ECS 122A
Algorithm Design and Analysis

Instructor: Qirun Zhang

Agenda

- Union-find data structure
- Introduction to dynamic programming

Last time

- Transitive closure
  - $t_{ij} \leftarrow t_{ij} \vee (t_{ik} \wedge t_{kj})$, where T is a Boolean matrix, $\vee$ is logic "or" and $\wedge$ is logic "and".
- Transitive closure (a better algorithm)
  - Q essentially contains a pairs of nodes
    - Q = { (1,2) , (5,6) , (7,2) ... }
      - t_{ij} (implicitly) represent the pair (i, j)
      - A perhaps better way is to have
        » Q ← Enqueue ((i,j))
        » (i,j) ← Dequeue(Q)

The End