* Important interview concepts for Java Developers from Collection Framework:

* **The Properties Class inside java.util**

All the data for an application/project such as database, username, password, server_port, url, etc are loaded using a file having extension **filename.properties**

* For most apps the file name is:
  * application.properties
  * config.properties

  ] [root directory]

* **Count the frequency of each string in an array in the best possible time complexity.**

array = { "apple", "banana", "apple", "guava", "banana", "avocado" }

o/p: { apple = 2, banana = 2, guava = 1, avocado = 1 }
(apple → key, 2 → Value)

AL
LL
X

Map<K,V>

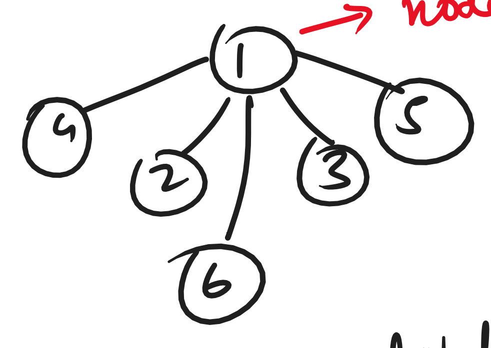
* Wild Cards <?>

Introduction to non-linear Data Structures:→

(1) Trees → A non-linear data structure having entities called nodes is called a tree. Based on the number of children a tree can be of different types.

(Trie – Suffix Tree)

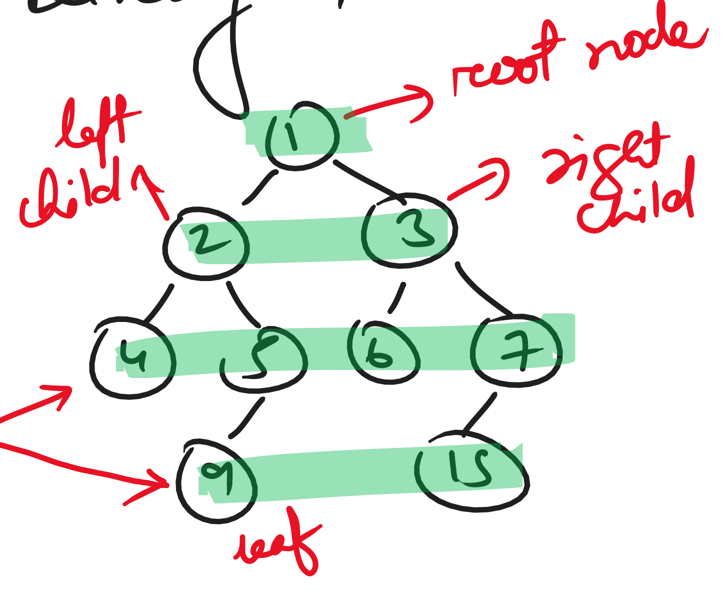
(1) Normal Tree



Multiple-children
(Recursion)

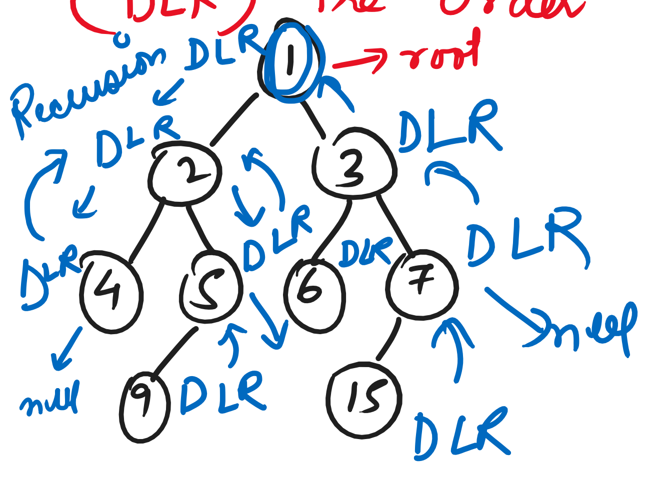
* (2) Binary Tree

A node will have max 2 children.



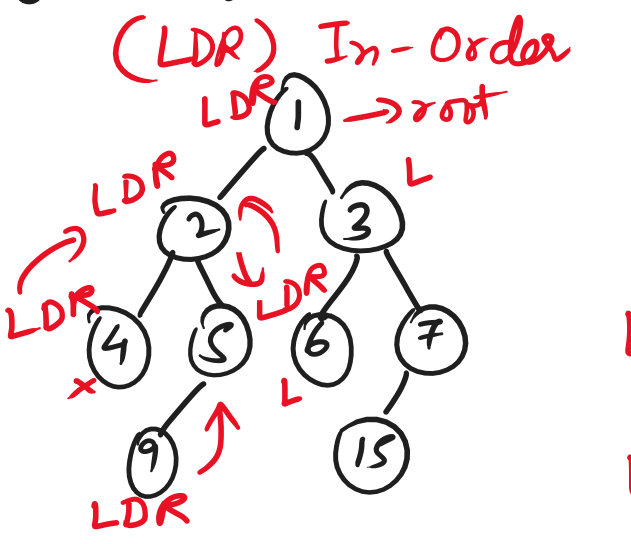
Depth First Search Traversal Technique : DFS

(DLR) Pre-Order



O/p: 1, 2, 4, 5, 9, 3, 6, 7, 15
↓
Root

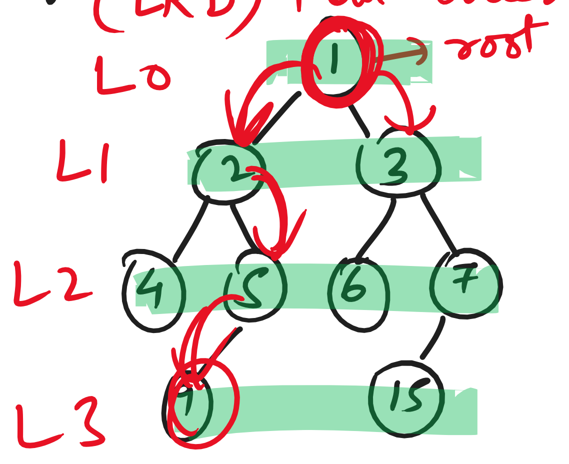
(LDR) In-Order



O/p: 4, 2, 9, 5, 1, 6, 3, 15, 7

(*BST*)

(LRD) Post-Order

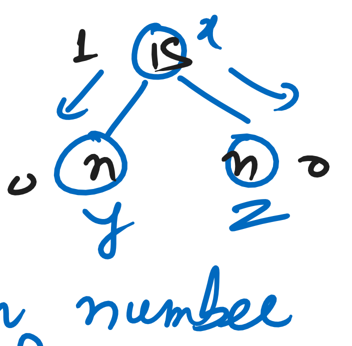


O/p:
4, 9, 5, 2, 6, 15, 7, 3, 1

* If the tree is empty, we don't traverse (root == null)

Class Node {
  int data; Node left, Node right;
}

* **Binary Tree Interview Questions :→**



(1) Height of a Binary Tree

The height of a binary tree is the maximum number of nodes from the root node to any of it's descendants.

node => height = max (l, r) + 1;