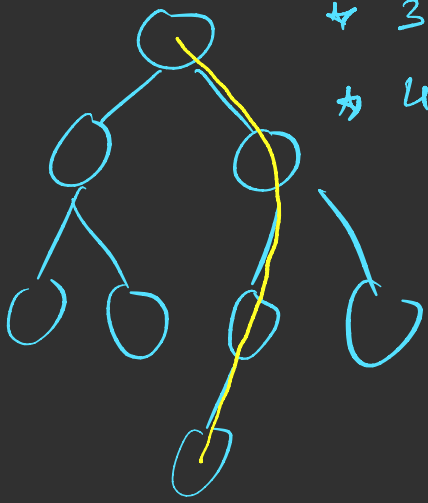
L75
BT Problem Solving

Join Discord - https://bit.ly/ly-discord

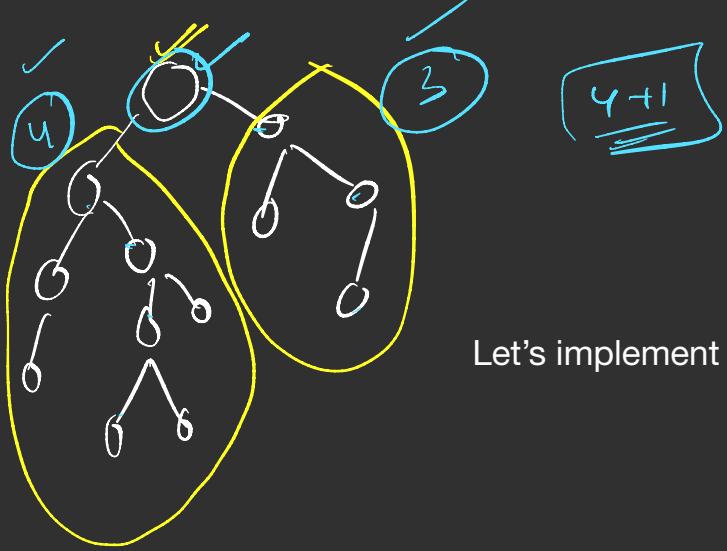
RECAP

1. Max Depth of a Binary Tree



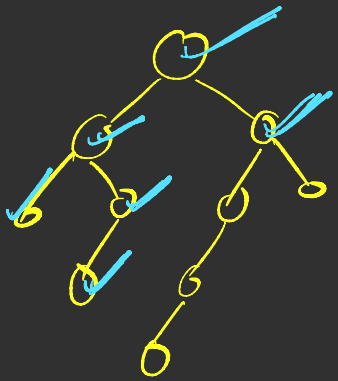
* 3 in terms of edges
* 4 in terms of nodes

