

Course Topics Overview



Data Structures

- Storage:
 - List/Sorted List
 - Stack
 - Queue
 - Binary Search Tree
 - Hash Table
 - Heap
 - Structural
 - Tree
 - Graph
 - Sparse Arrays
- operations*
- **Insert()**
 - **Find()**
 - **Remove()**
 - **FindMin()/FindMax()**
 - **DeleteMin()/DeleteMax()**
 - *traversals (sorted/complete)*
- traversals*
- traversals, shortest paths, MSTs*
- storage, traversals*

Course Topics Overview



Algorithms

- categorization of algorithms:
 - recursive vs. iterative
 - primary vs. secondary effects
 - greedy vs. divide-and-conquer vs. other
- types of algorithms
 - searching (linear, binary, using data structures)
 - selection (using data structures, quickselect)
 - sorting (insertion, shellsort, mergesort, quicksort, bucketsort)
 - graph-based (shortest path, minimum spanning tree)