

L80

Mixed Problems 2

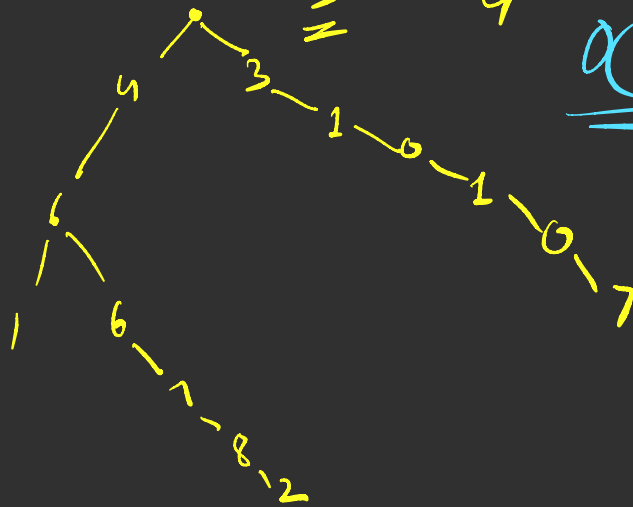
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RECAP

1. Longest Common Prefix

ans 1 = [461, 466782, 310107] $O(n)$

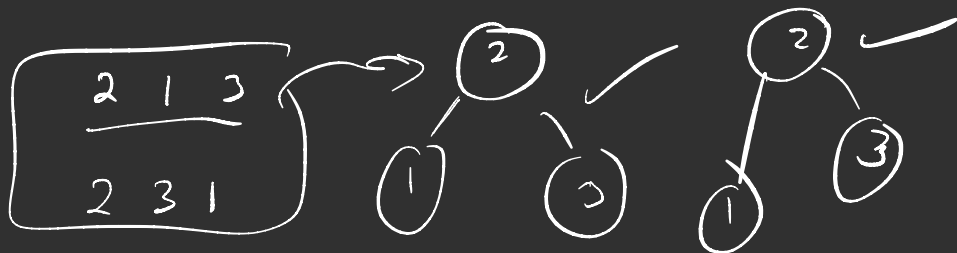
ans 2 = [462, 310108, 4667213] $O(m)$



$O(m+n)$

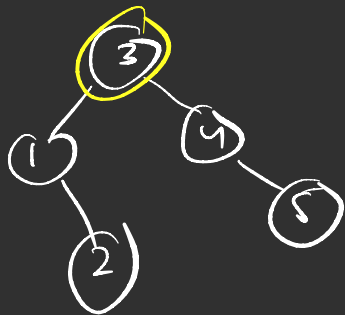
Intuition

Let's implement



2. Number of ways to get same BST

3	4	5	1	2]
3	1	2	4	5	
3	1	4	2	5	
3	1	4	5	2	
3	4	1	2	5	
3	4	1	5	2	



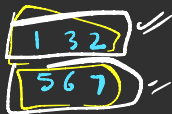
Left

1	2
└─	

Right

4	5
└─	

4 1 5 3 2 6 7



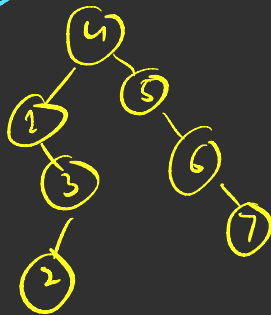
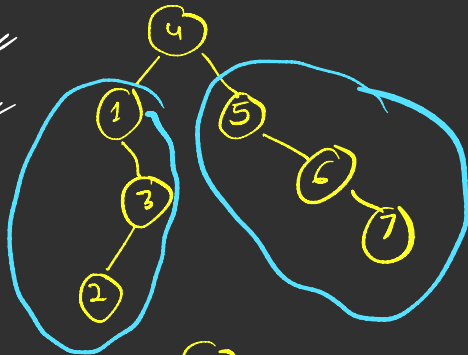
4 5 6 7 1 3 2

4 5 1 6 3 7 2

4 1 5 3 6 2 7

l r

$$\frac{(l+r)!}{l! r!}$$

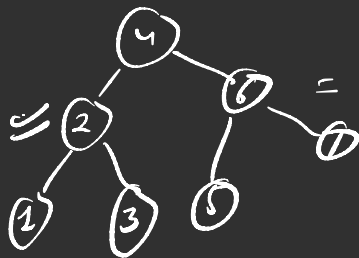


4 2 1 3 6 7 5 [2 1 3] [2 3 1]
 [6 7 5] [6 5 7]

4 2 6 1 7 3 5

4 2 6 3 5 1 7

Intuition



ways (ans)

1 - 2

1 1 2 1 6 1 ... 1

{

left = all elements in ans smaller than ans[0];

right = all elements in ans greater than ans[0];

lways = ways(left);

rways = ways(right);

ans = $\frac{(left.size + right.size)!}{left.size! * right.size!} * lways * rways;$

}

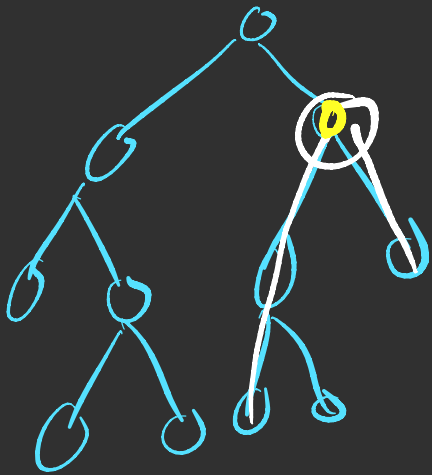
1 2 3 4

4!

1 2 3 4 4

Let's implement

3. Maximum Path Sum



1. $root \rightarrow val$
2. $lMax + root \rightarrow val$
3. $rMax + root \rightarrow val$
4. $rMax + lMax + root \rightarrow val$

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!