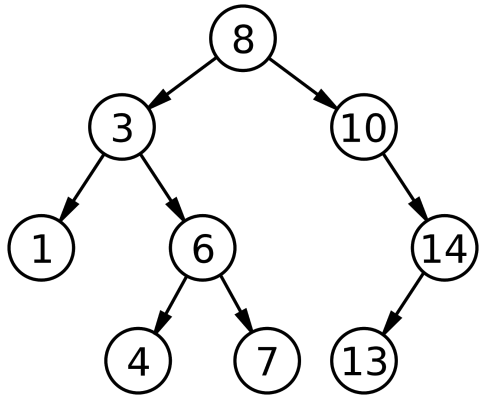
Notes Binary Search Tree

- Root
- Node
- Leaf



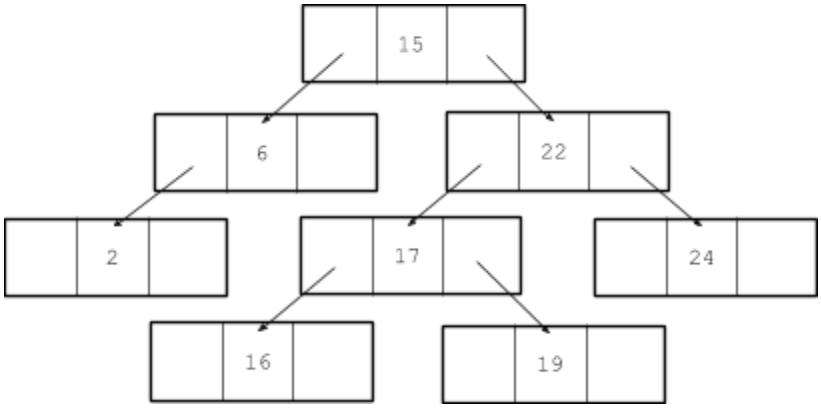
- Has inner number (datum), and left/right values
    - Left/right could be empty or another node

Common Algorithm

- Cond for empty?
- Cond for yes
- Else → recursion on left, recursion on right, combine

Logarithmic

- Some algorithms can be logarithmic → constantly in half



- Binary tree: for every node in the tree, it has at most two children
- Binary search tree: for every node in the tree, the data left are smaller and to the right are larger
- Balanced based on height: for every node, the depth of the left subtree and right differ by at most one

- Not balanced based on weight: if balanced, the number of nodes in the left subtree and right subtree must differ by at most one