CS4311
Design and Analysis of Algorithms

Lecture 28:
All-Pairs Shortest-Path

Some Algorithms

- When no negative edges
  - $O(VE + V^2\log V)$ time   (how?)
- When no negative cycles
  - Folklore [???]: $O(V^3\log V)$ time
  - Floyd-Warshall [1962]: $O(V^3)$ time
  - Johnson [1977]: $O(VE + V^2\log V)$ time
    - based on a clever combination of Bellman-Ford and Dijkstra