

Problem: Implement breadth-first traversal on a binary tree.

Constraints

- Can we assume we already have a Node class with an insert method?
 - Yes
- Can we assume this fits in memory?
 - Yes
- What should we do with each node when we process it?
 - Call an input method visit_func on the node

Test Cases

Breadth-First Traversal

- 5, 2, 8, 1, 3 -> 5, 2, 8, 1, 3

Algorithm

- Initialize queue with root
- While queue is not empty
 - Dequeue and print the node
 - Queue the left child
 - Queue the right child

Complexity:

- Time: $O(n)$
- Space: $O(n)$, extra space for the queue