

March 6, 2024 Outline

Reading: *text*, §17.1–17.2, 18.1

Assignments: Homework #5, due March 15; Extra Credit #F, due March 15

Module 48 (Reading: Introduction to Information Flow)

1. Entropy-based analysis
 - (a) Flow of information from x to y
 - (b) Implicit flow of information

Module 49 (Reading: Information Flow Policies)

2. Non-lattice policies
 - (a) Transitivity
 - (b) Information flow policy
 - (c) Confinement flow model
3. Transitive non-lattice policies
 - (a) Quasi-ordered sets
4. Basic policy composition
5. Non-transitive policies
 - (a) Dual mappings
 - (b) Theorem: a dual mapping from a reflexive information flow policy into an ordered set is order-preserving

Module 50 (Reading: Confinement Problem)

6. Confinement problem
 - (a) What it is
 - (b) Covert channels
 - (c) Rule of transitive confinement
 - (d) Difficulty of preventing leaking