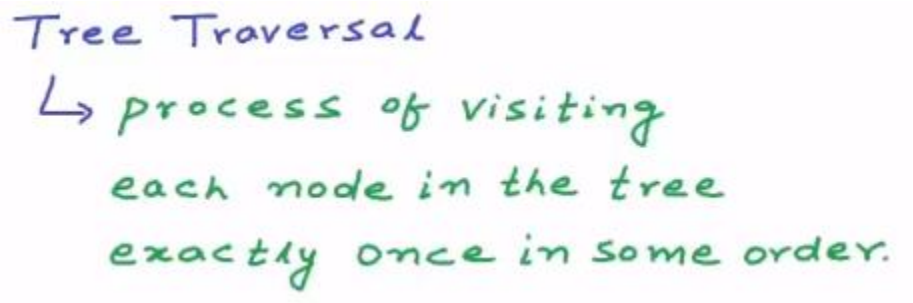
Binary Tree Traversal:

Breadth-First and **Depth-First** Strategies

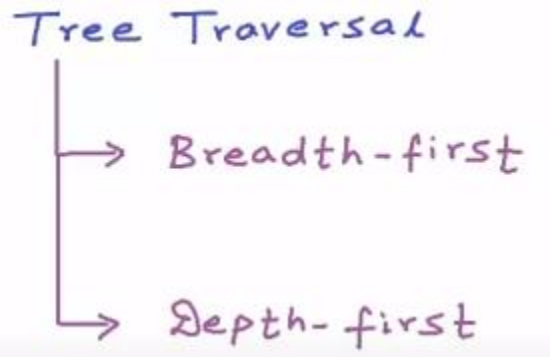
Tree is not a linear data structure. There is no logical start with a pointer, such as a linked list.

A Binary Tree can have multiple possible directions.



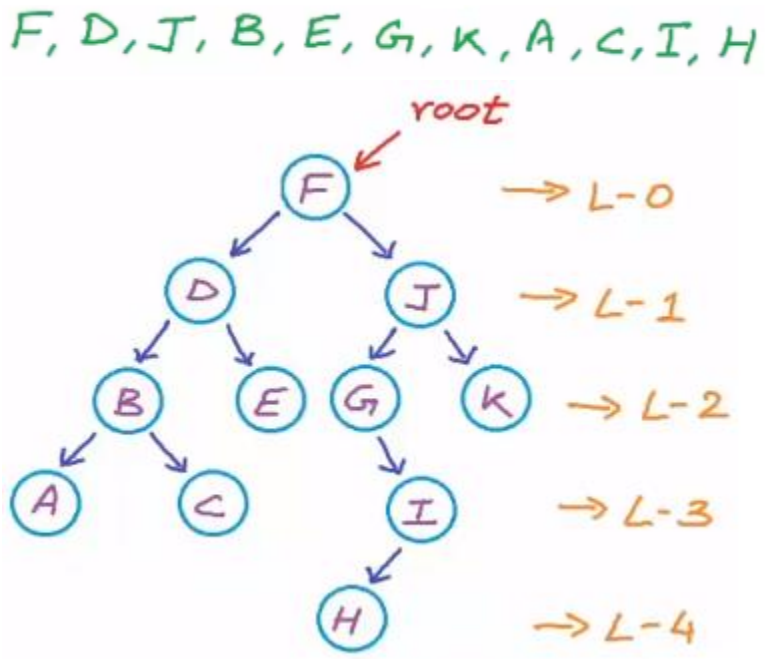
… when we say “visiting a node,” we mean processing data in that node.

