Lab report of CSE 206(3)
Course Title: Algorithms Lab
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Answer to the Question

Depth-first search is an algorithm for traversing or searching tree or graph data structures. The algorithm starts at the root node and explores as far as possible along each branch before backtracking. In this example: after searching A, then B, then D, the search backtracks and tries another path from B.
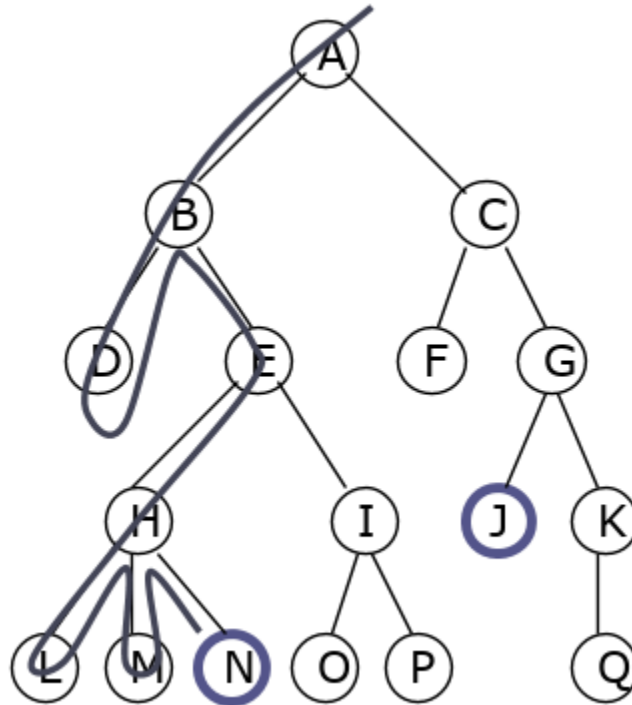
N will be found before **J,** in this case, this isn't the correct answer so we are looking for BFS.
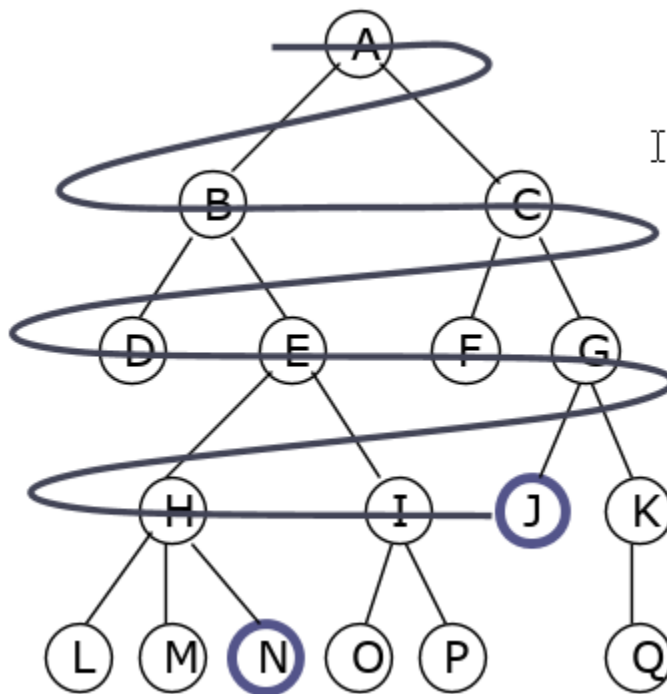
Breadth-first search (BFS) is an algorithm for traversing or searching tree or graph data structures. It starts at the tree root (or some arbitrary node of a graph, sometimes referred to as a 'search key', and explores all of the neighbor nodes at the present depth prior to moving on to the nodes at the next depth level.

In this breadth-first search (BFS) we explore nodes nearest the root before exploring nodes further away

In this example: after searching A, then B, then C, the search proceeds with D, E, F, G

Nodes are explored in the order A B C D E F G H I J K LM N O P Q.

And **J** will be found before **N**

Breadth-first search (BFS)