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Last Time
- Sorting (finish)
- Radix Sort
- Stable sorts
- Sorting in Java
- Graphs

Today
- HW7 Due
- Last week in review
- Graphs (cont’d)
- Using Edge Representations
- Searches/Traversals: Depth-First Search

Next Time
- Graphs (cont’d)
- Breadth-first search
- Dijkstra’s Shortest Path Algorithm
(Last) Week in Review

- Hashing
- Collision Handling in Open Addressing
- Hashing in Java
- Sorting
- Problem, Definition
- Basic Sorts: Bubble Sort, Insertion Sort, Selection Sort
- Smarter Sorts: Heap Sort, Merge Sort, Quicksort
- Choosing a pivot for quicksort
- Radix Sort
- Stable Sorts
- Sorting in Java
- Graphs
- Concept, Terminology
- Representing Edges
Using Edge Representations

Compute the degree of a node in an undirected graph when edges are represented as:

   Adjacency matrix:

   Adjacency list:

Computing in-degree in a directed graph:
Euler Paths/Cycles: The Königsberg Bridge Problem

Searches and Traversals

Search

Traversal
Depth-First Search (DFS)
What kind of questions can we answer?

Recursive Definition:

Using a stack:
DFS Examples
DFS node visit order beginning at A:

Graph 1:

Graph 2:

DFS spanning tree starting at A:

Graph 1:

Graph 2: