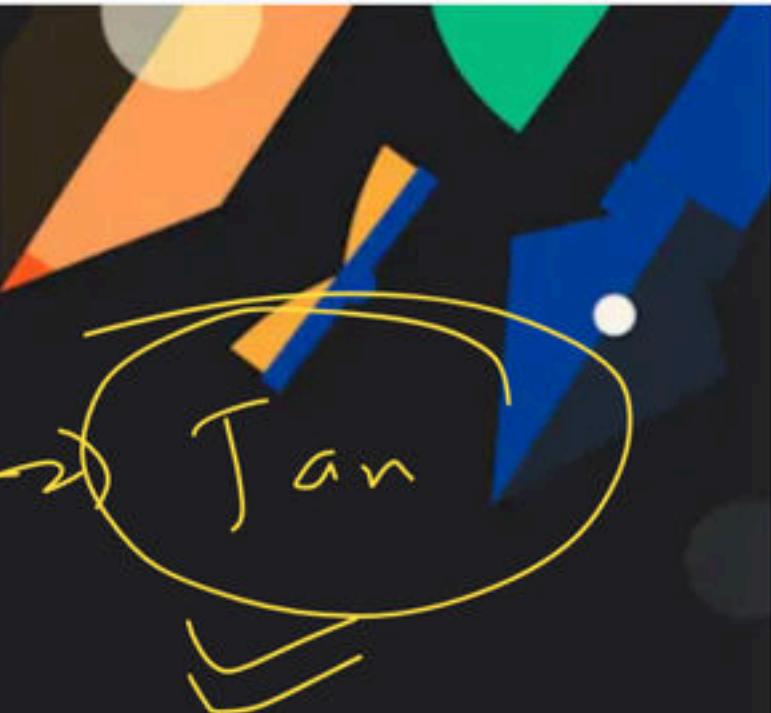


$\Rightarrow \underline{\text{BST}} \Rightarrow \underline{\text{Easy}} \Rightarrow \underline{\text{Interview}}$

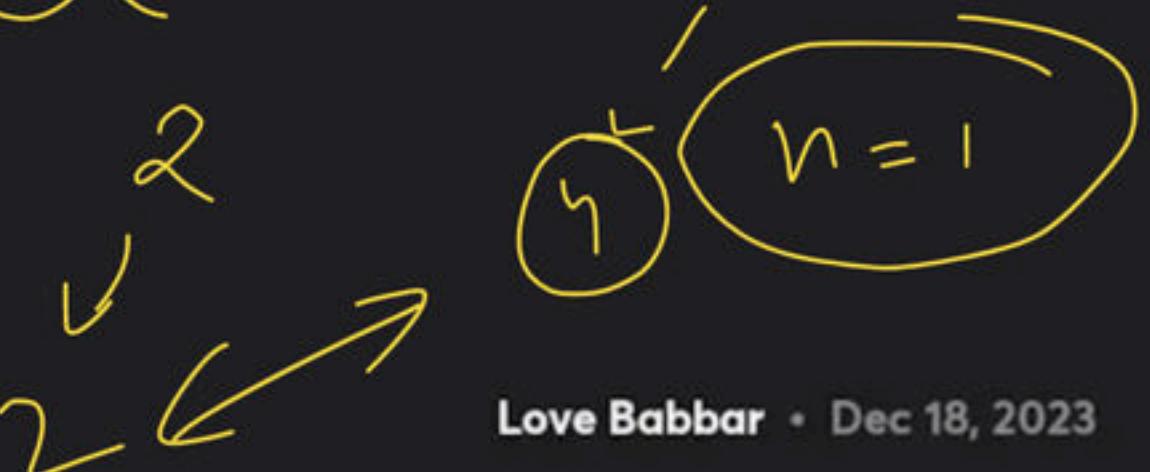


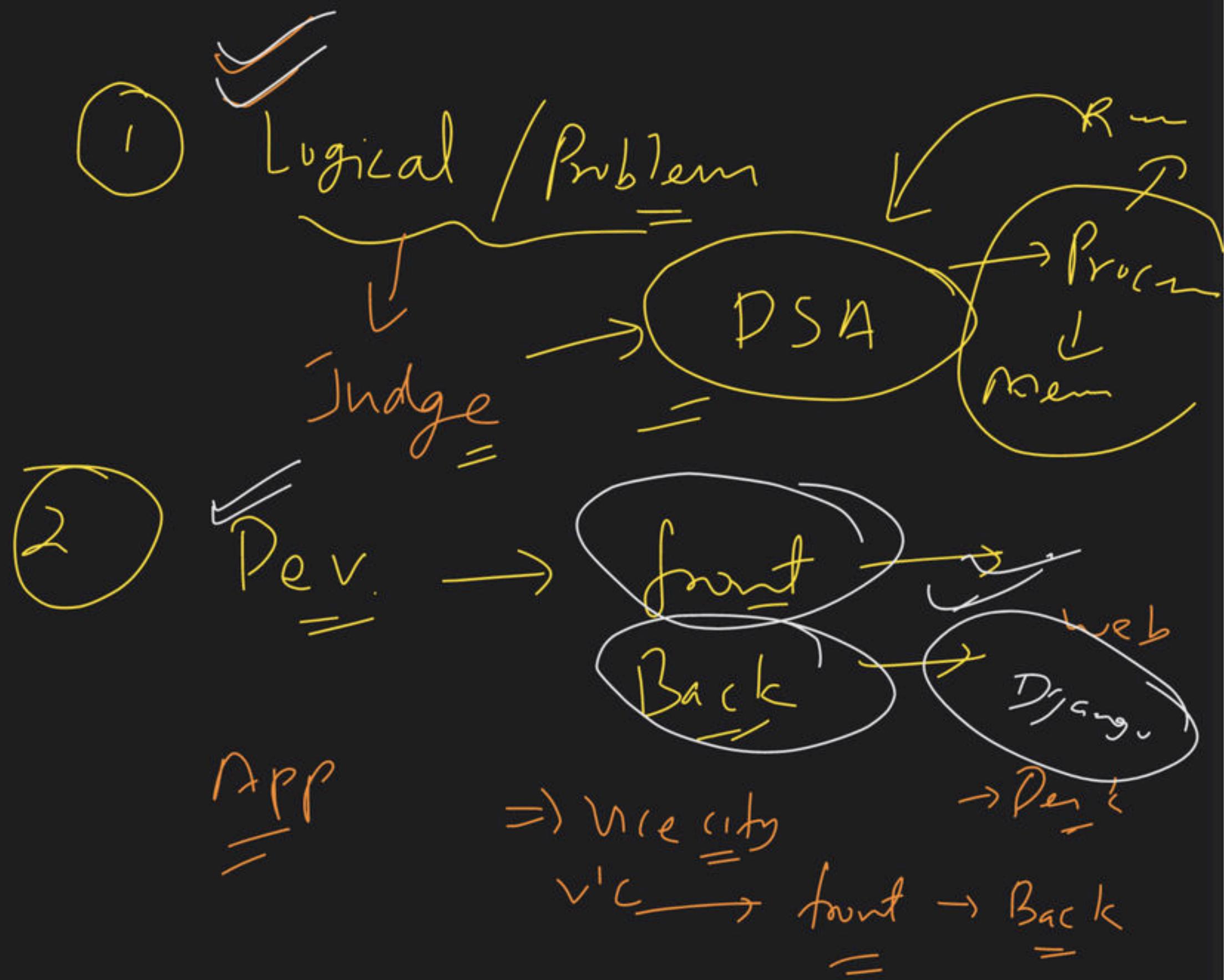
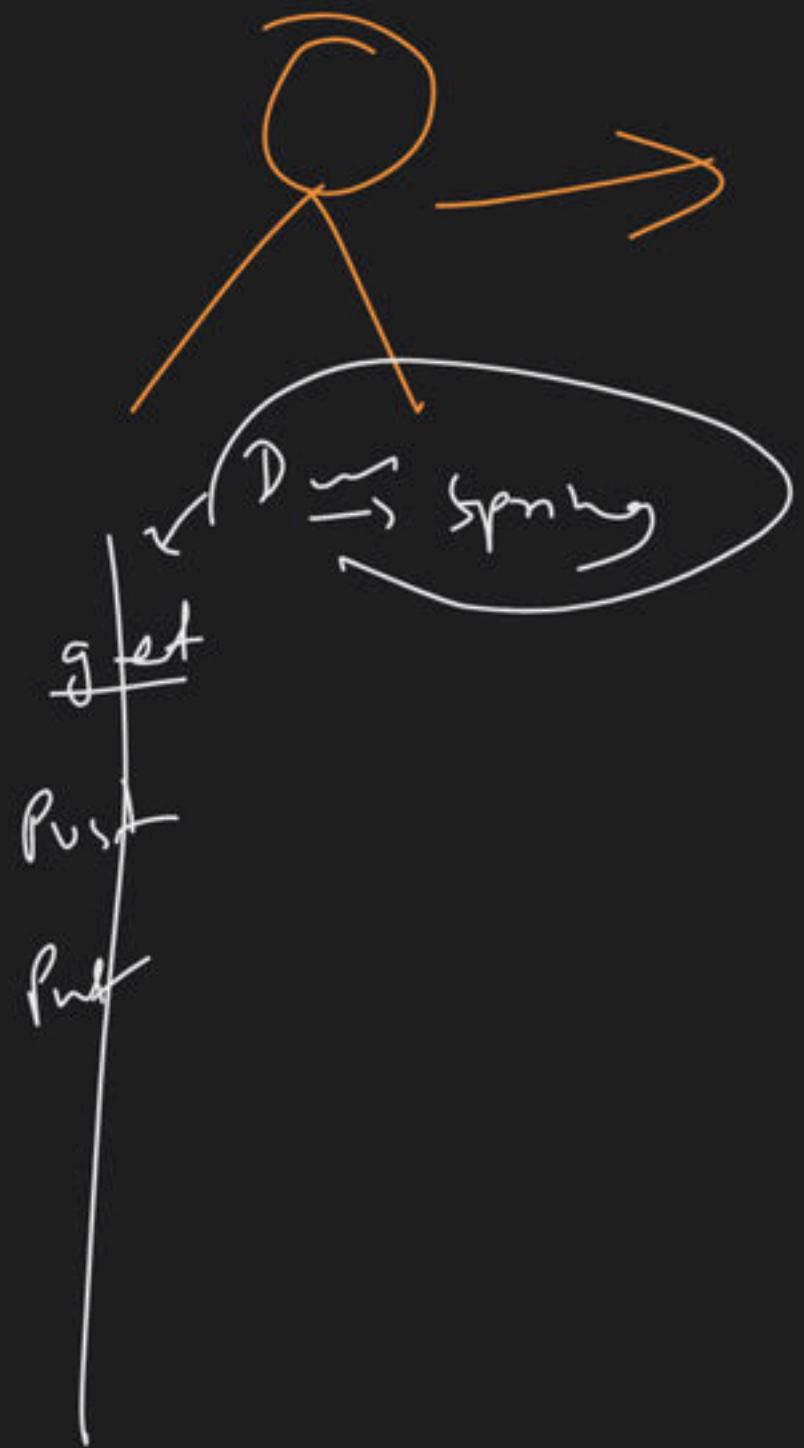
Doubts Session With Lakshay Bhaiya

Special class

$$\mathcal{O}(n) \Leftrightarrow \mathcal{O}(n \log n)$$

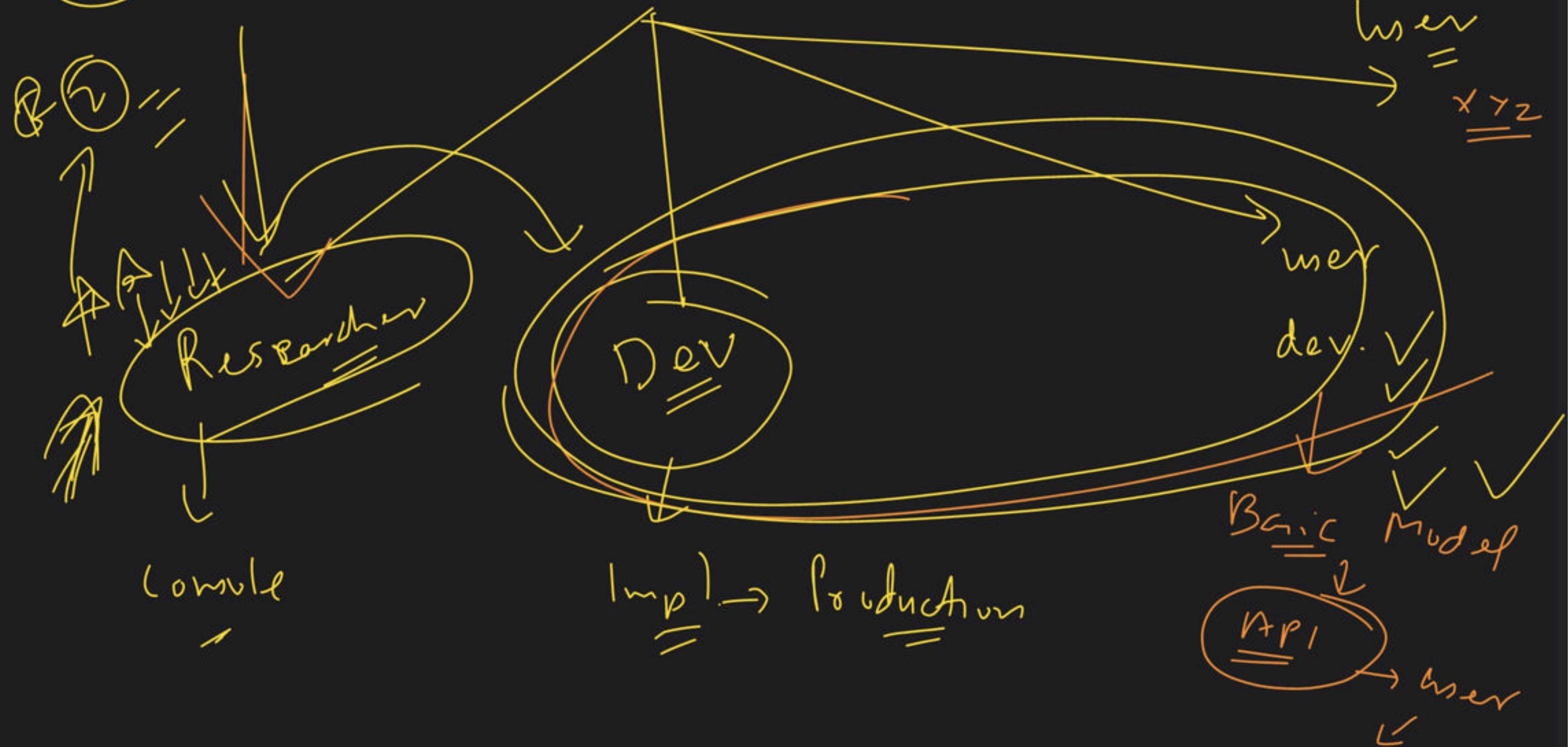
$$\Rightarrow \mathcal{O}(n) = \mathcal{O}(n^2)$$





