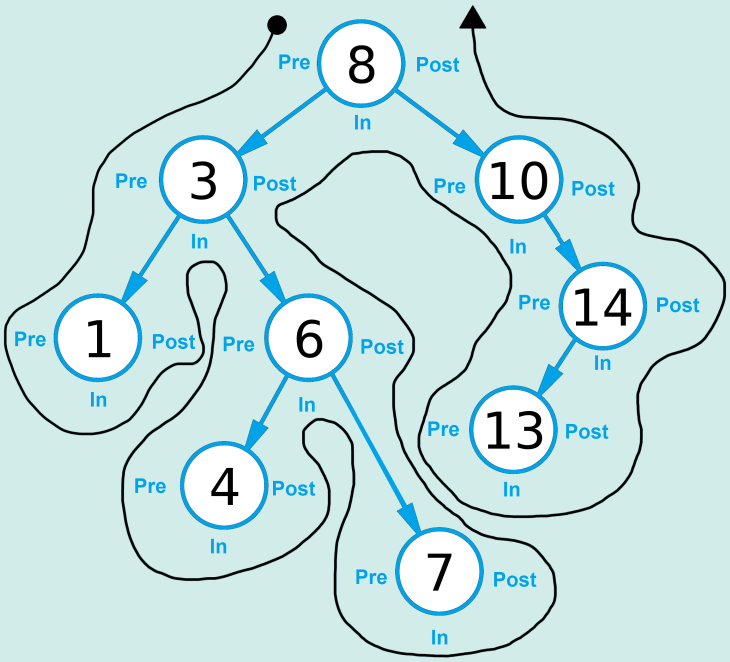
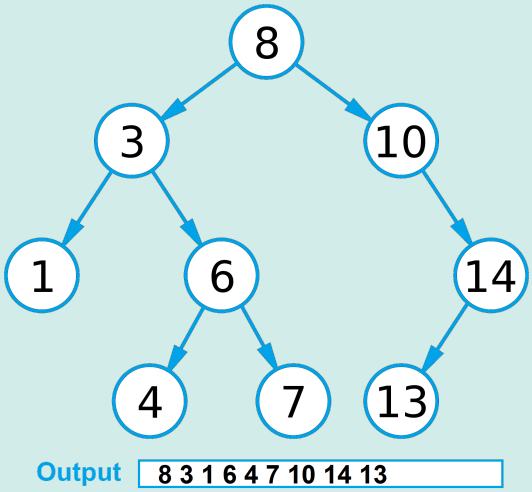
Basic Intuition



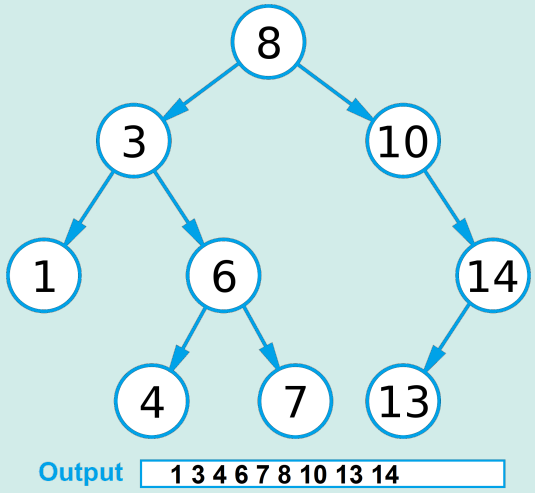
- The sample tree can be used to figure out the output sequence of depth first search traversals.
- For pre-order traversal list out he nodes where the contour line passes 'pre' from start to finish.
- For in-order traversal list out the nodes where the contour line passes 'in' from start to finish.
- For post-order traversal list out the node where the contour line passes 'post' from start to finish.

Pre-Order Traversal



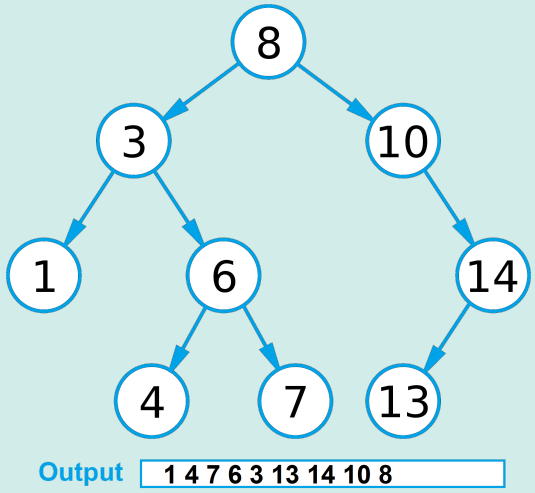
- Uses Stack data structure to store nodes.
- Time Complexity: O(n), n is number of nodes.
- Space Complexity: O(h), h is tree height.

In-Order Traversal



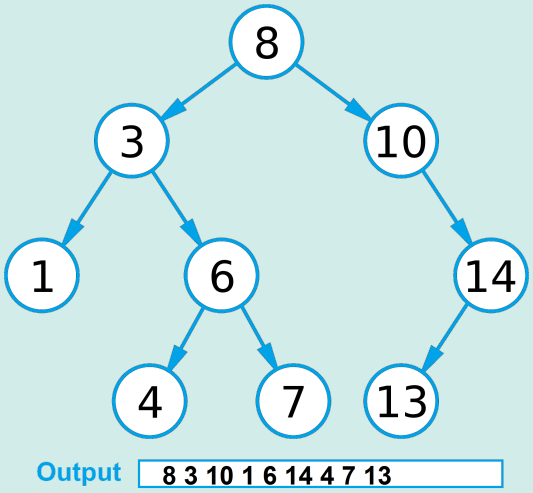
- Uses Stack data structure to store nodes.
- Time Complexity: O(n), n is number of nodes.
- Space Complexity: O(h), h is tree height.

Post-Order Traversal



- Uses Stack data structure to store nodes.
- Time Complexity: O(n), n is number of nodes.
- Space Complexity: O(h), h is tree height.

Level-Order Traversal



Output 8 3 10 1 6 14 4 7 13

- Uses Queue data structure to store nodes.
- Time Complexity: O(n), n is number of nodes.
- Space Complexity: O(n), n is number of nodes.