Intuition

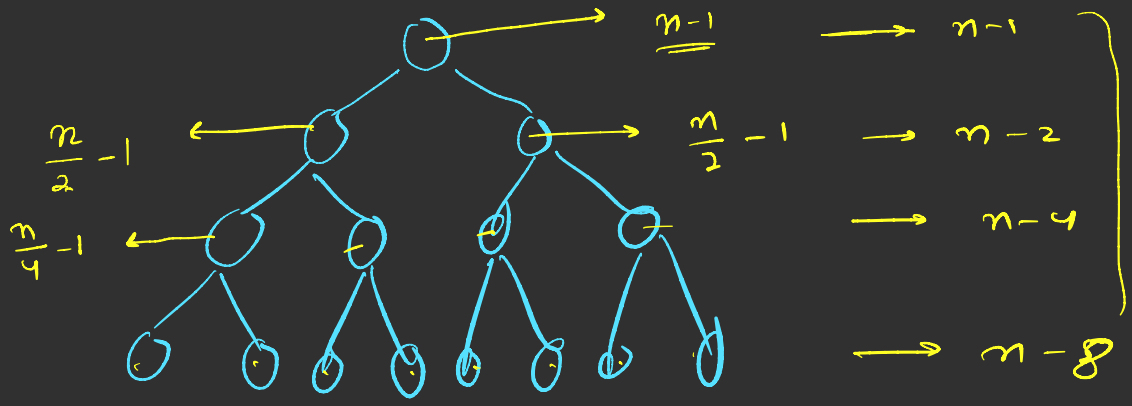


Let’s implement

2. Is it Balanced?



Intuition



h

$$n-2^0 + n-2^1 + n-2^2 + \cdots\cdots n-2^h$$

$$n^2 - (1+2+4+\cdots\cdots 2^h) \quad \text{q}\left[\frac{2^h-1}{2-1}\right]$$

$$n^2 - 2^h$$

$n^2 - 2^n$

$nh - 2^n$

$nh - 2^{\log_2 n}$

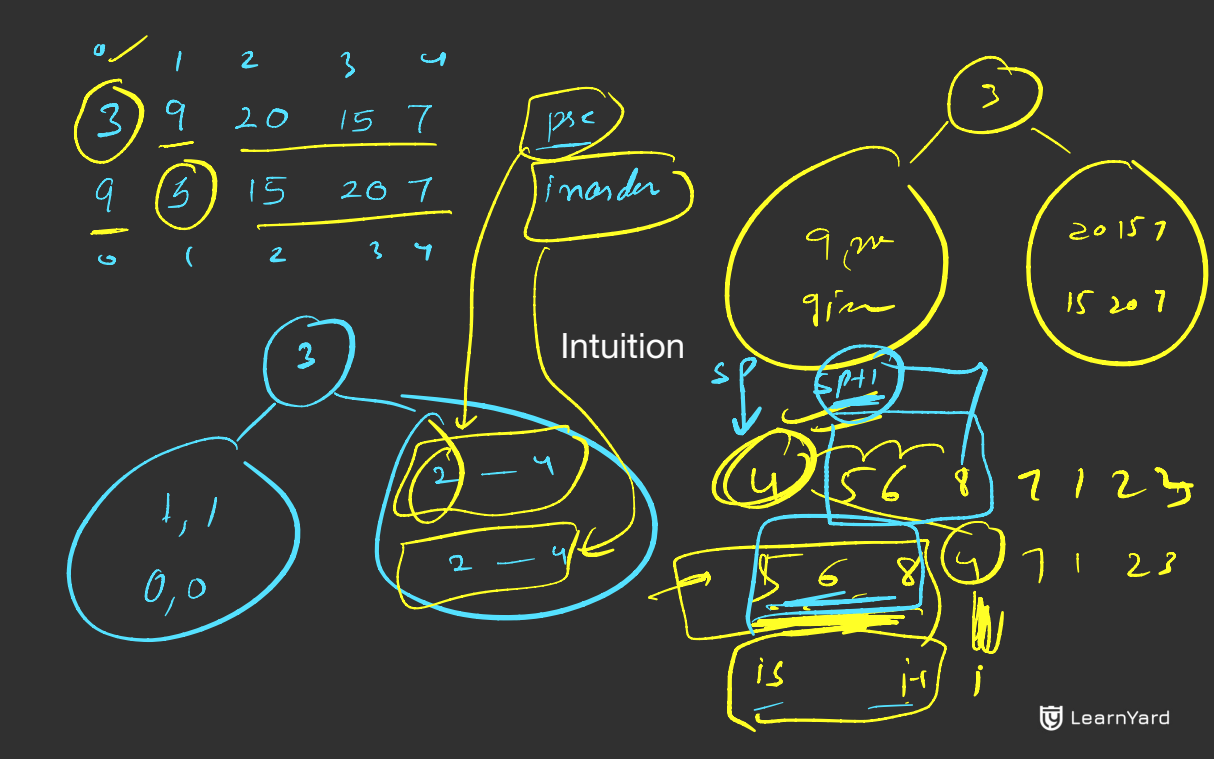
$\log_2 n = h$

$nh - n \simeq O(n^2)$

