Session 5
Fundamentals: Recurrence

Lecture Summary

Focus for now on recognizing common recurrences and their solutions. There is an opportunity in 🕮 2.4 to elaborate on using solutions to standard recurrences in context.

Numerical Sequences

1. Motivation: efficiency as a math sequence
2. Definition, characterization as recurrence

Recurrence Relations (Equations)

1. Definition, terminology, examples, solution
2. Standard recurrences (common to analysis of algorithms), intro Master Theorem as tool to determine growth directly
3. Solving using standard results (intro, time permitting)

Session Exercise

🕮 **Exercise 2.4** • 1, 2, 3

Reading List

🕮 Appendix B

Keywords

Generic (nth) term, particular [solution], recurrence [relation], [math] sequence