3

M2 / MAT





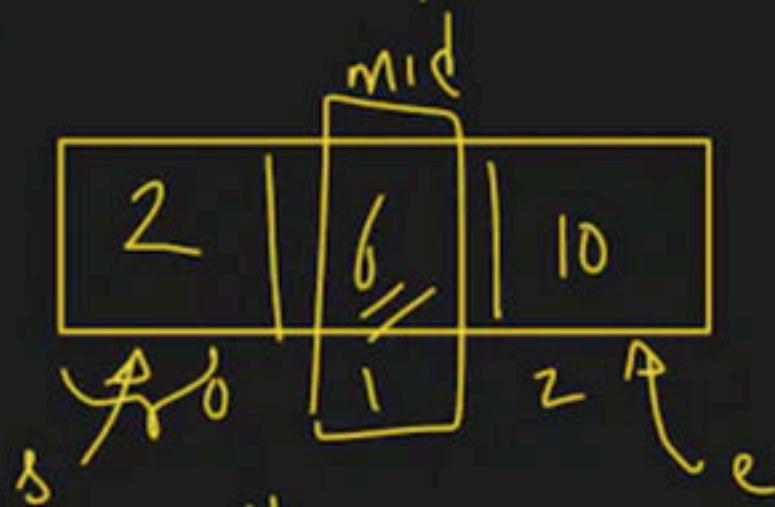
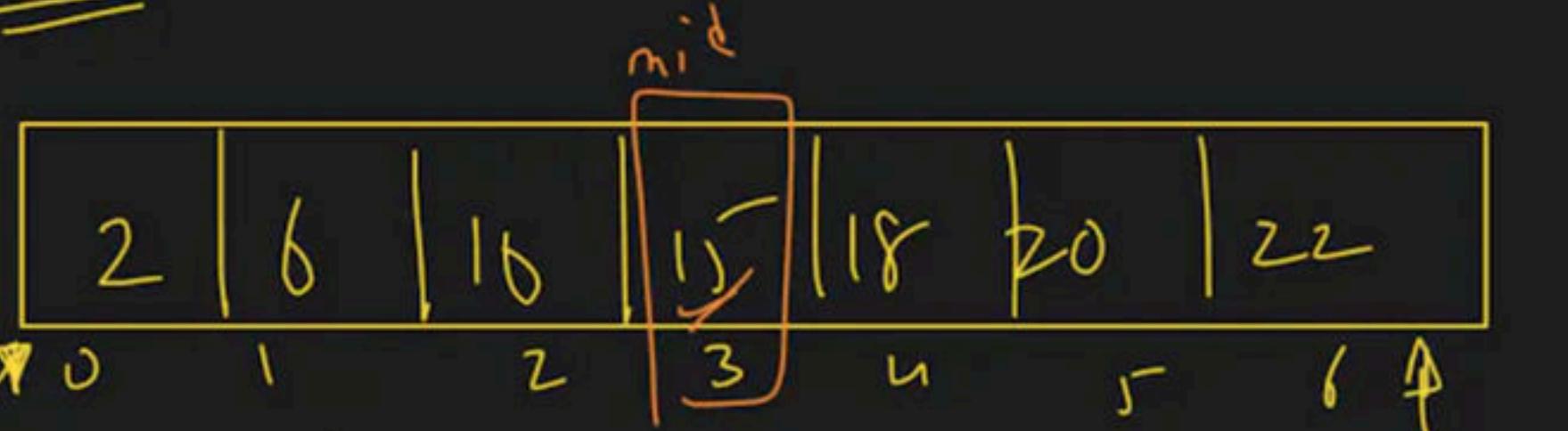
Binary Search Trees Class-1

