

Outline for September 25, 2024

Reading: *text*, §1

Due: Homework 1, due October 9; Project selection, due Oct 9

1. Class overview
2. Basic components
 - (a) Confidentiality
 - (b) Integrity
 - (c) Availability
3. Threats
 - (a) Snooping
 - (b) Modification
 - (c) Masquerading; contrast with delegation
 - (d) Repudiation of origin
 - (e) Denial of receipt
 - (f) Delay
 - (g) Denial of service
4. Role of policy
 - (a) Example of student copying files from another
 - (b) Emphasize: policy defines security
 - (c) Distinguish between policy and mechanism
5. Goals of security
 - (a) Prevention
 - (b) Detection
 - (c) Recovery
6. Trust
 - (a) First problem: security mechanisms correctly implement security policy
 - (b) Second problem: policy does what you want; define secure, precise
7. Operational issues; change over time
 - (a) Cost-benefit analysis
 - (b) Risk analysis (comes into play in cost-benefit too)
 - (c) Laws and customs
8. Human Factors
 - (a) Organizational problems
 - (b) People problems (include social engineering)