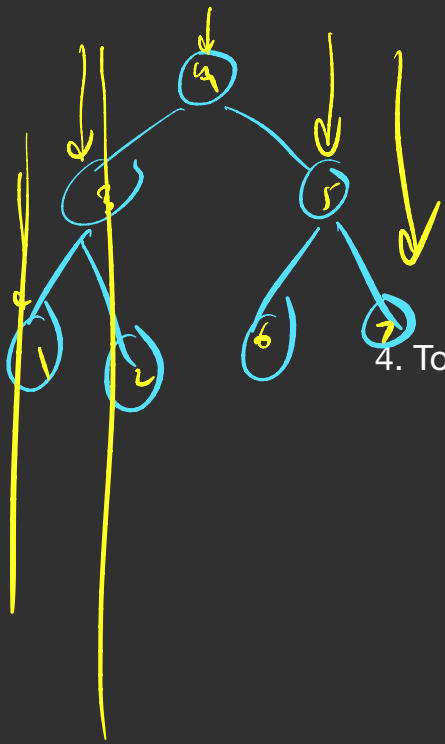
nh $n \log n$

Let’s implement

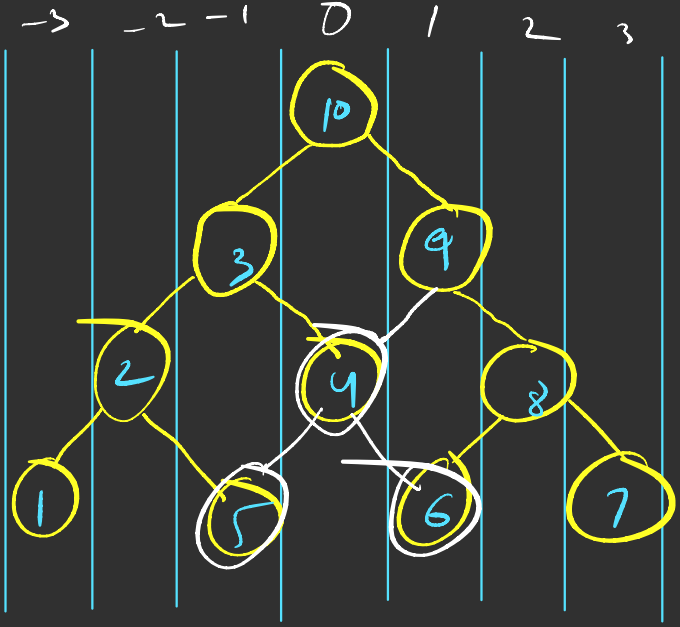
3. Construct BT from inorder & preorder traversals

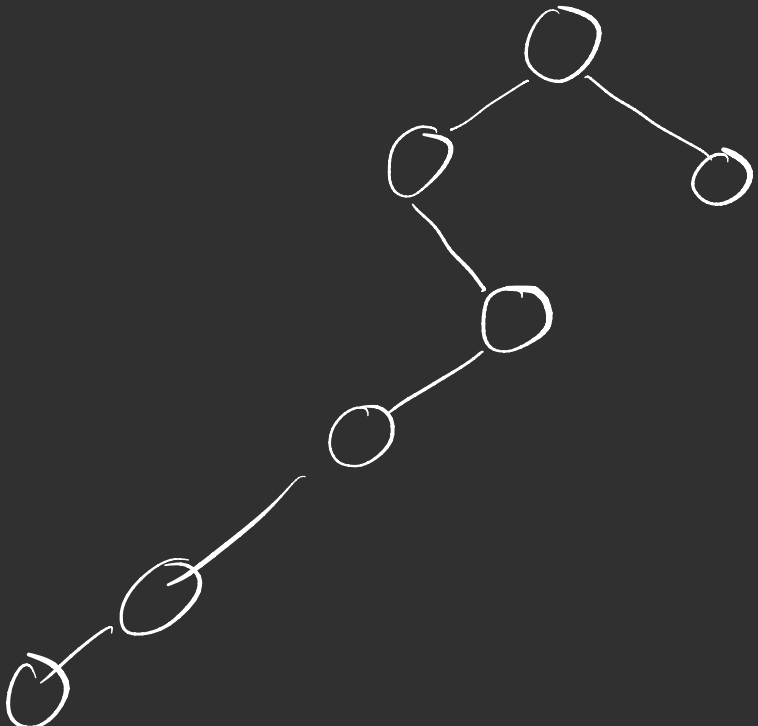

Intuition
LearnYard

Let’s implement



4. Top View of a Binary Tree





Intuition

Let’s implement

Thank You!

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!