Special class

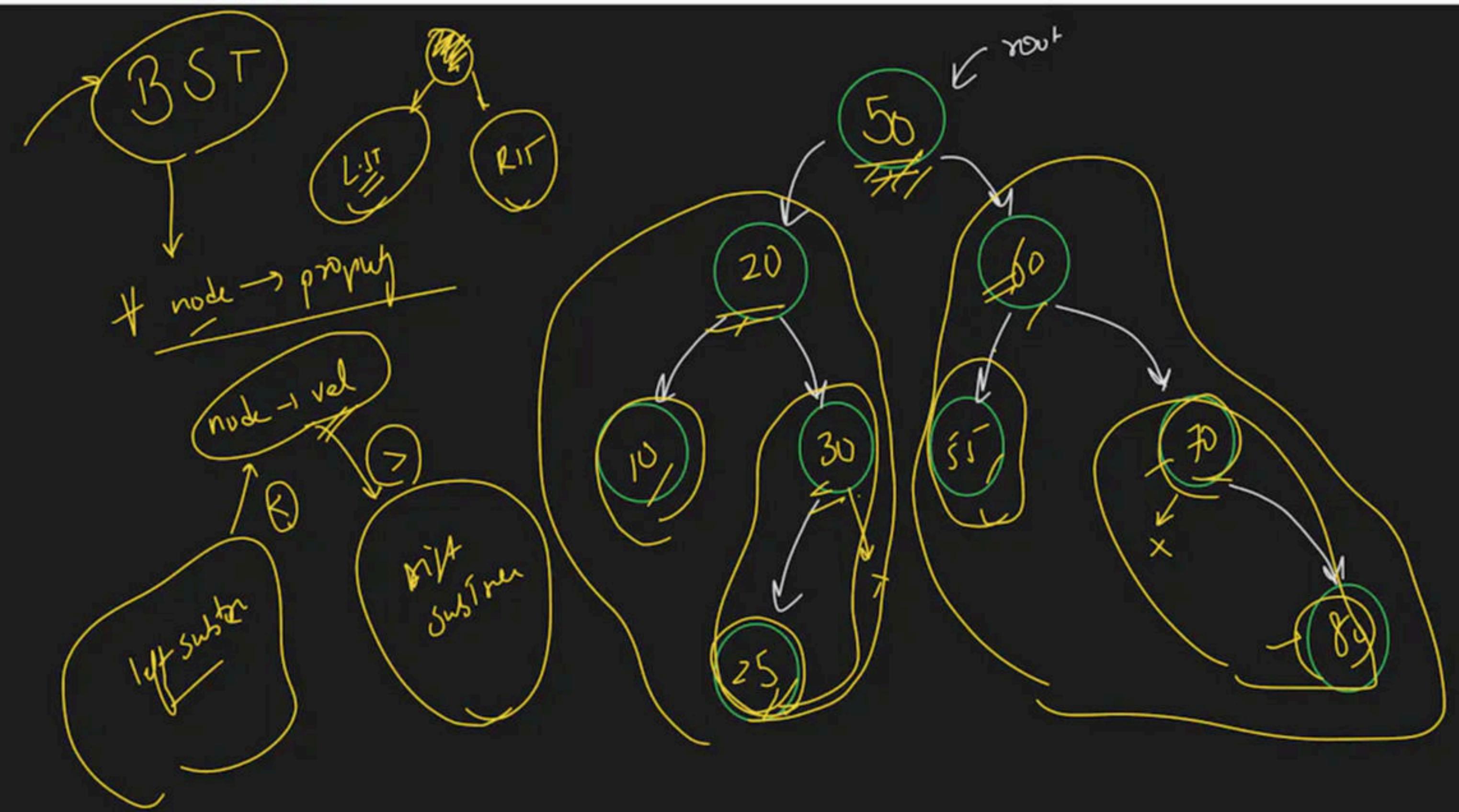
Love Babbar • Dec 6, 2023

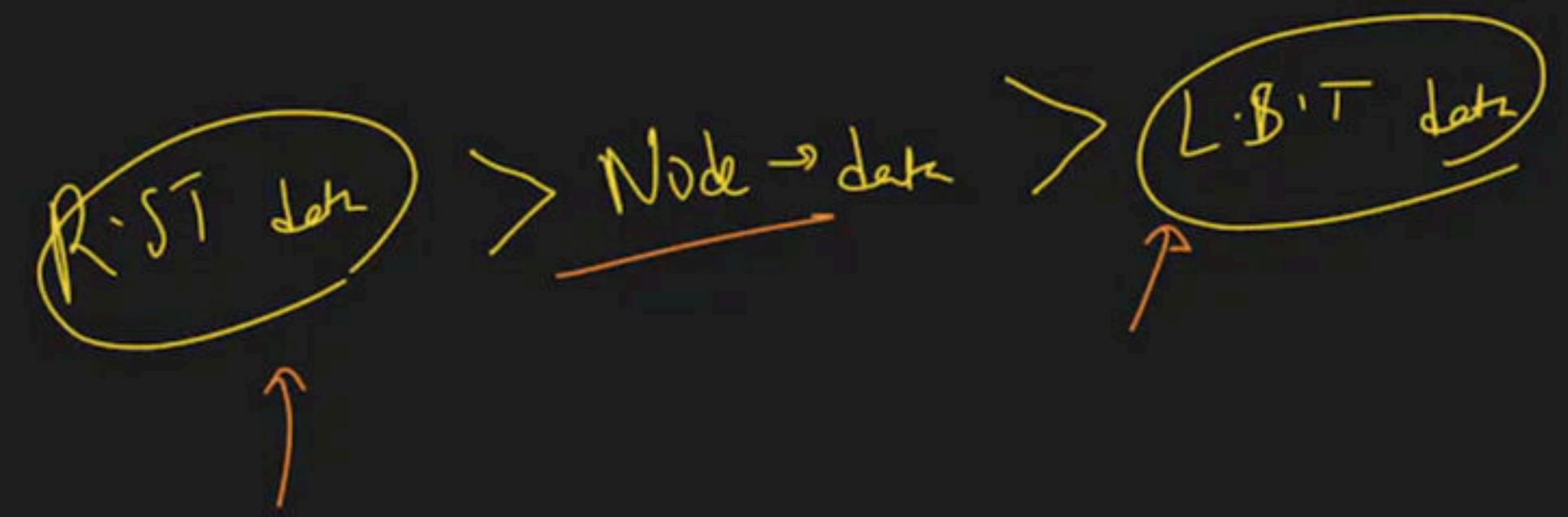
~~target - 2~~

Binary Search

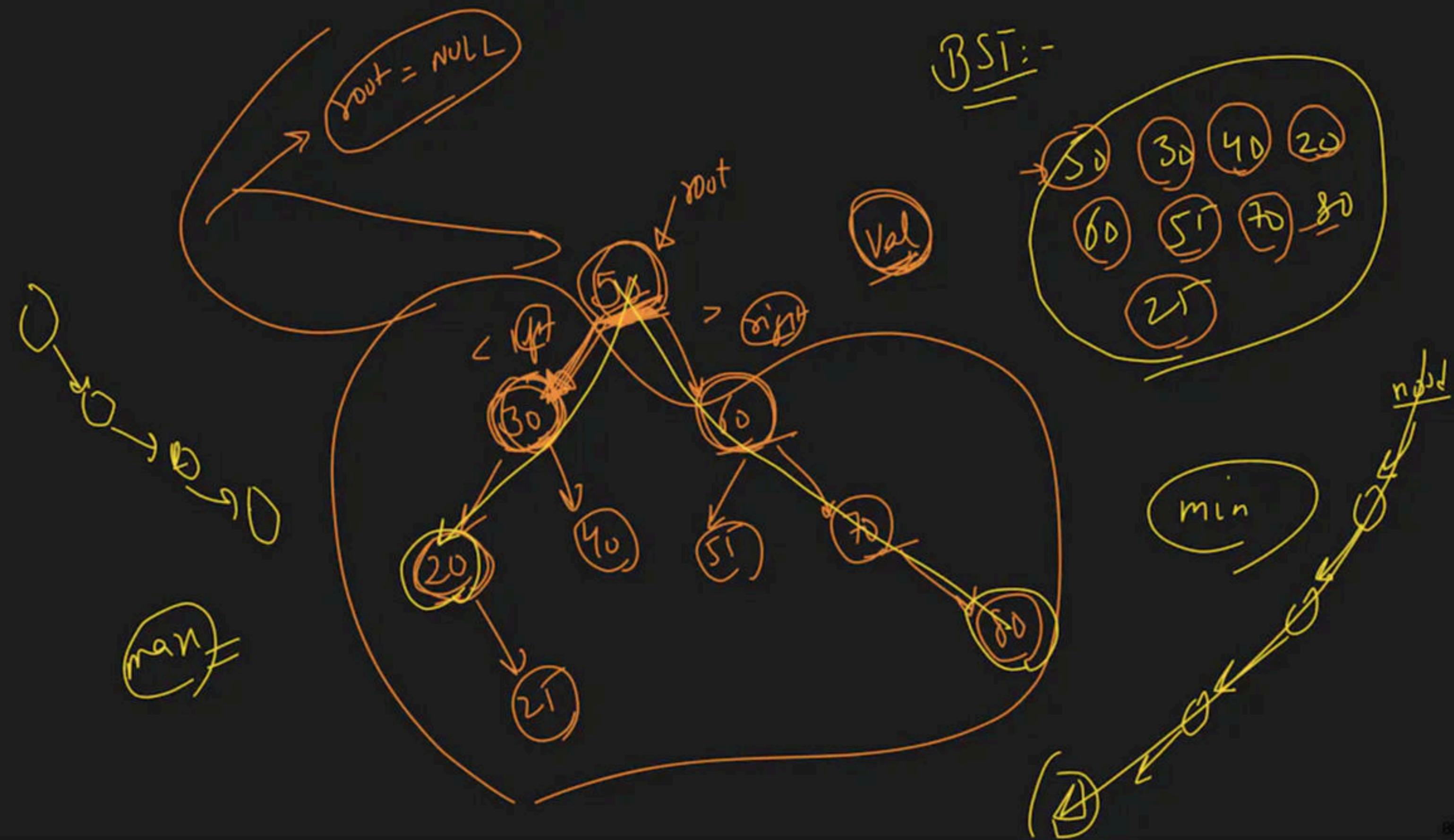


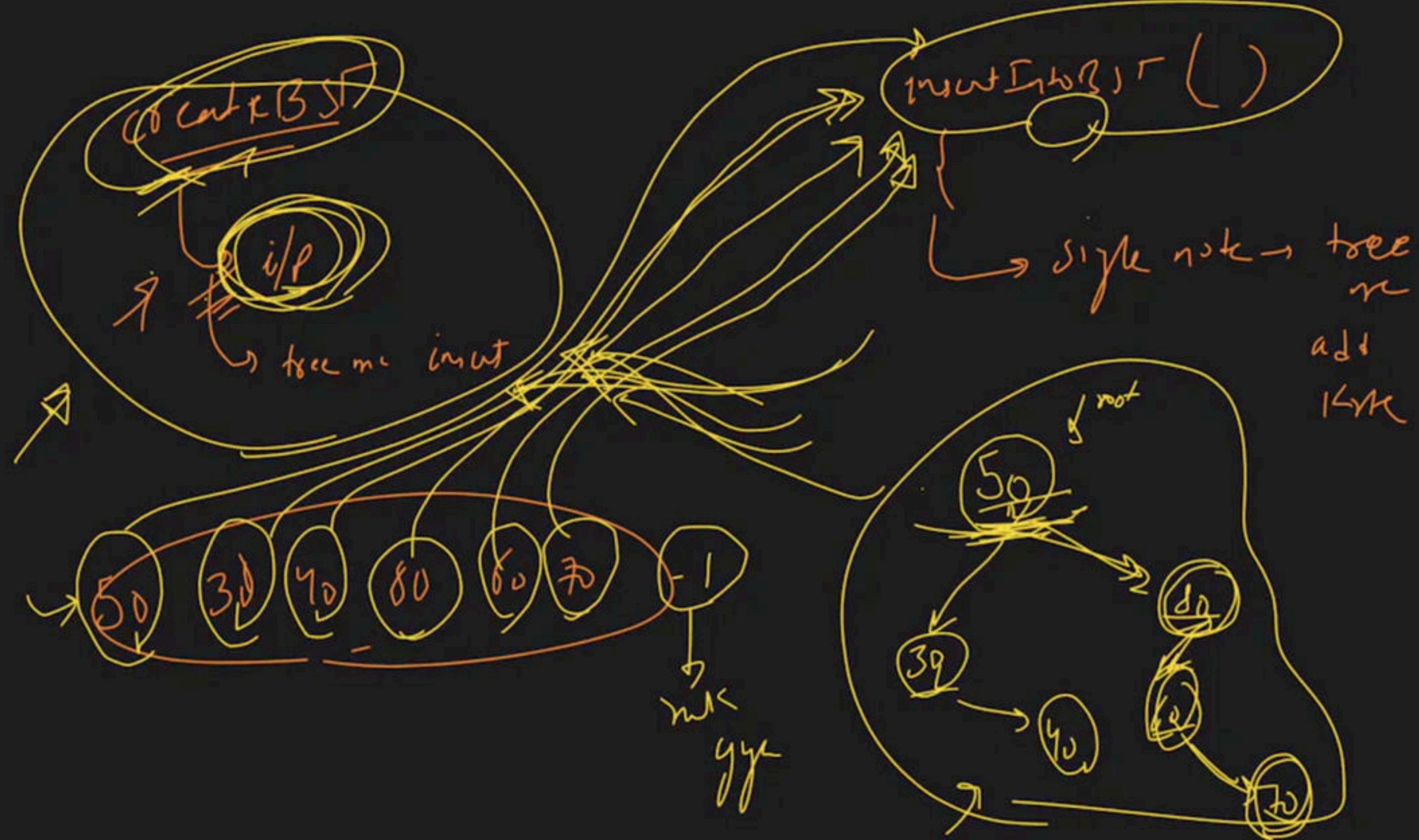
$T.C \rightarrow O(\log n)$

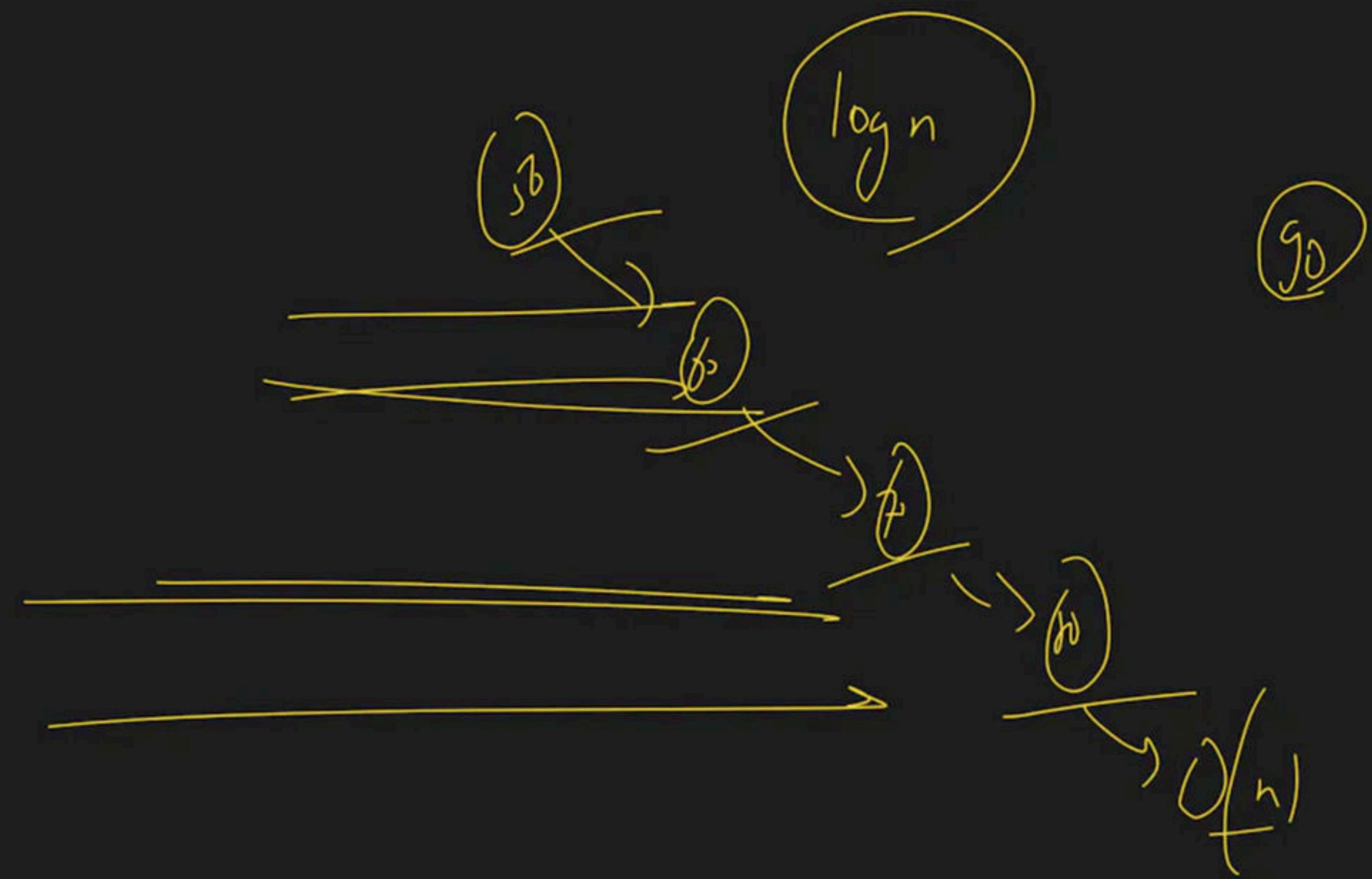


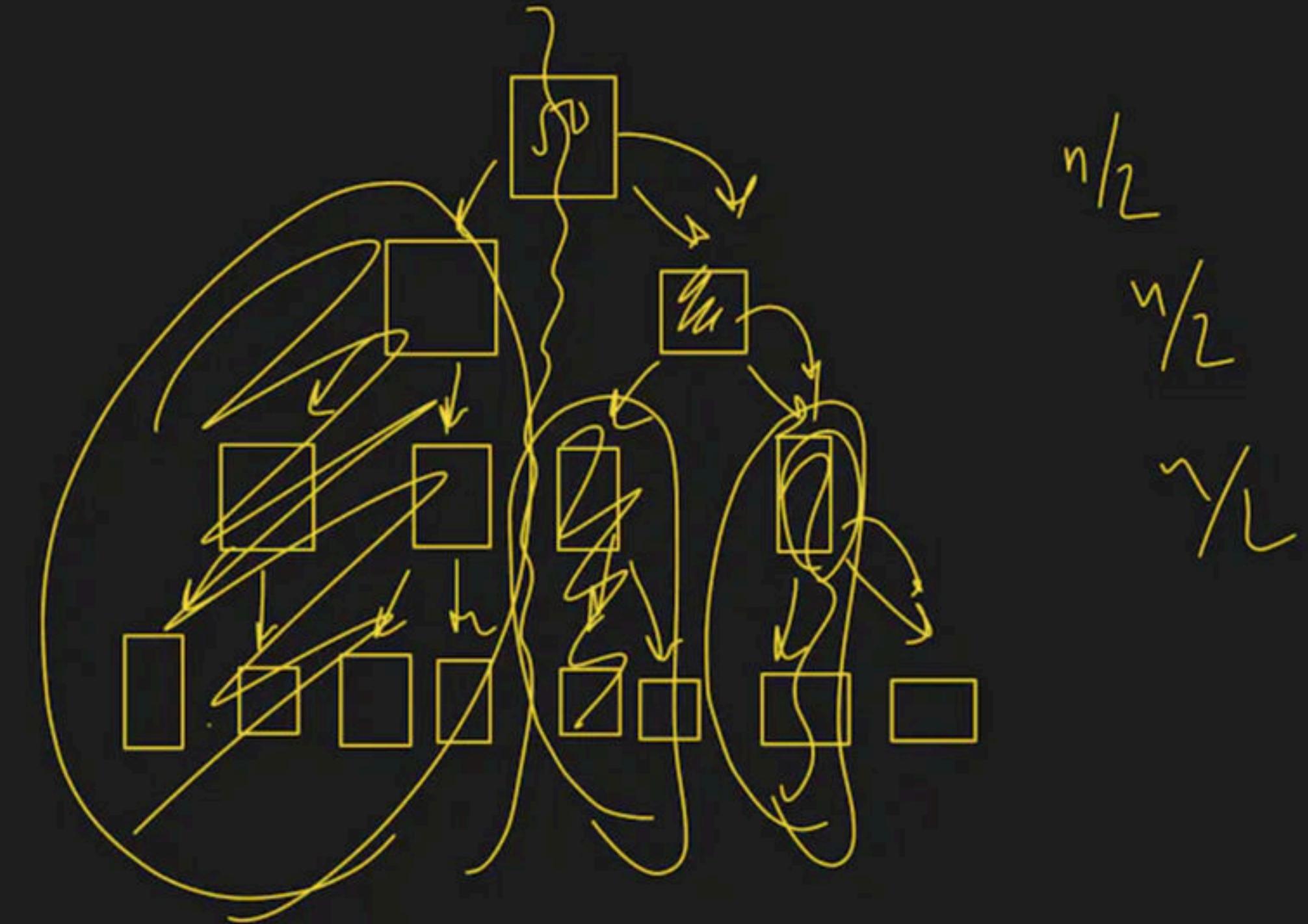


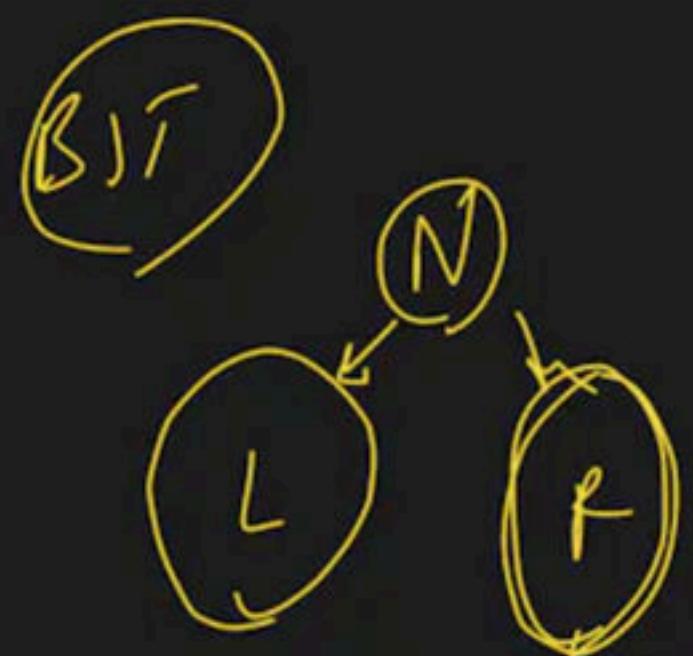
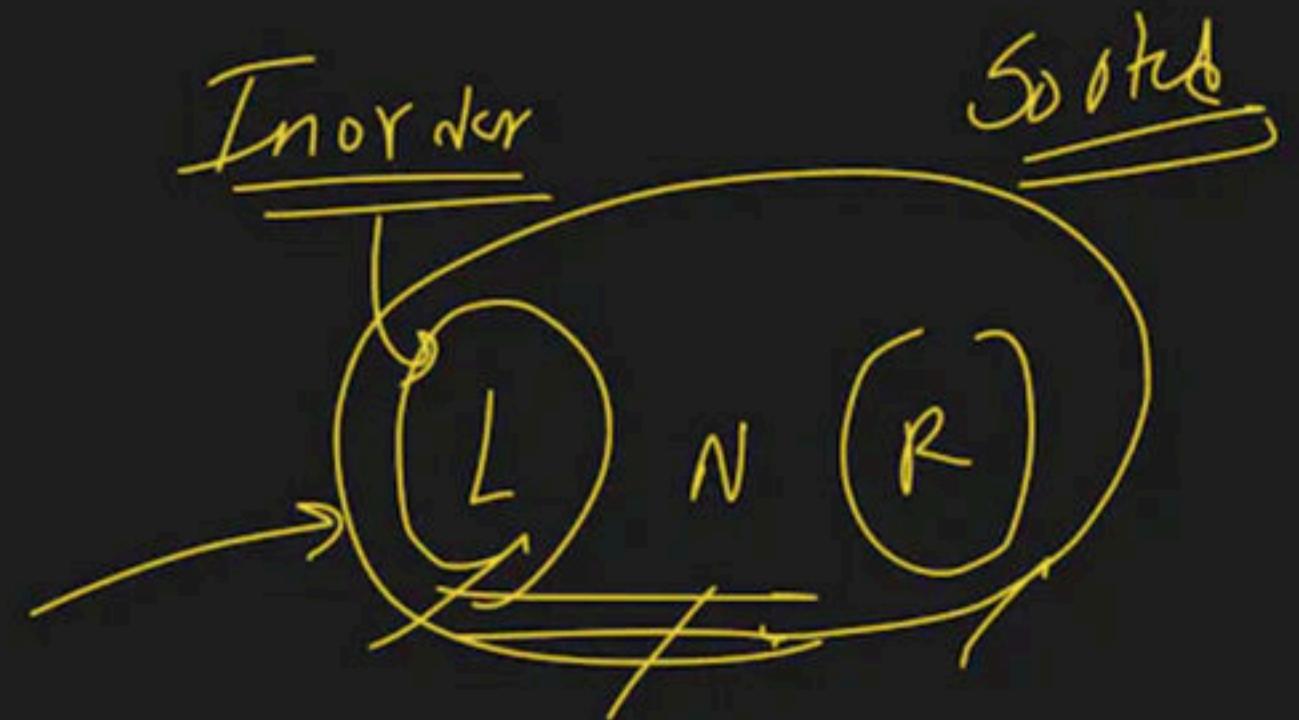
BST :-











