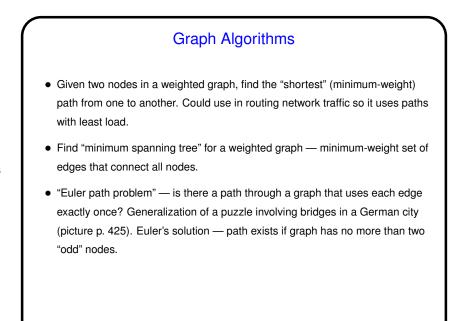


Graphs — Recap / Why Interesting

- Idea is to represent relationships among set of items in a way that can be dealt with mathematically. Computer-friendly representations extend that.
- Chapter 6 discusses many interesting "graph algorithms", most/all with real-world uses. Examples on next slides.

Slide 2

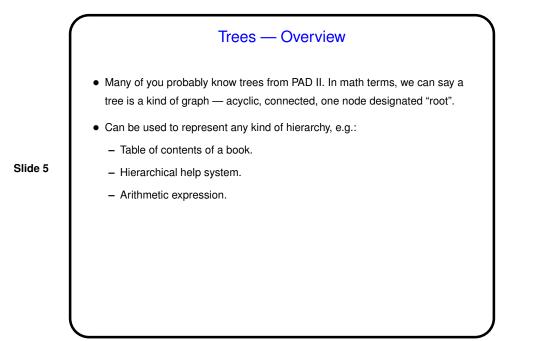


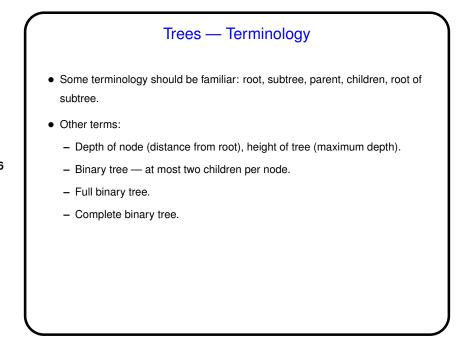
Graph Algorithms, Continued

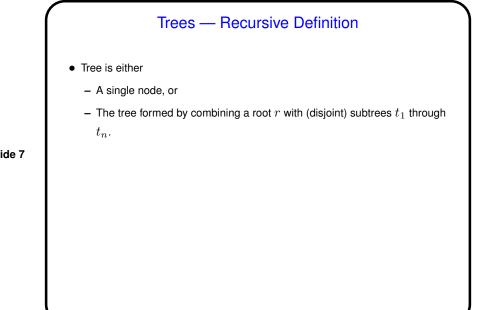
• "Travelling salesperson^a problem" — in a complete weighted graph, of the many closed paths that visit each node exactly once ("Hamiltonian circuits"), which has least weight? Brute-force solution is O(n!), best solution is apparently $O(n^22^n)$.

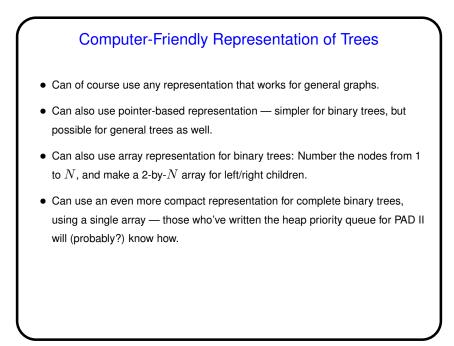
Slide 4

^a"salesman" in the literature, alas

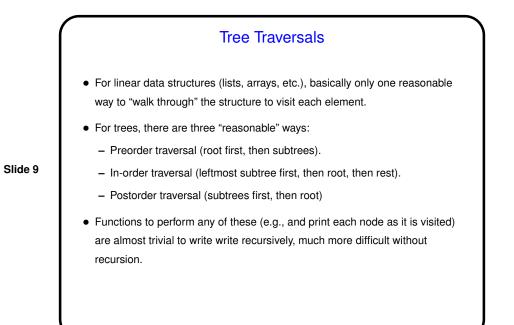


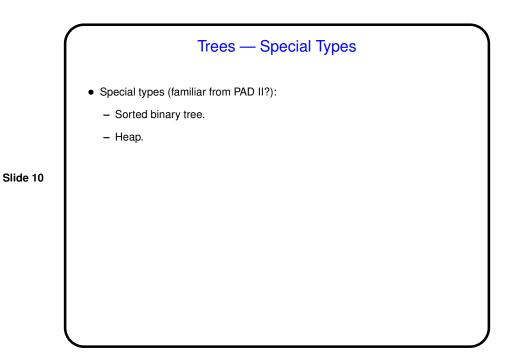


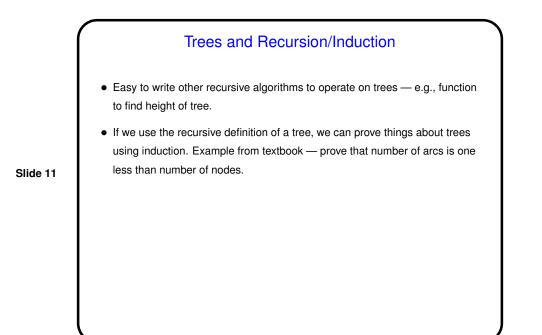




Slide 8







Minute Essay • None – quiz. Slide 12