

# Ques: Generate Parentheses

$n=2 \rightarrow$  2 opening bckts & 2 closing bckts.

()()  
✓

(())  
✓

)>()  
✗

()>()  
✗

$n=3$

()()()

()(())

((()))

((())())

(())(())



## Ques: Generate Parentheses

$n=1$      $()$

$n=2$      $()()$      $(())$

$n=3$      $()()()$      $(())()$      $()(())$      $((()))$      $(())()$

Hint: No. of left brackets  
No. of right brackets



$n=3$

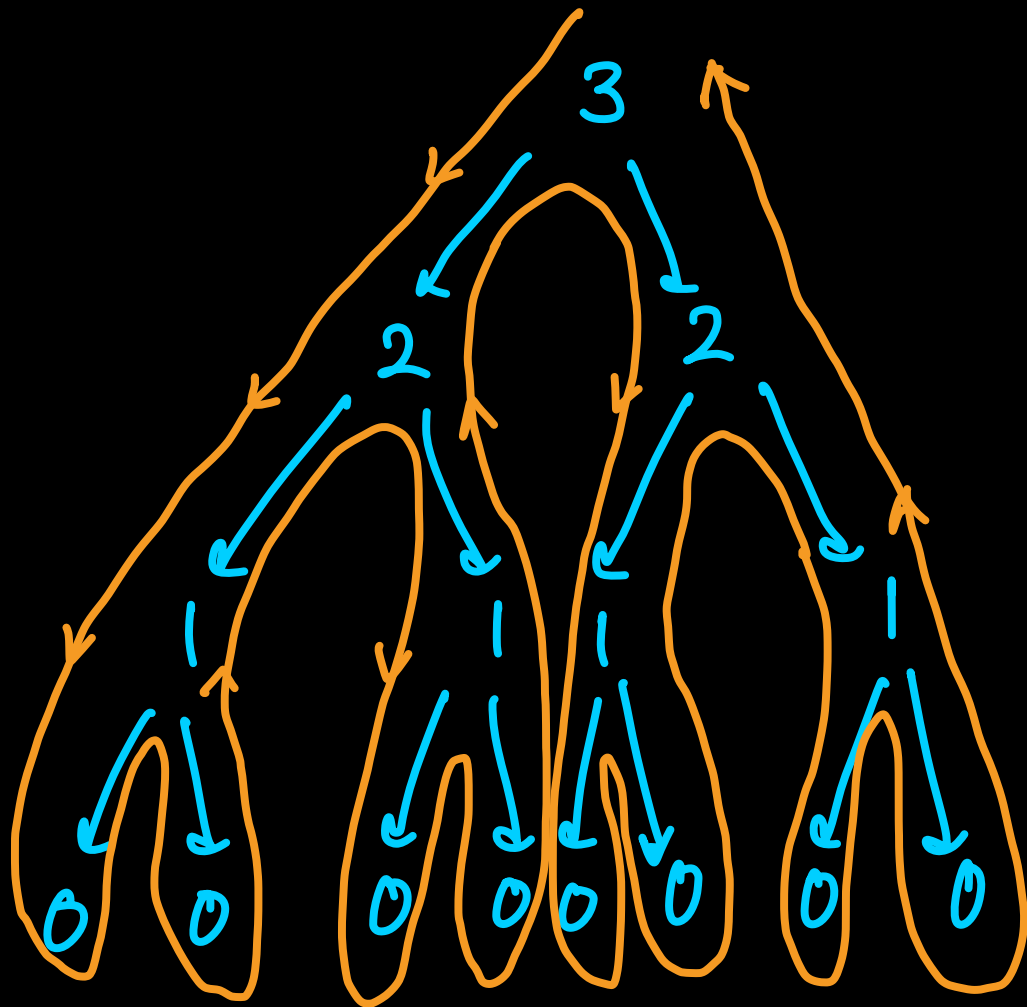
**Pre In Post**

Euler's tour tree



Pre 3

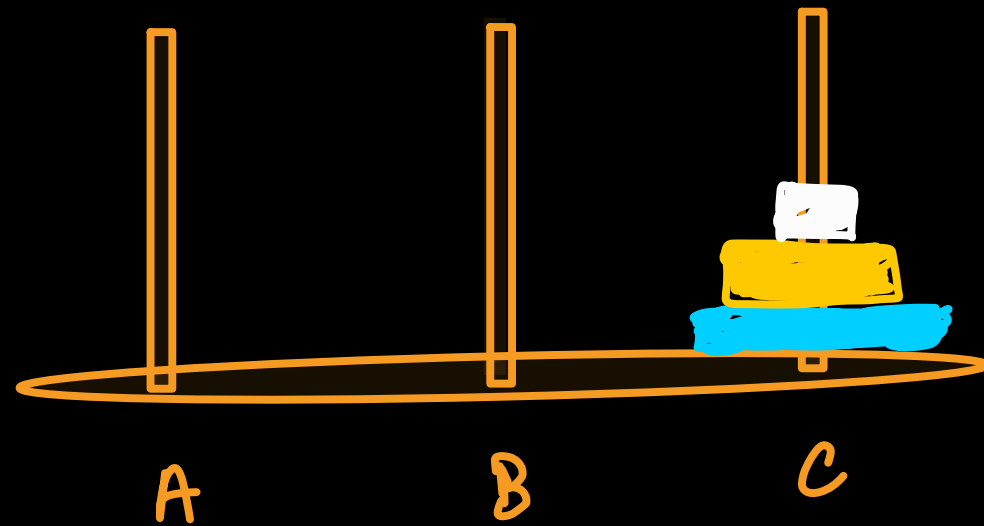
Pre 2



```
void pip(n) {  
    if (n == 0) return;  
    sout(n);  
    pip(n-1);  
    sout(n);  
    pip(n-1);  
    sout(n);  
}
```



# Ques: Tower Of Hanoi



$n$  disks from A to C via B

- $n-1$  disks from A to B via C
- largest disk from A to C
- $n-1$  disks from B to C via A



# Ques: Look and Say Pattern $n=6$

1	1
2	11
3	21
4	1211
5	111221
6	312211
7	13112221
8	1113213211

$fun(4) = \text{padho } fun(3) \text{ ko}$

$s = 111221$   $i$   $freq = j-i$   
 $j$

$ans = 312211$