$N > L$
 $N < R$

$R > N > L$

asc. order

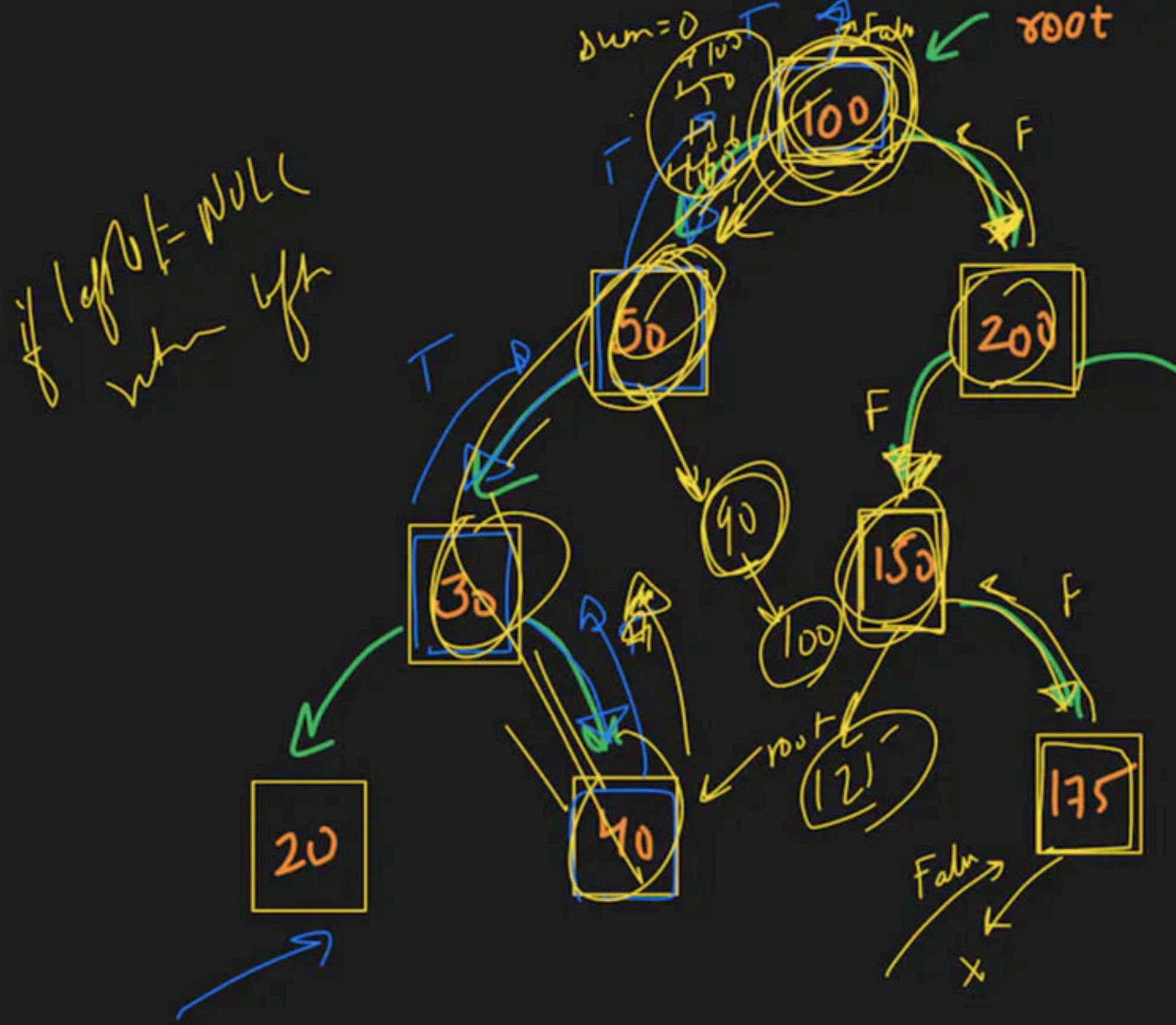
Not E

Inorder of ~

BST is
always

SORTED

if left-wall
left-right



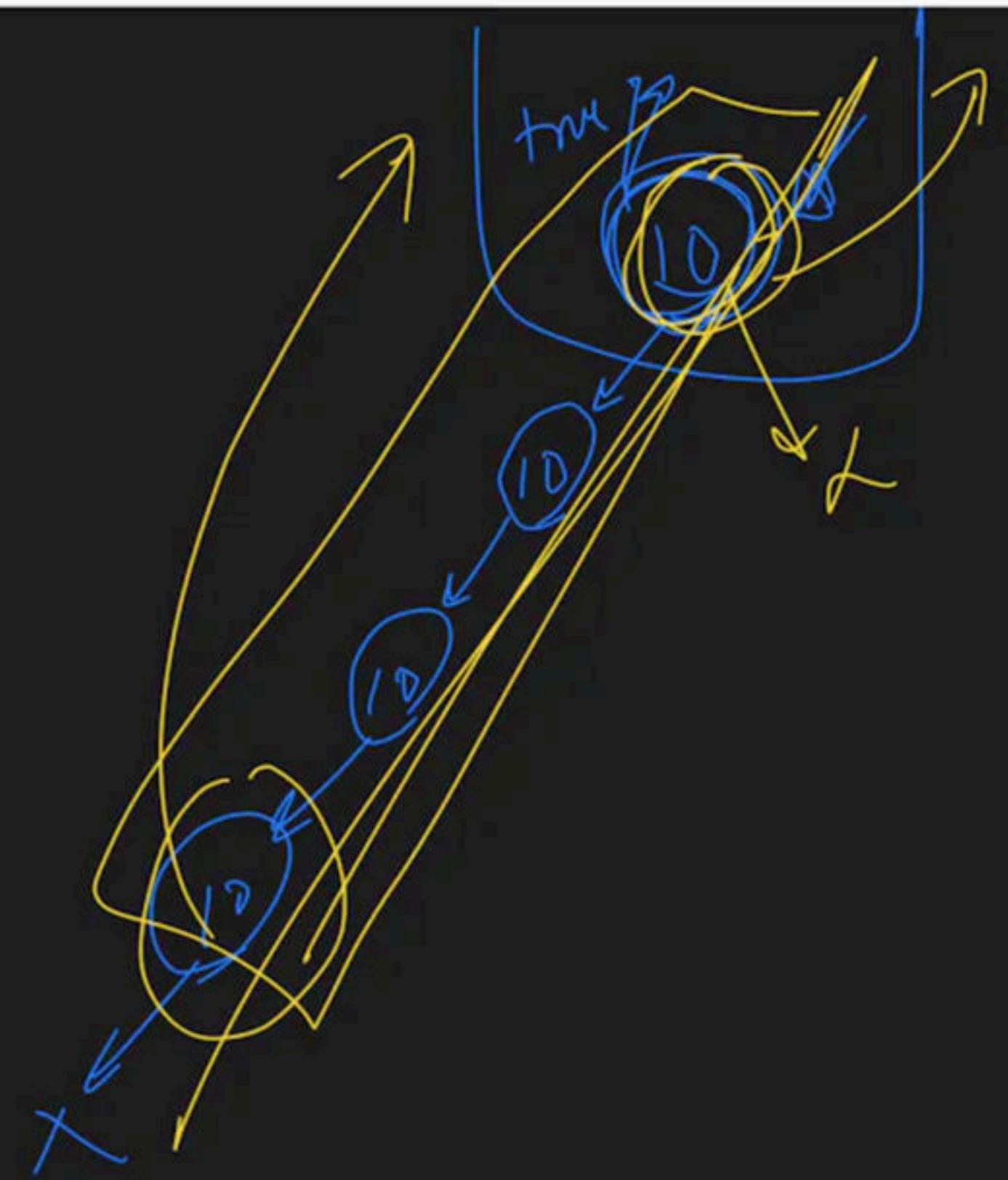
160 => target

160 => target

while ($t \neq -1$)

400

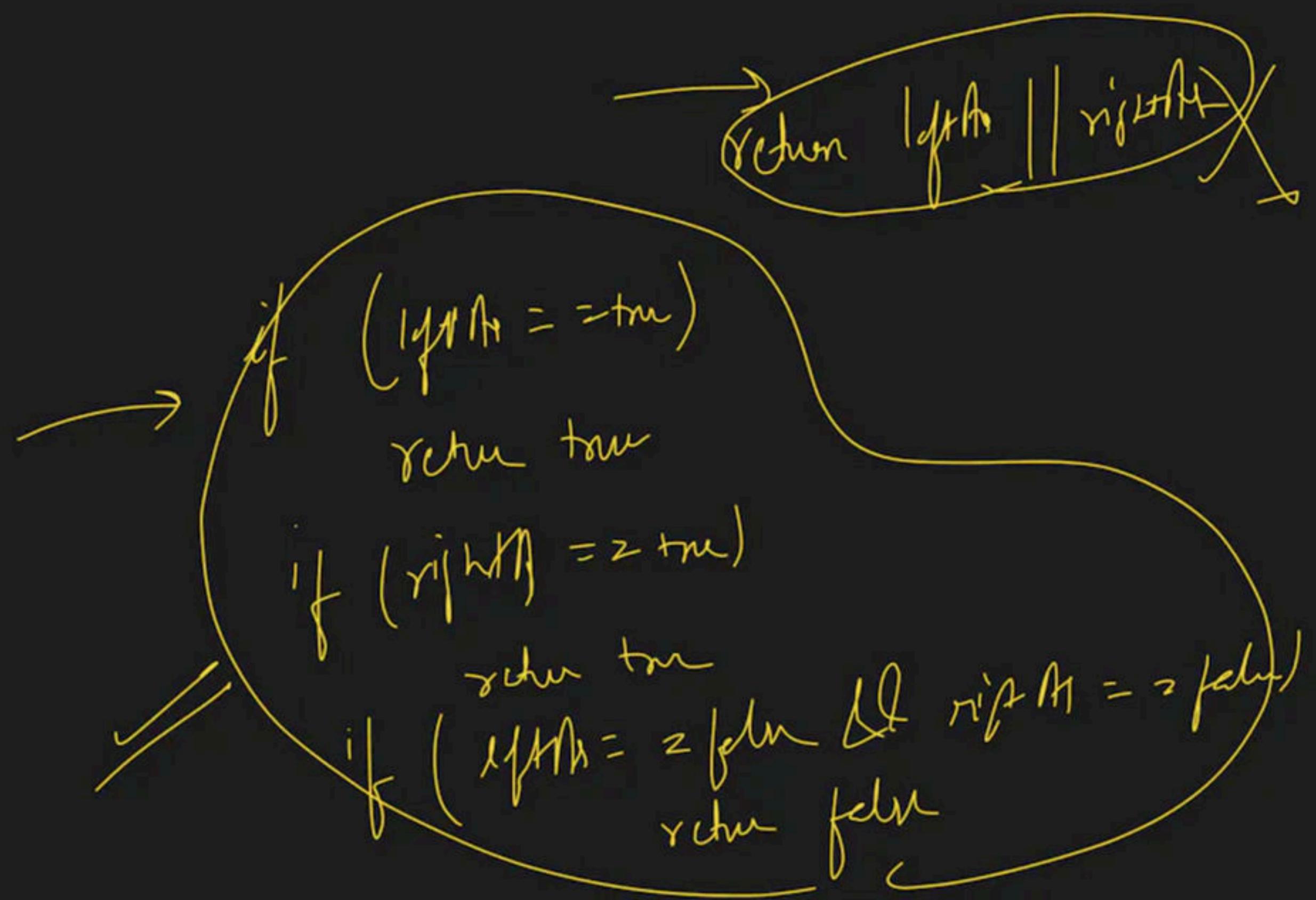
300



10 10 10 10

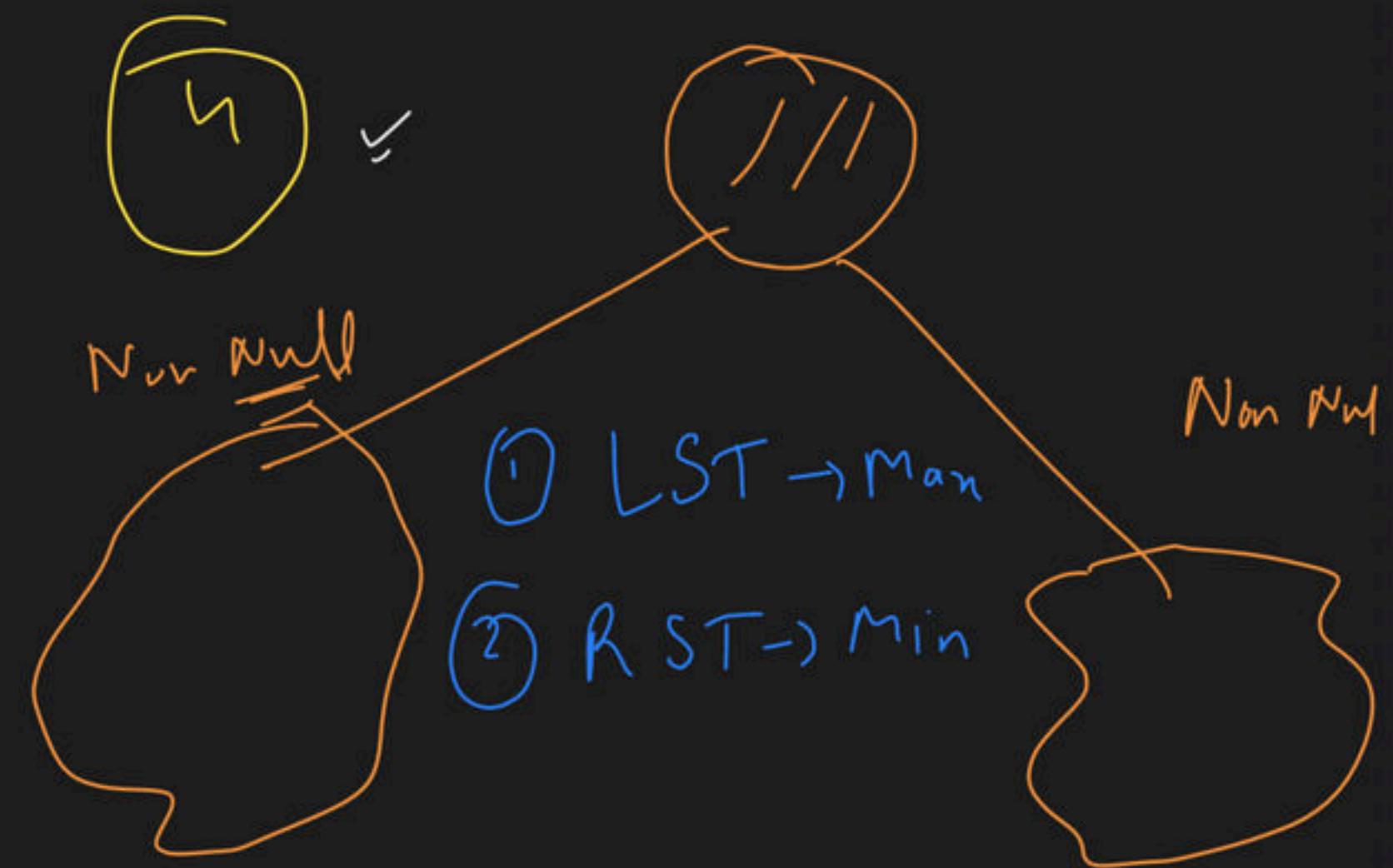
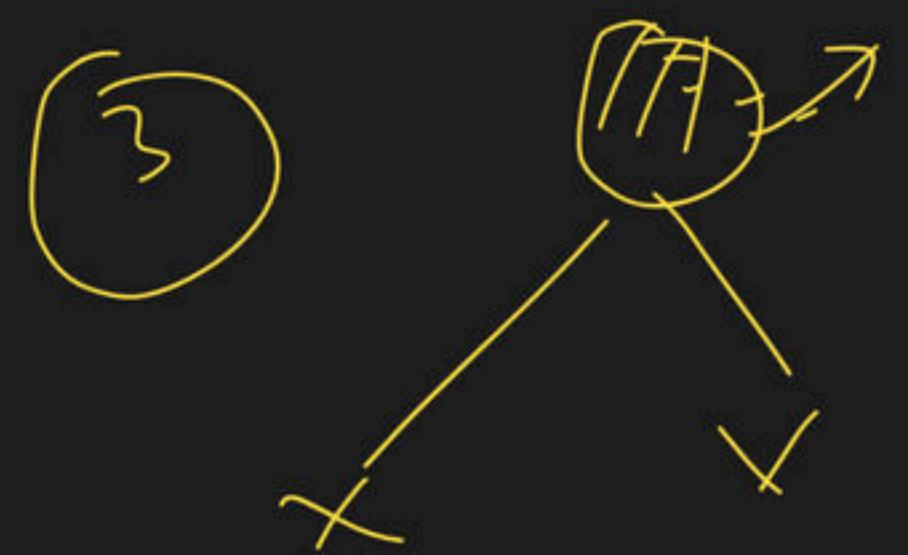
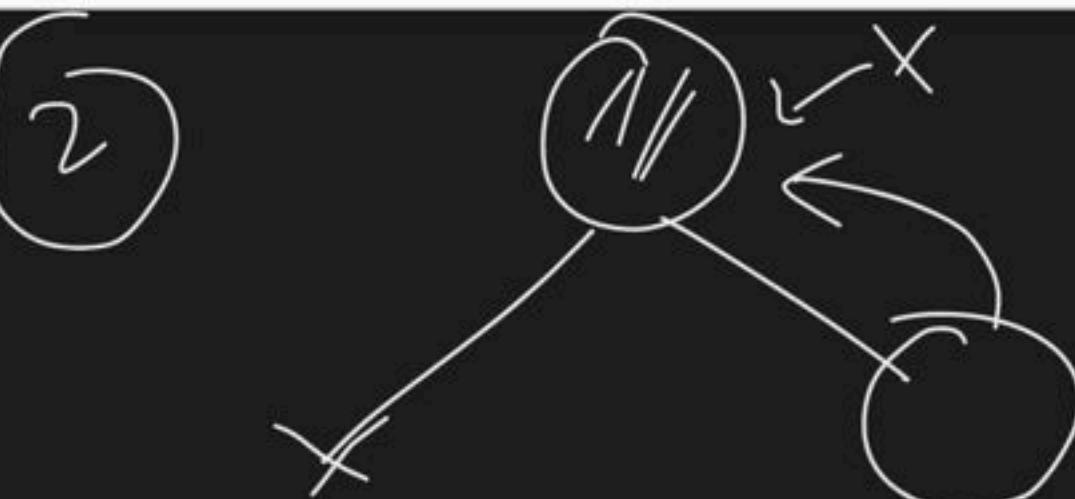
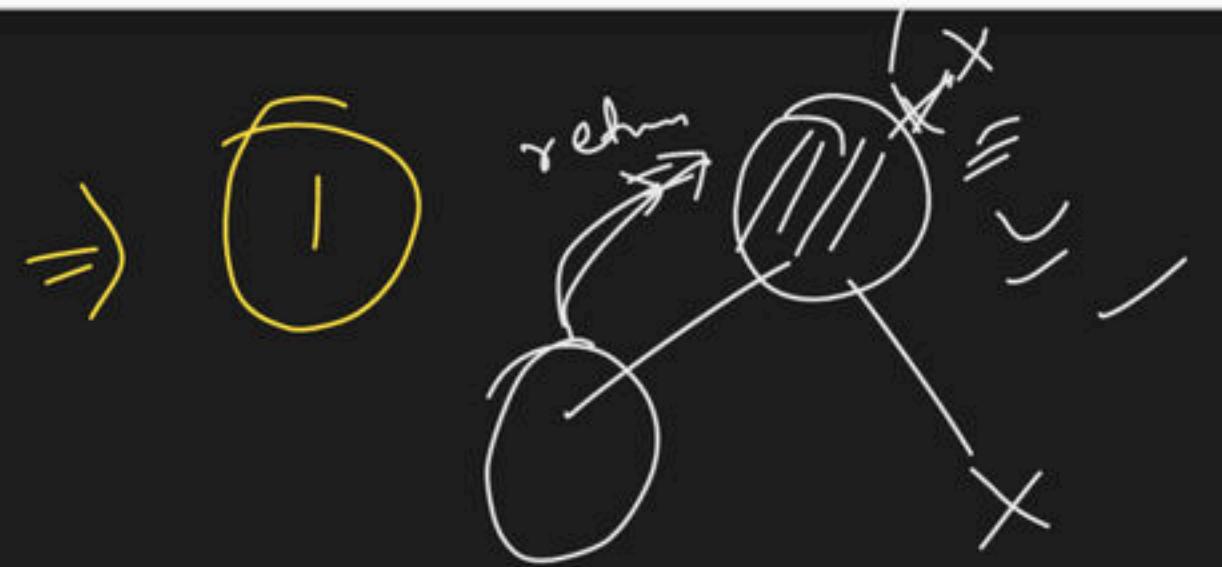
$$\tau = 10$$

