Data Structure Visualizations

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Contact

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Currently, we have visualizations for the following data structures and algorithms:

- Basics
  - Stack: Array Implementation
  - Stack: Linked List Implementation
  - Queues: Array Implementation
  - Queues: Linked List Implementation
  - Lists: Array Implementation (available in java version)
  - Lists: Linked List Implementation (available in java version)
- Recursion
  - Factorial
  - Reversing a String
  - N-Queens Problem
- Indexing
  - Binary and Linear Search (of sorted list)
  - Binary Search Trees
  - AVL Trees (Balanced binary search trees)
  - Red-Black Trees
  - Splay Trees
  - Open Hash Tables (Closed Addressing)
  - Closed Hash Tables (Open Addressing)
  - Closed Hash Tables, using buckets
  - Trie (Prefix Tree, 26-ary Tree)
  - Radix Tree (Compact Trie)
  - Ternary Search Tree (Trie with BST of children)
  - B Trees
  - B+ Trees
- Sorting
  - Comparison Sorting
    - Bubble Sort
    - Selection Sort
    - Insertion Sort
    - Shell Sort
    - Merge Sort
    - Quck Sort
  - Bucket Sort
  - Counting Sort
  - Radix Sort
  - Heap Sort
- Heap-like Data Structures
  - Heaps
  - Binomial Queues
  - Fibonacci Heaps
  - Leftist Heaps
  - Skew Heaps
- Graph Algorithms
  - Breadth-First Search
  - Depth-First Search
  - Connected Components
  - Dijkstra's Shortest Path
  - Prim's Minimum Cost Spanning Tree
  - Topological Sort (Using Indegree array)
  - Topological Sort (Using DFS)
  - Floyd-Warshall (all pairs shortest paths)
  - Kruskal Minimum Cost Spanning Tree Algorithm
- Dynamic Programming
  - Calculating nth Fibonacci number
  - Making Change
  - Longest Common Subsequence

- Geometric Algorithms
  - 2D Rotation and Scale Matrices
  - 2D Rotation and Translation Matrices
  - 2D Changing Coordinate Systems
  - 3D Rotation and Scale Matrices
  - 3D Changing Coordinate Systems
- Others ...
  - Disjoint Sets
  - Huffman Coding (available in java version)