Lecture 20: November 8, 2019

Reading: *text*, §2.3–2.4, 3.1–3.2, 16.   **Assignments:** Lab 2, due November 8, 2019
Homework 3, due November 8, 2019

1. Greetings and felicitations!

2. Puzzle of the Day

3. Access Control Matrix

    (a) Commands and conditions: *create•file*, various flavors of *grant•right* to show conditions and nested commands

    (b) Copy flag, own rights

    (c) Principle of attenuation of privilege

4. Decidability of security

    (a) Notion of leakage in terms of ACM

    (b) Determining security of a generic system with generic rights and mono-operational commands is decidable

    (c) Determining security of a generic system with generic rights is undecidable (HRU result)

    (d) Meaning: can't derive a generic algorithm; must look at (sets of) individual case

5. Access Control Lists

    (a) Full access control lists

    (b) Abbreviations (UNIX method)

    (c) Issues in the way lists work

    (d) Revocation issue

6. Capabilities

    (a) Capability-based addressing

    (b) Capabilities as security mechanisms

    (c) Inheritance of C-Lists