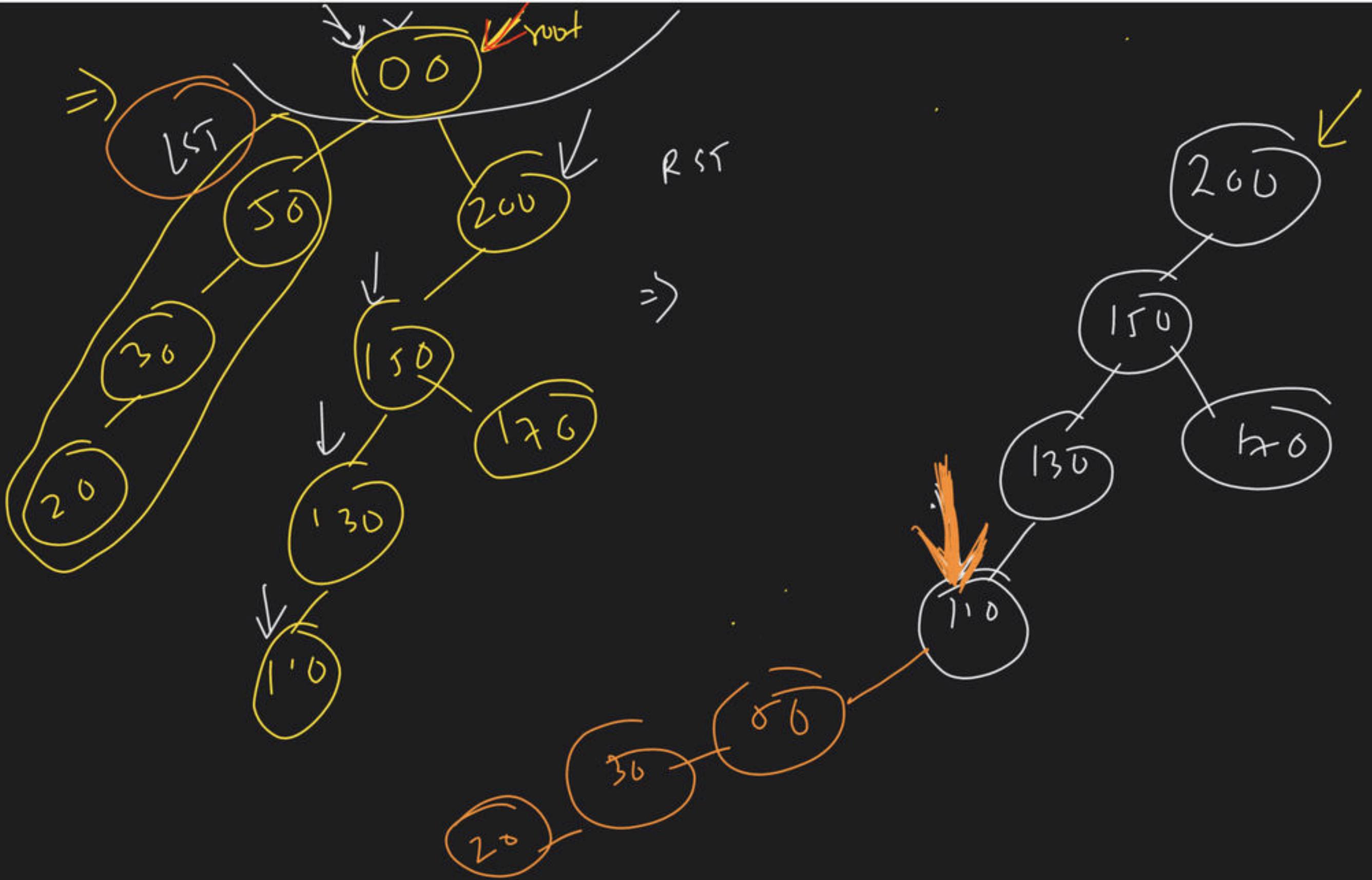
→ BST
insert →

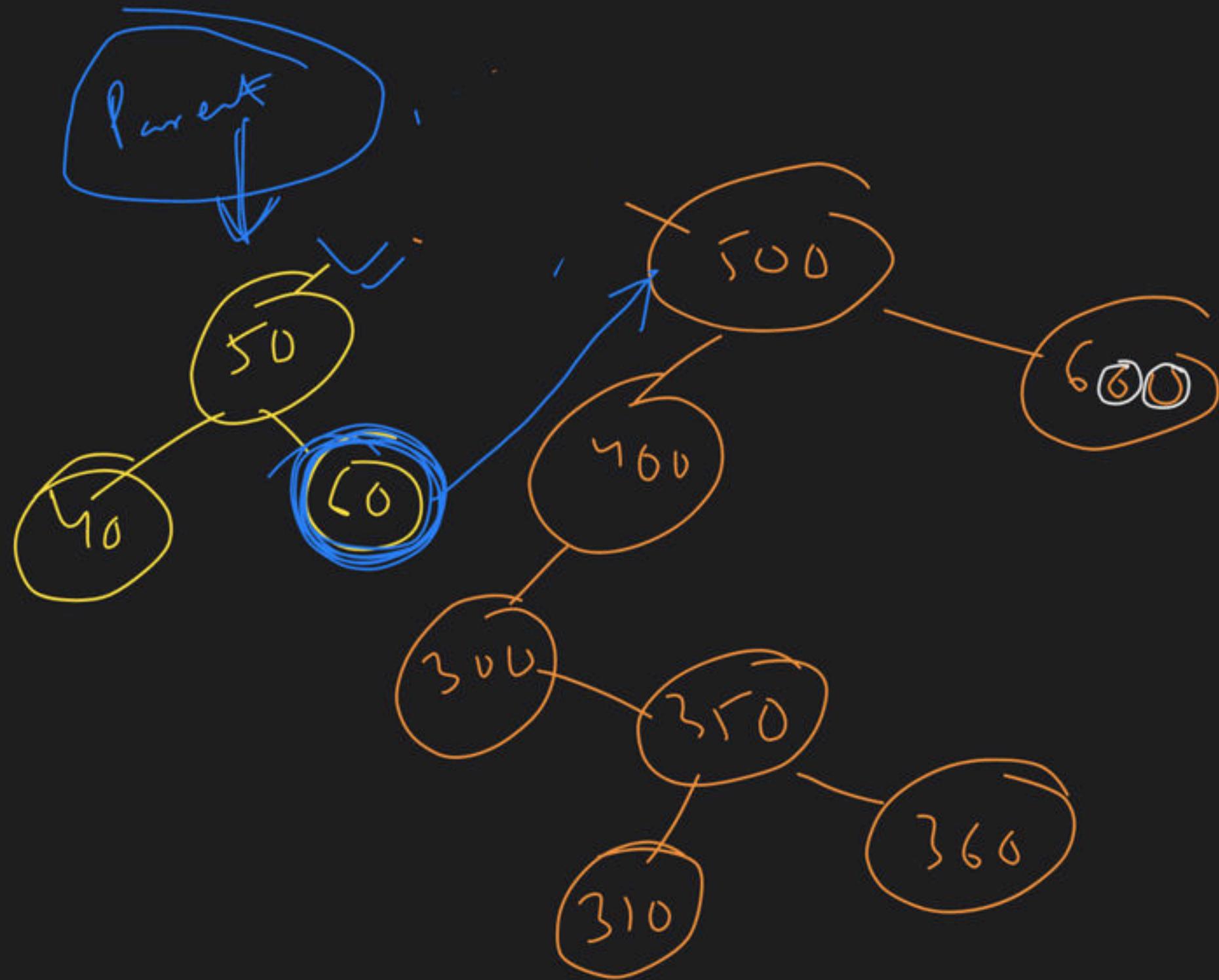


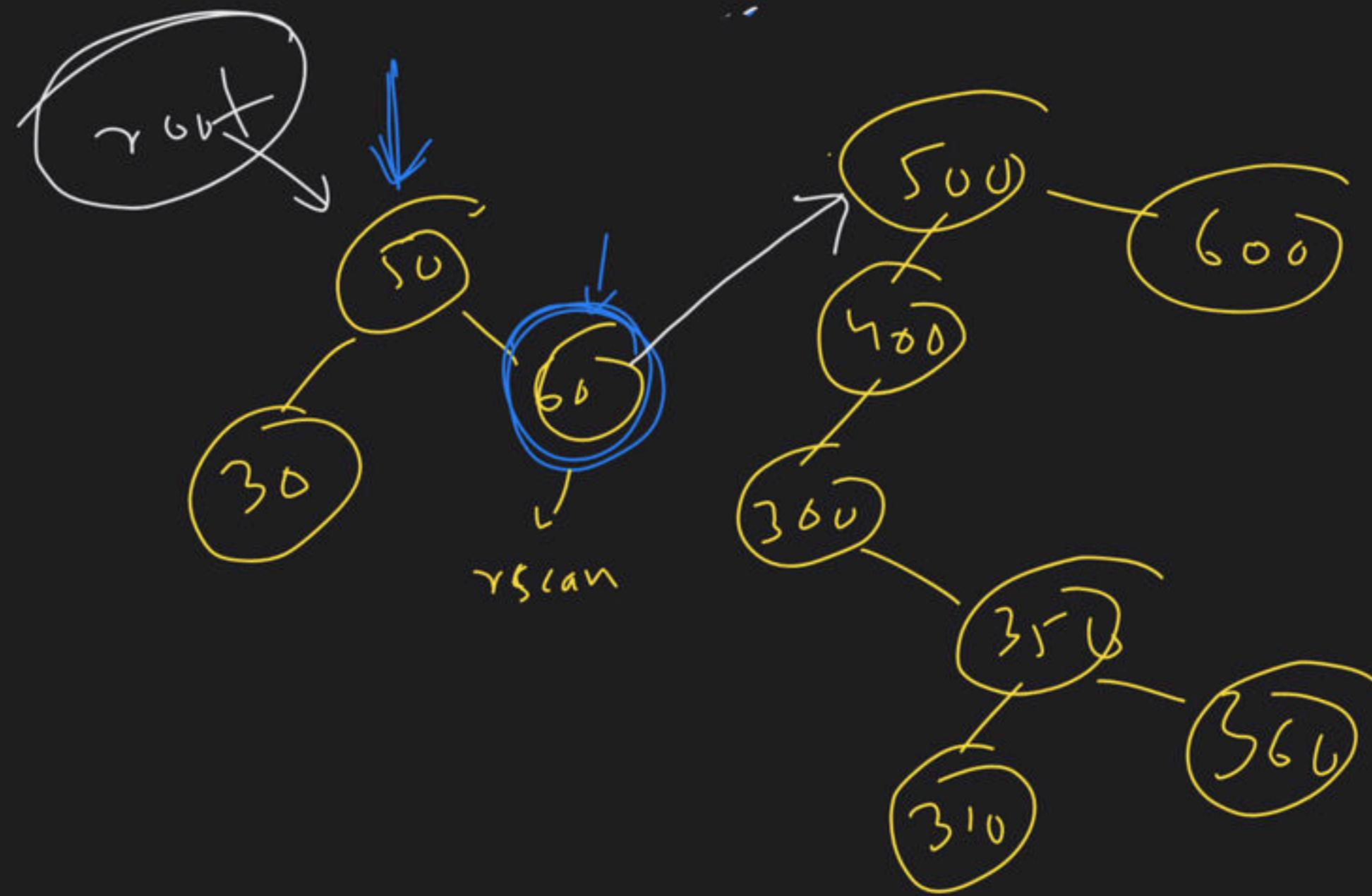
→ Delete a Node from BST

⇒⇒









① find the node

γ_{rsan}

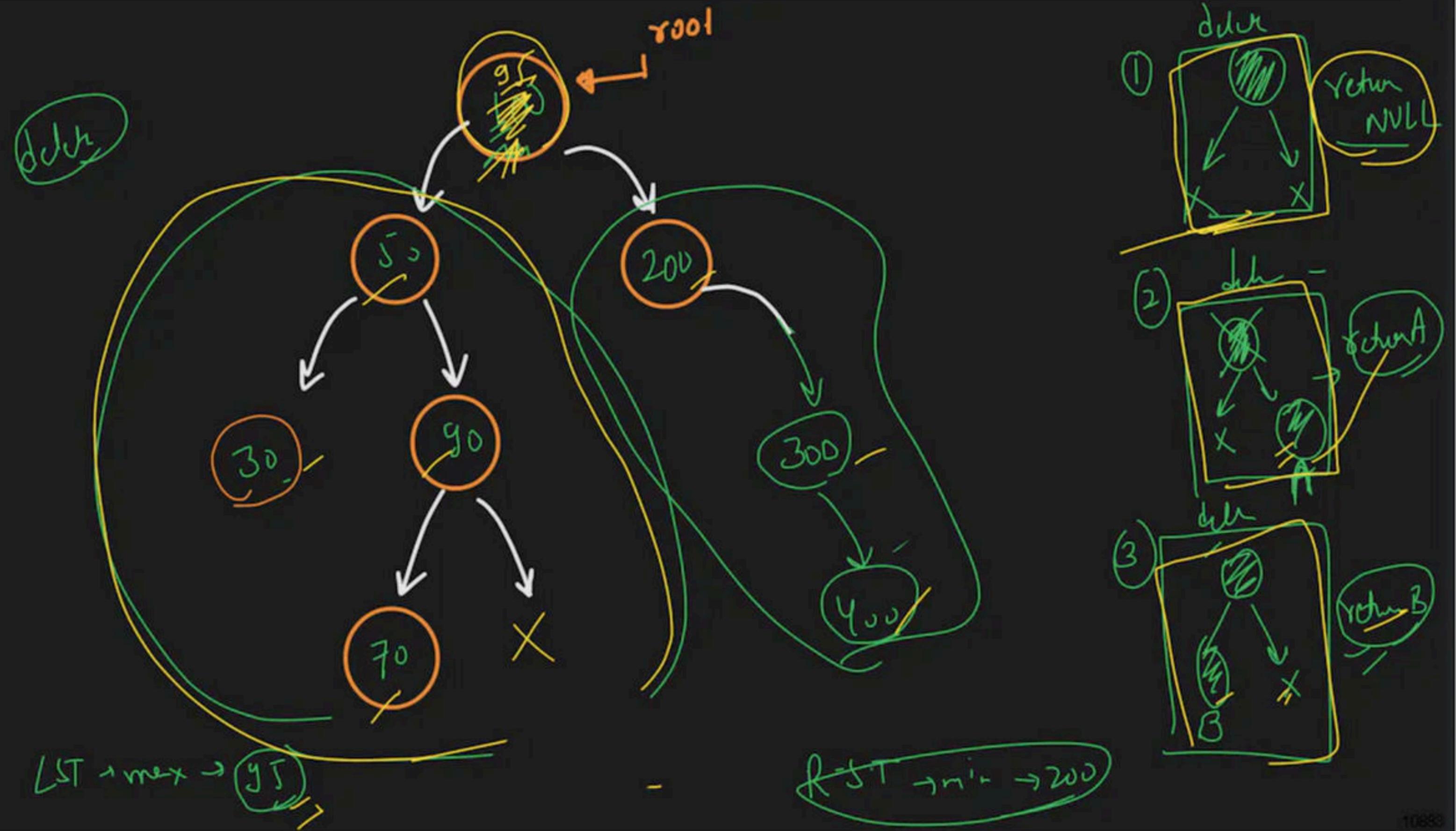
① $\gamma_{rsan} \rightarrow \text{right}$

