SUMMARY: This week is the climax of all our work on graph search --- Dijkstra's shortest-path algorithm, surely one of the greatest hits of algorithms (Part XI). It works in any directed graph with non-negative edge lengths, and it computes the shortest paths from a source vertex to all other vertices. Particularly nice is the blazingly fast implementation that uses a heap data structure (more on heaps next week).

THE HOMEWORK: Problem Set #2 should solidify your understanding of Dijkstra's shortest-path algorithm. In the programming assignment you'll implement Dijkstra's algorithm. You can just implement the basic version, but those of you who want a bigger challenge are encouraged to devise a heap-based implementation.

SUGGESTED READINGS FOR WEEK 2:

* CLRS Chapter 24 (Sections 3,4)
* DPV Sections 4.4
* KT Section 4.4
* SW Section 4.4