Binary Search Trees - Study Guide

A Binary Search Tree (BST) is a tree data structure where:

Key Properties:

1. Left child node value < Parent node value

2. Right child node value > Parent node value

3. Both subtrees are also BSTs

Time Complexity:

- Search: O(log n) in balanced tree

- Insert: O(log n) in balanced tree

- Delete: O(log n) in balanced tree

Applications:

- Maintaining sorted data

- Fast lookup operations

- Range queries