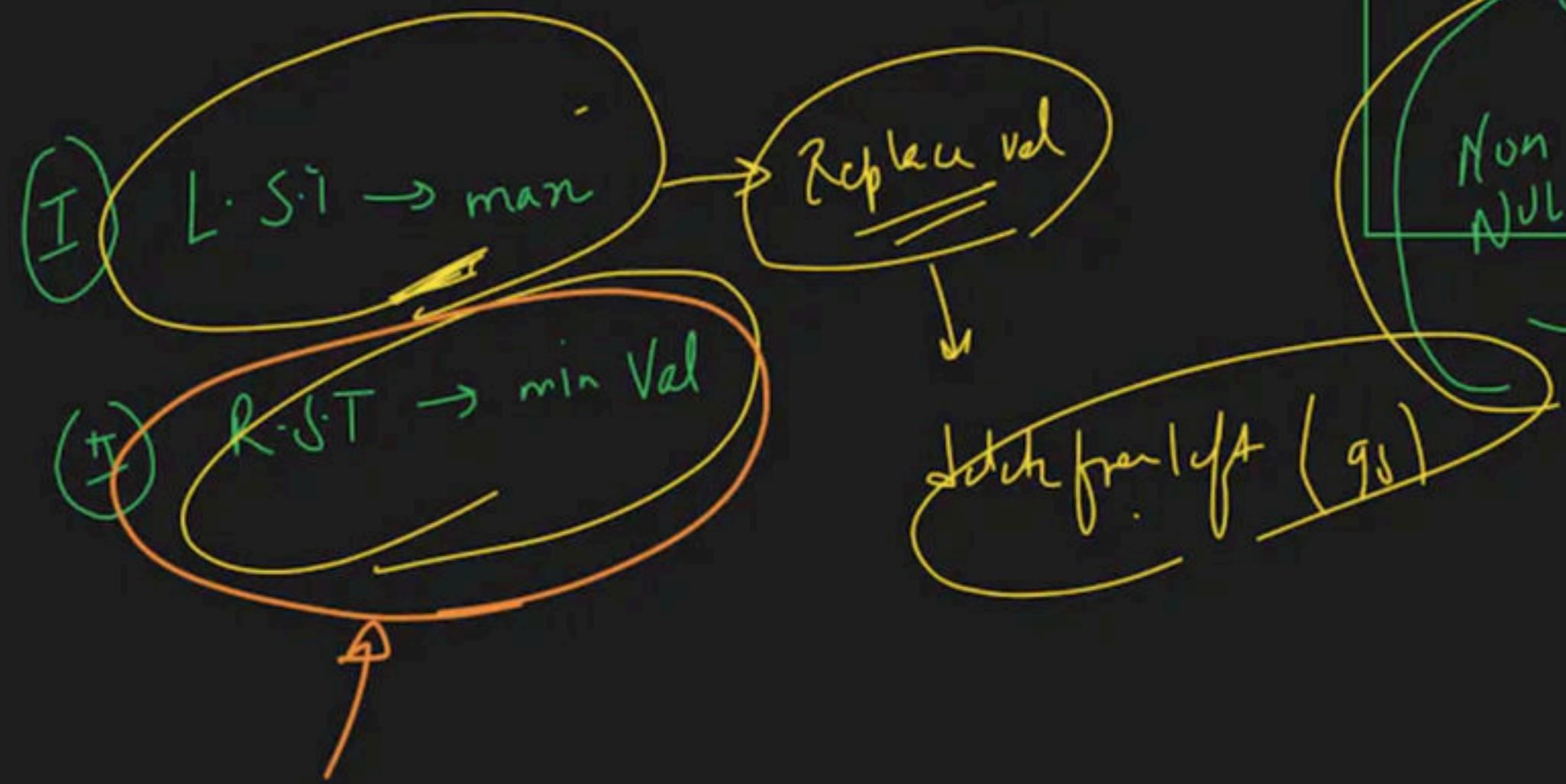
$= \gamma_{root} \rightarrow \text{right}$

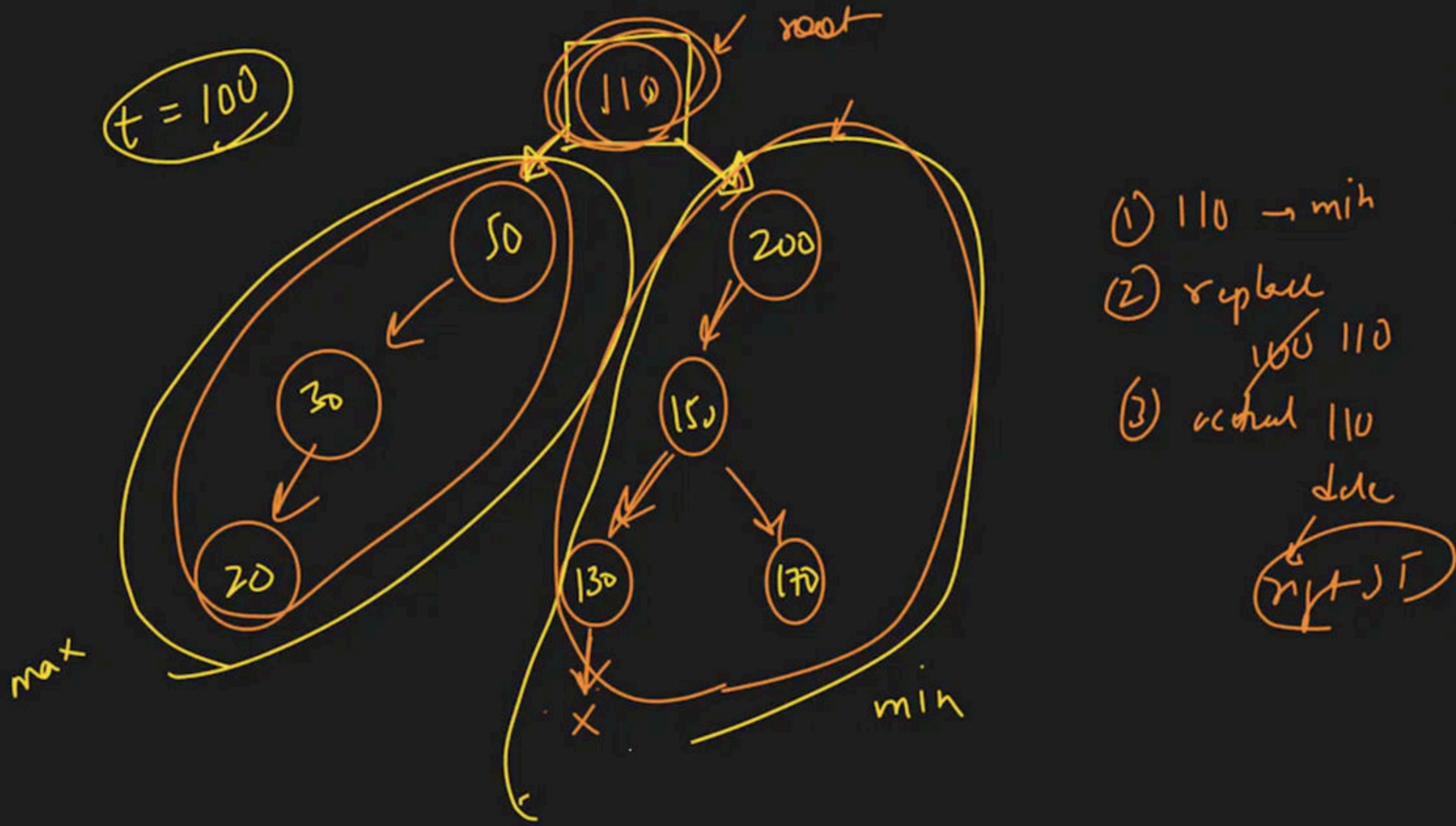
② $\underline{\text{temp}} = \gamma_{root};$

③ $\gamma_{root} = \gamma_{root} \rightarrow \text{left}$

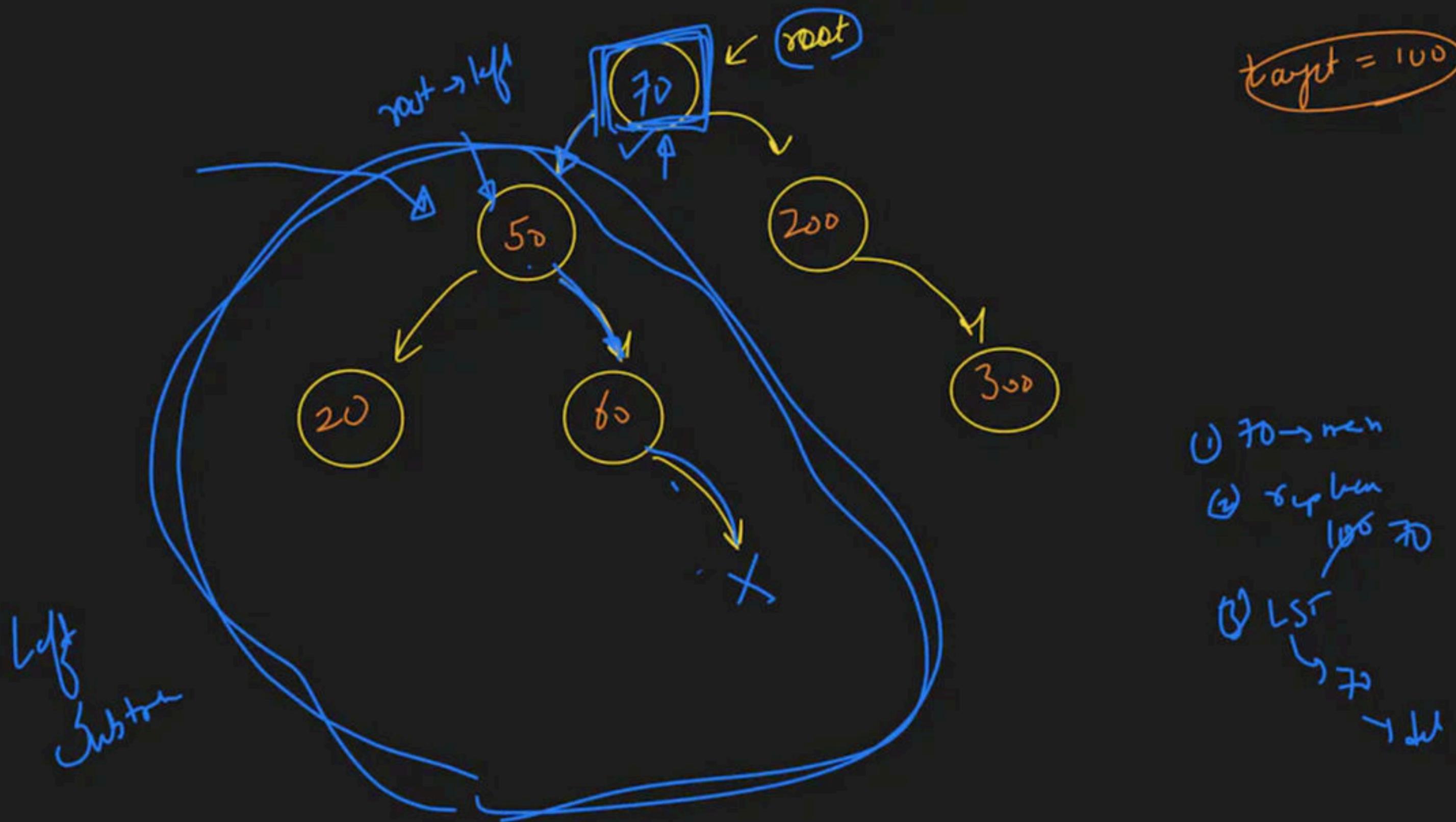
④ delete temp;

