there is a secure, precise mechanism m^* such that, for all security mechanisms m associated with p and c, $m^* \approx m$
   (c) Theorem: There is no effective procedure that determines a maximally precise, secure mechanism for any policy and program