

CSE310 Lecture 15: Binary Search Trees

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Topics of this lecture

- Binary Search Trees
- Representation
- Search
- Min and Max
- Successor
- Insertion
- Deletion

Binary Search Trees

- A **search tree** is a data structure that supports both dictionary and priority queue operations:
 - Minimum, Maximum;
 - Predecessor, Successor;
 - Search, Insert, Delete.
- A **binary search tree** is a binary tree with the following property:
 - For each node i in the tree, if x is any node in its left sub-tree and y is any node in its right sub-tree, then $\text{key}[x] \leq \text{key}[i] \leq \text{key}[y]$
- Is a heap a binary search tree? No.