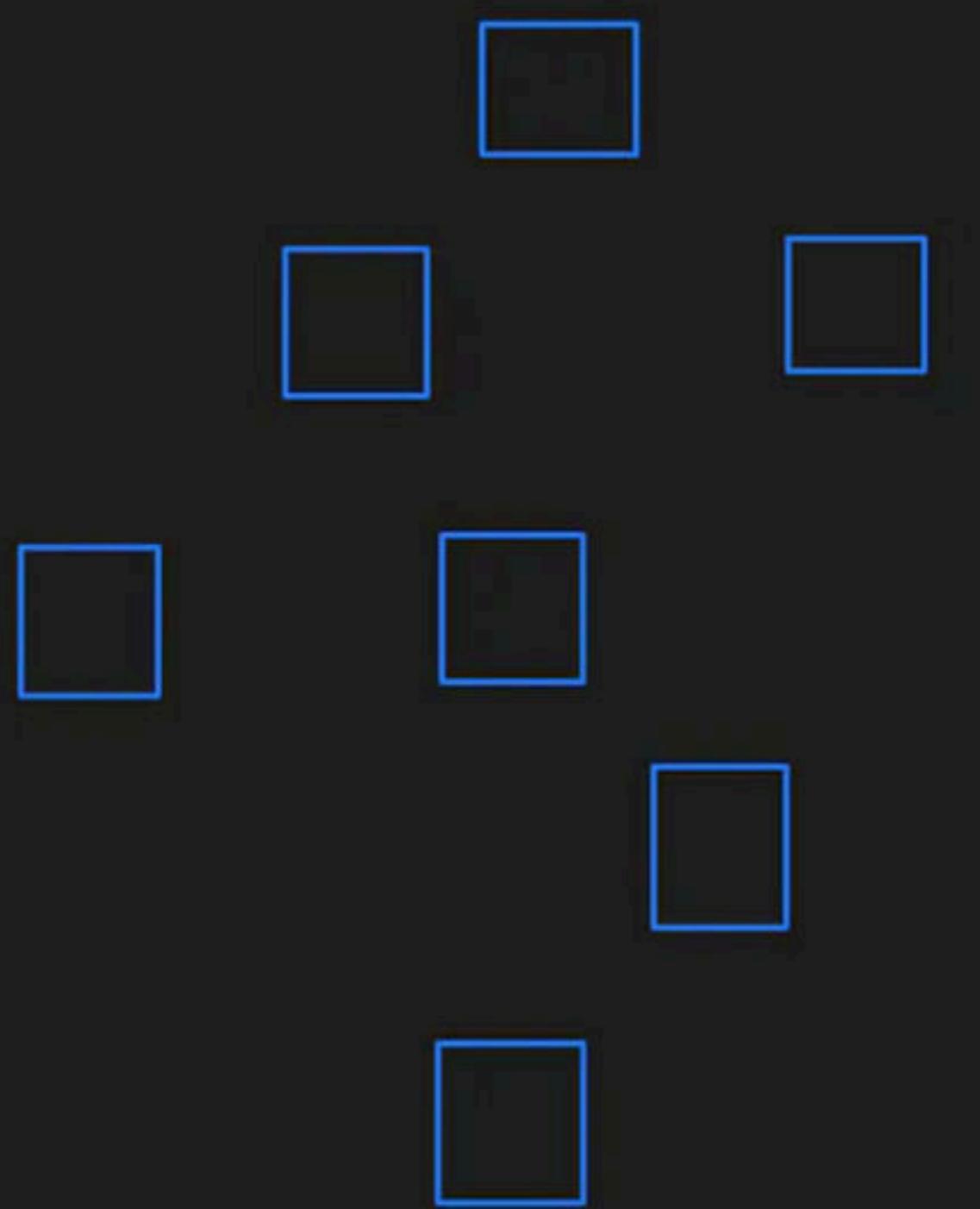




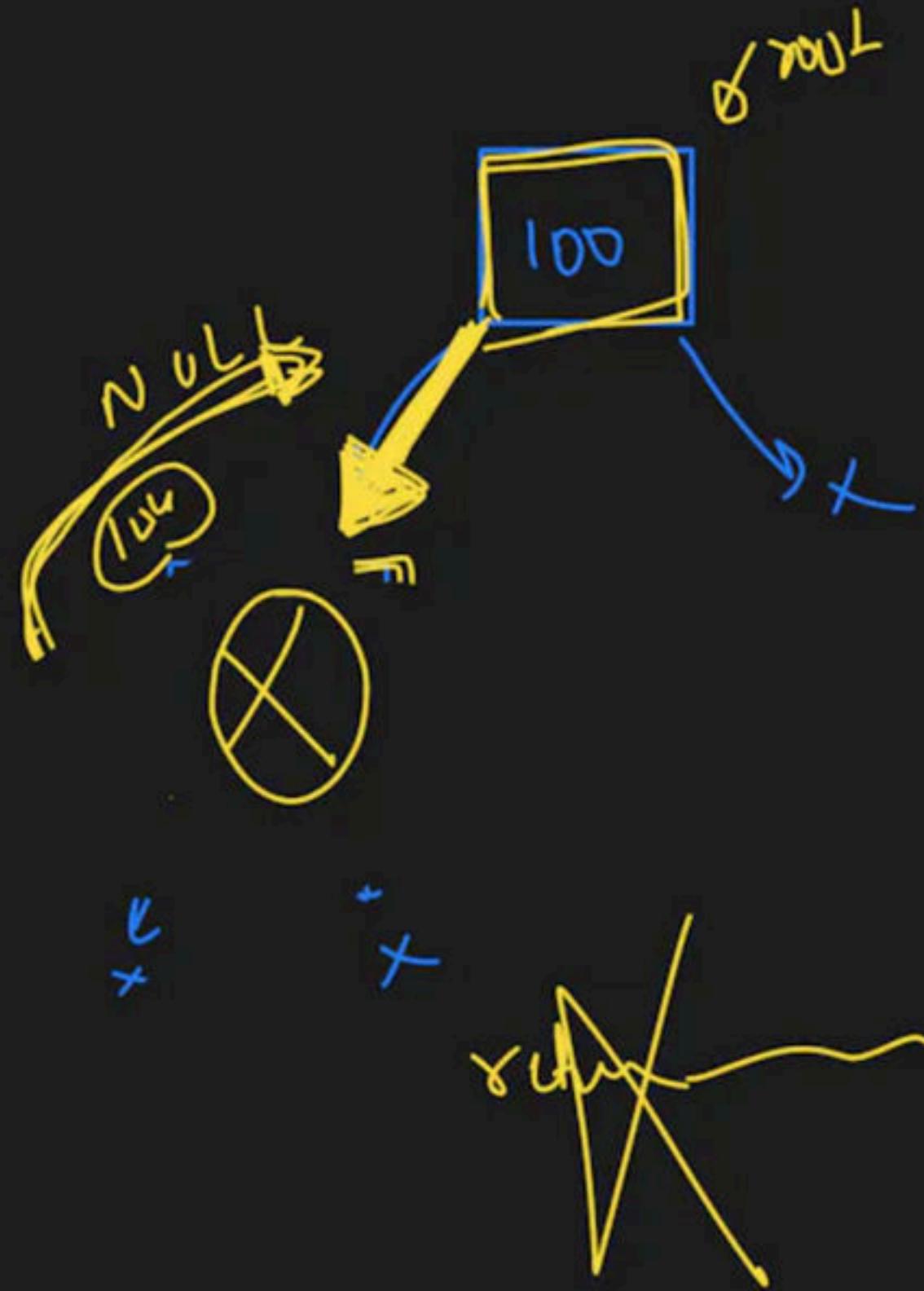


- (1) $110 \rightarrow \text{mix}$
- (2) replace
~~160 110~~
- (3) control 110

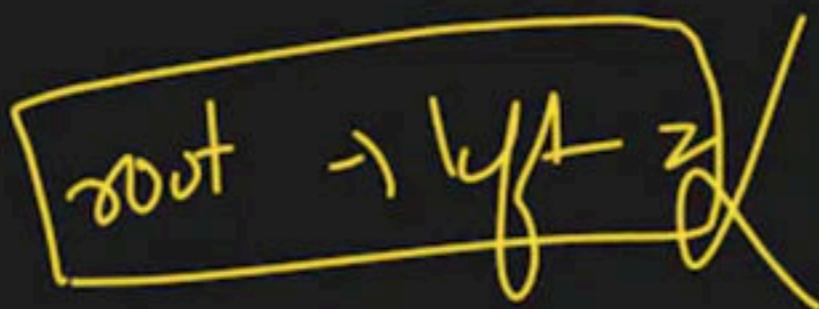




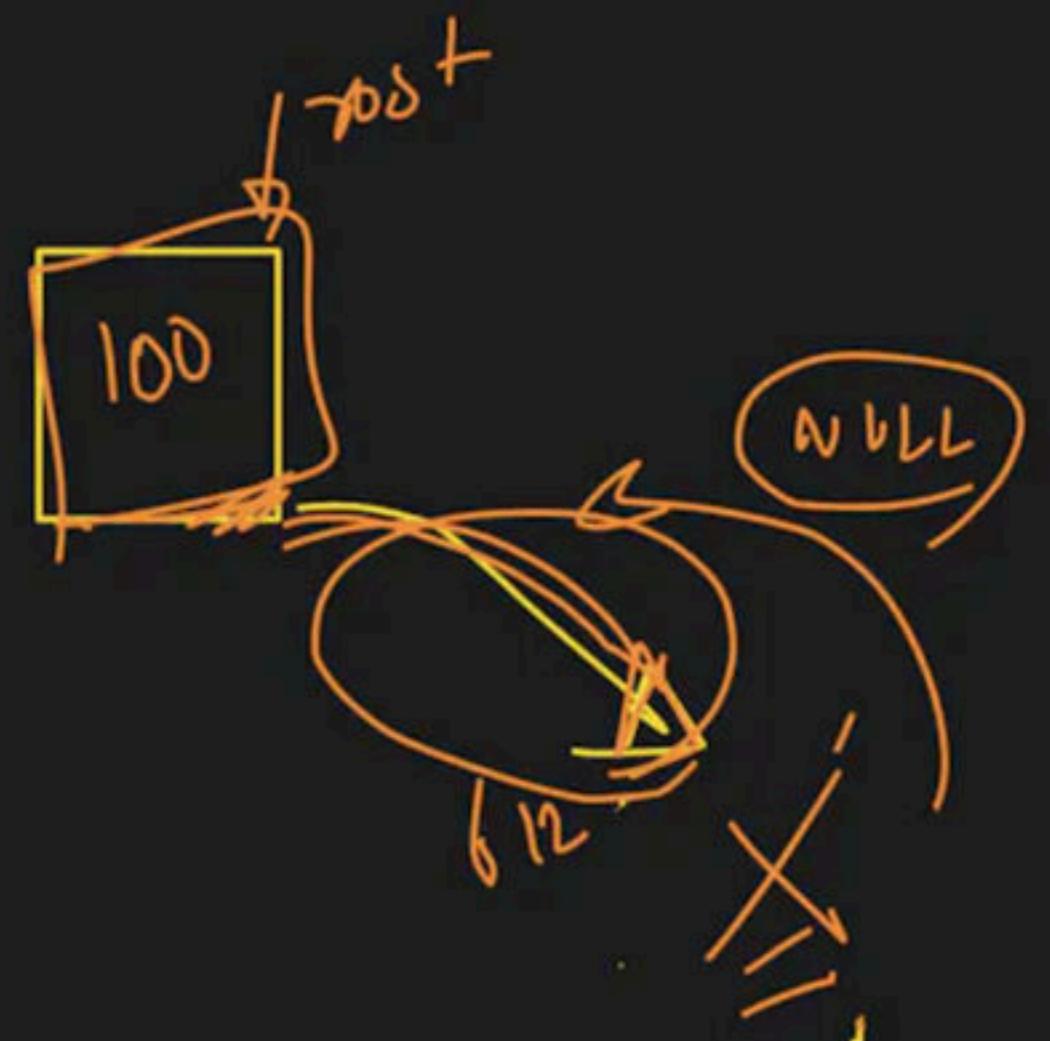
-
-
-
-



$S_0 \rightarrow twgt$

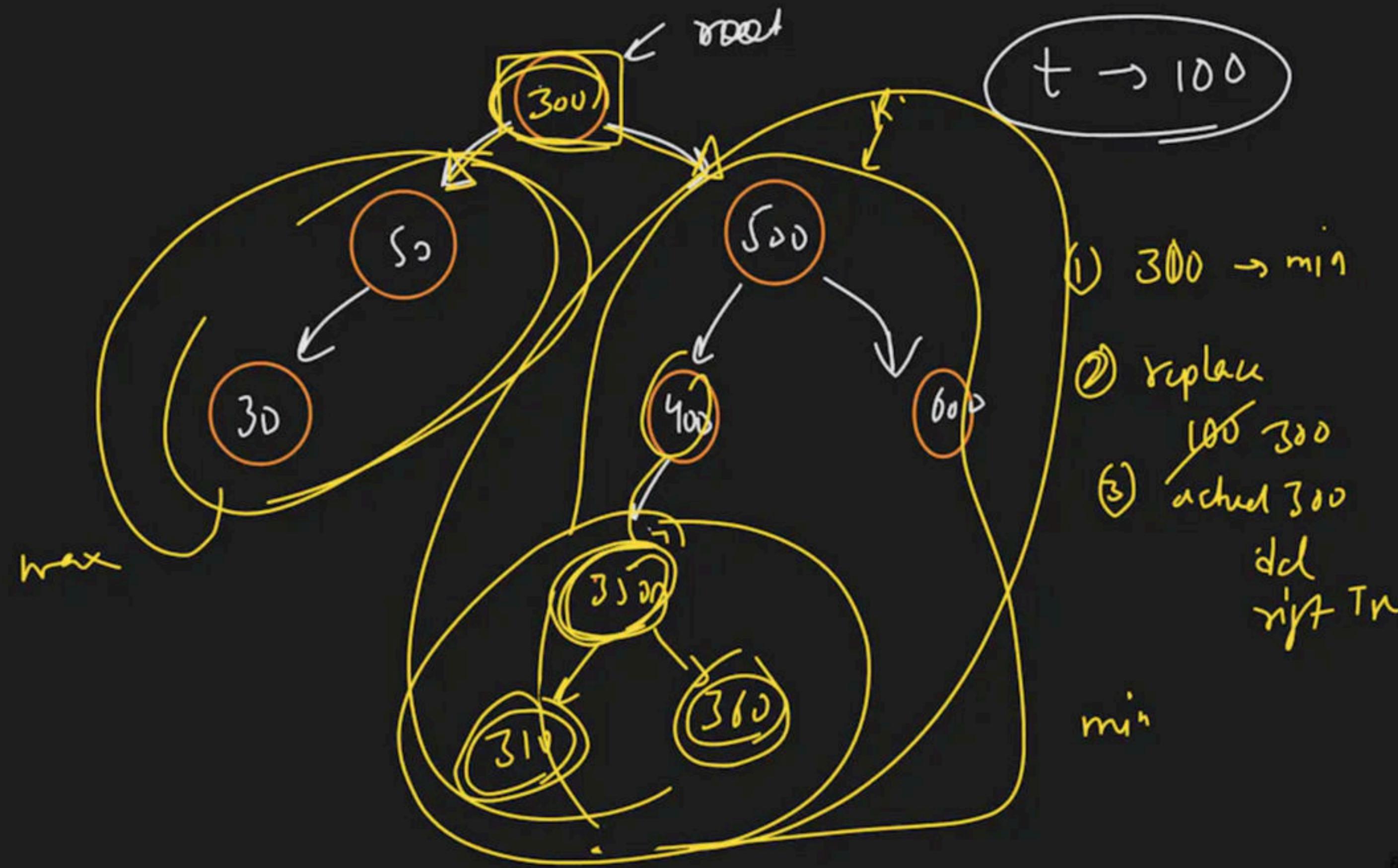