Tree Traversal can be classified into 2 categories:

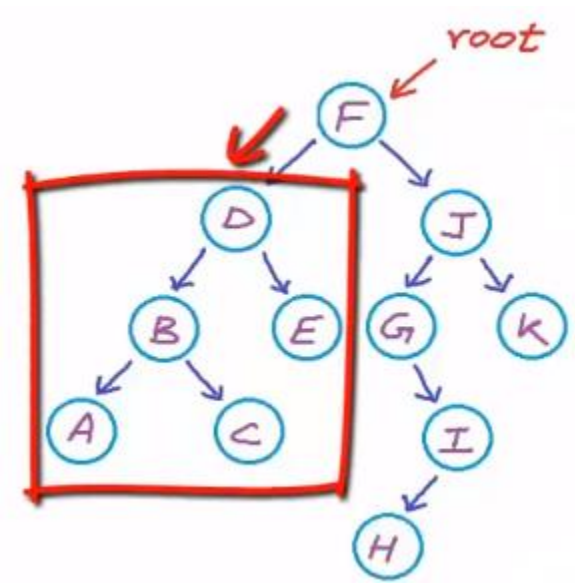


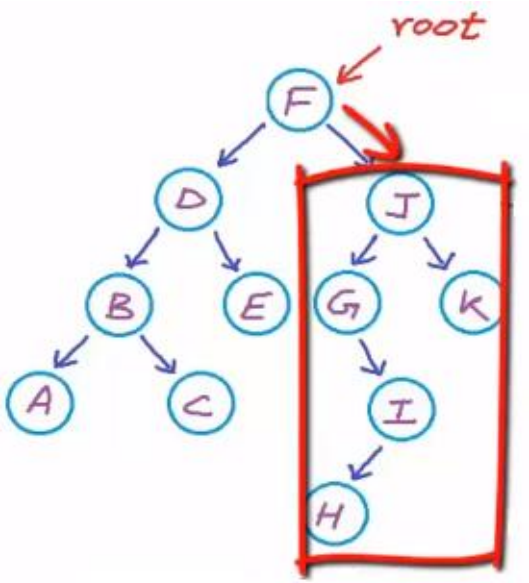
Breadth-First: We visit all nodes on the same level, before visiting nodes on the next level.

This is also known as **Level-Order Traversal**:

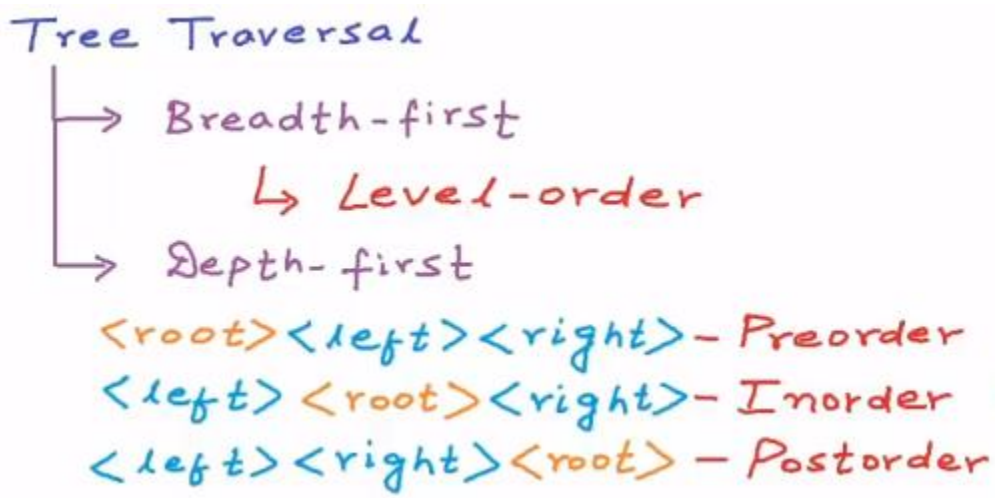


Depth-First: We visit a sub-tree (child and its respective grandchildren along one path) before visiting the other sub-tree:





There are 3 different types of Depth-First Strategies:


Tree Traversal
Breadth-first
Level-order
Depth-first
<root><left><right> - Preorder
<left> <root><right> - Inorder
<left><right><root> - Postorder