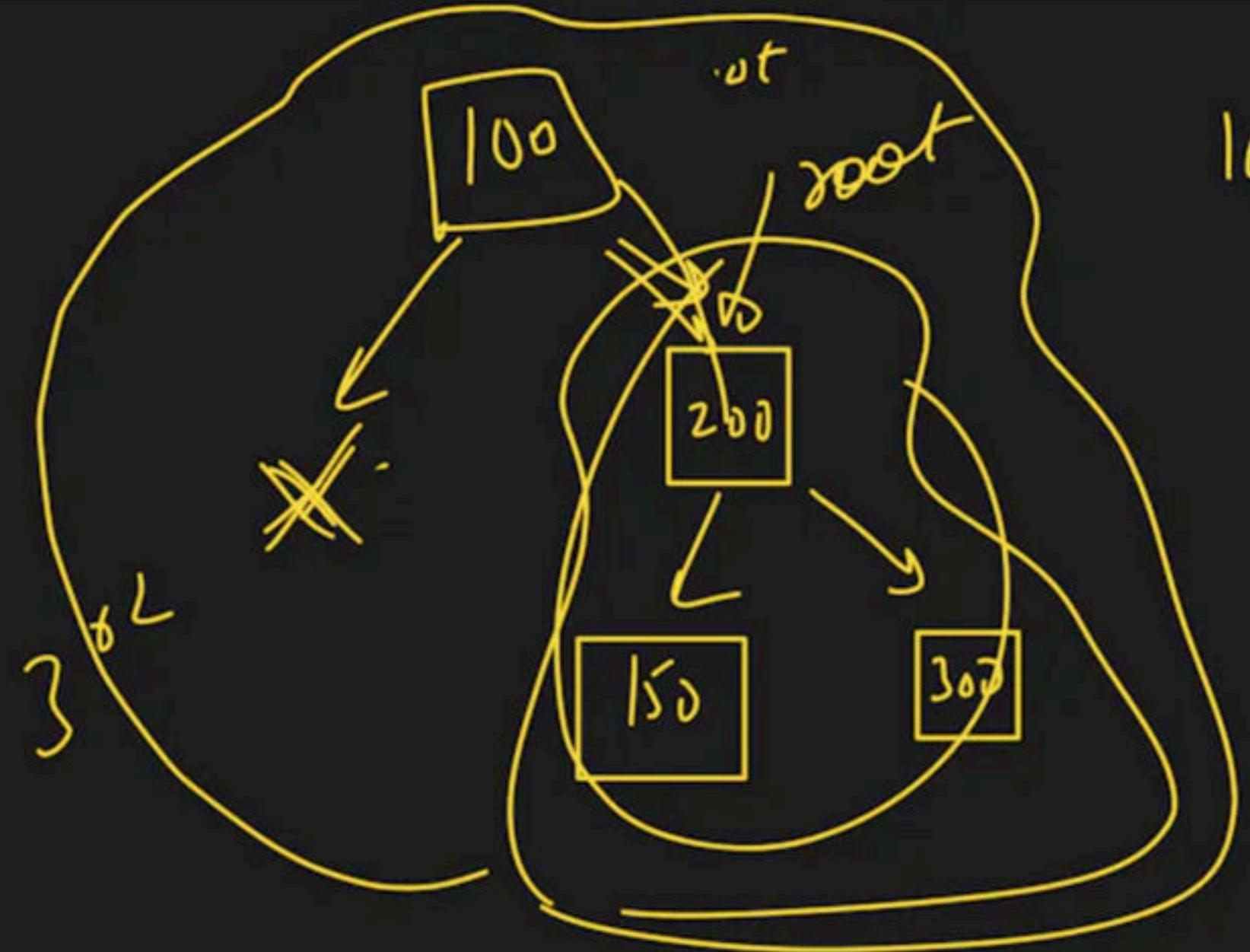
Yoot n w, =L



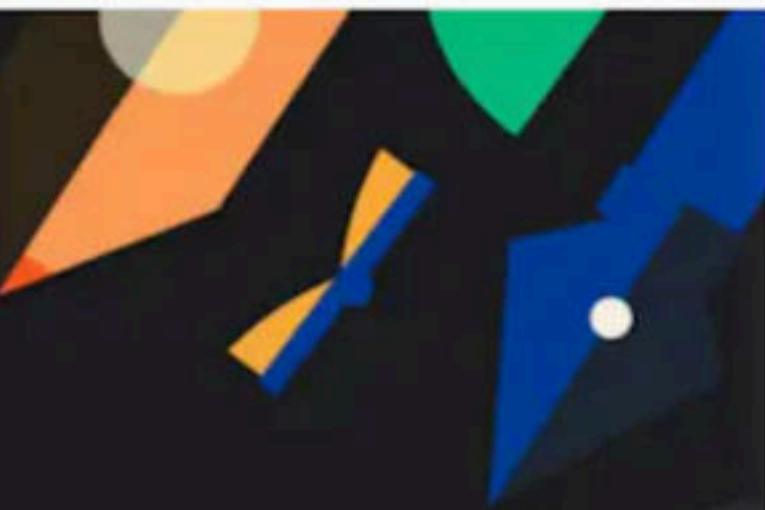
$t \rightarrow 200$

`root -> right = NULL`





100 → target



Binary Search Trees Class-2

Special class

SUPRA

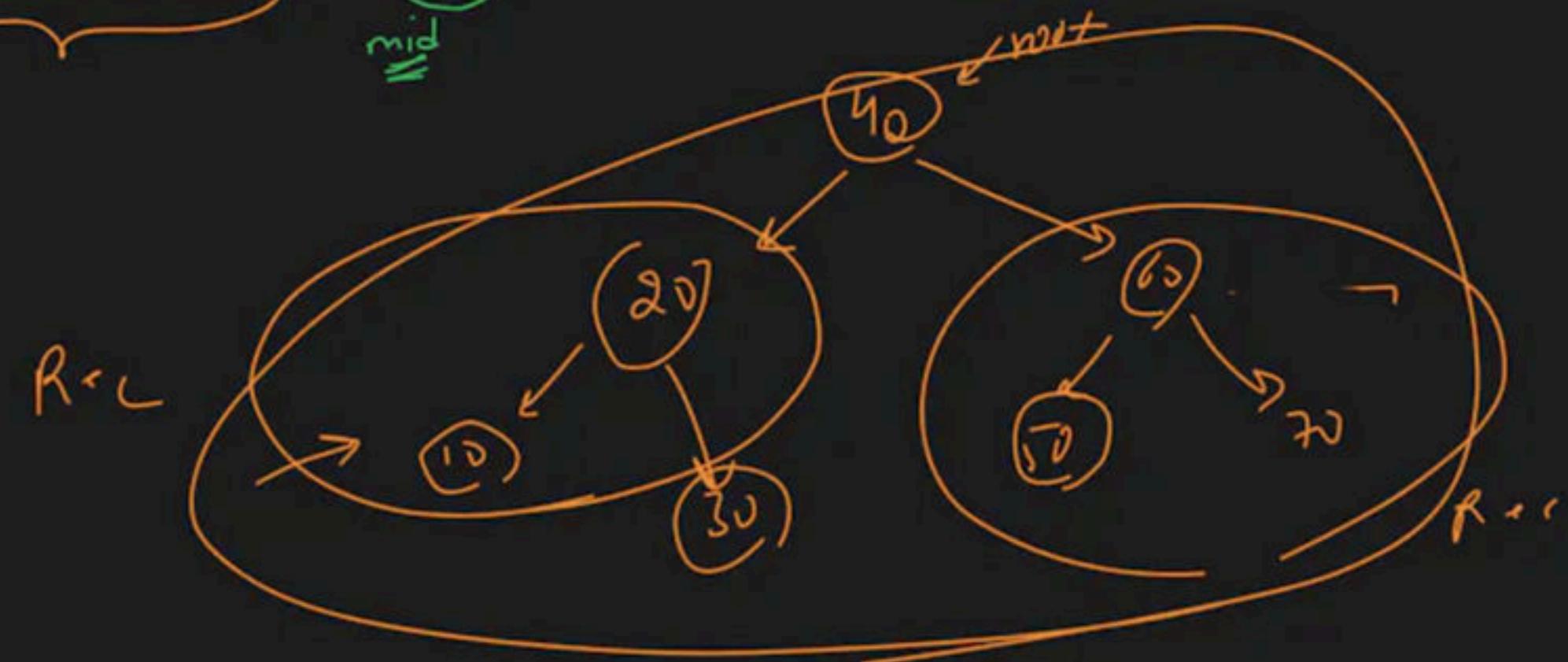
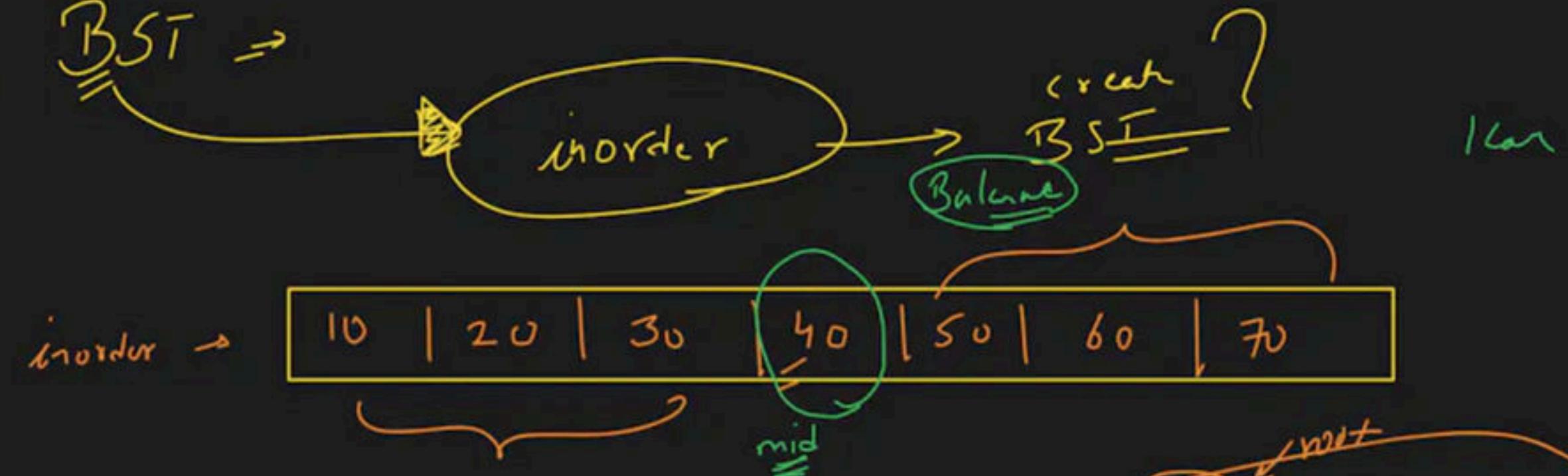


LD

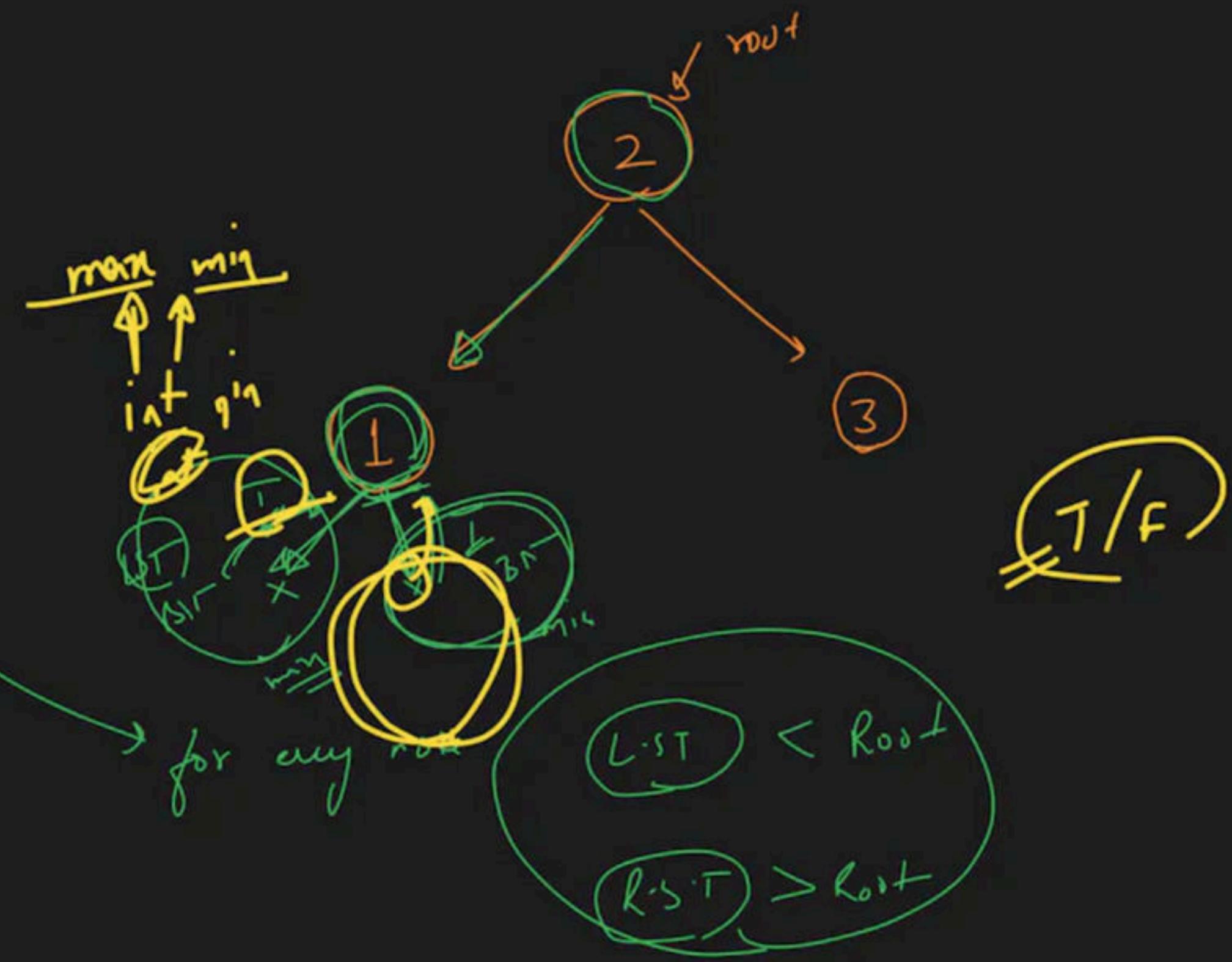
3days

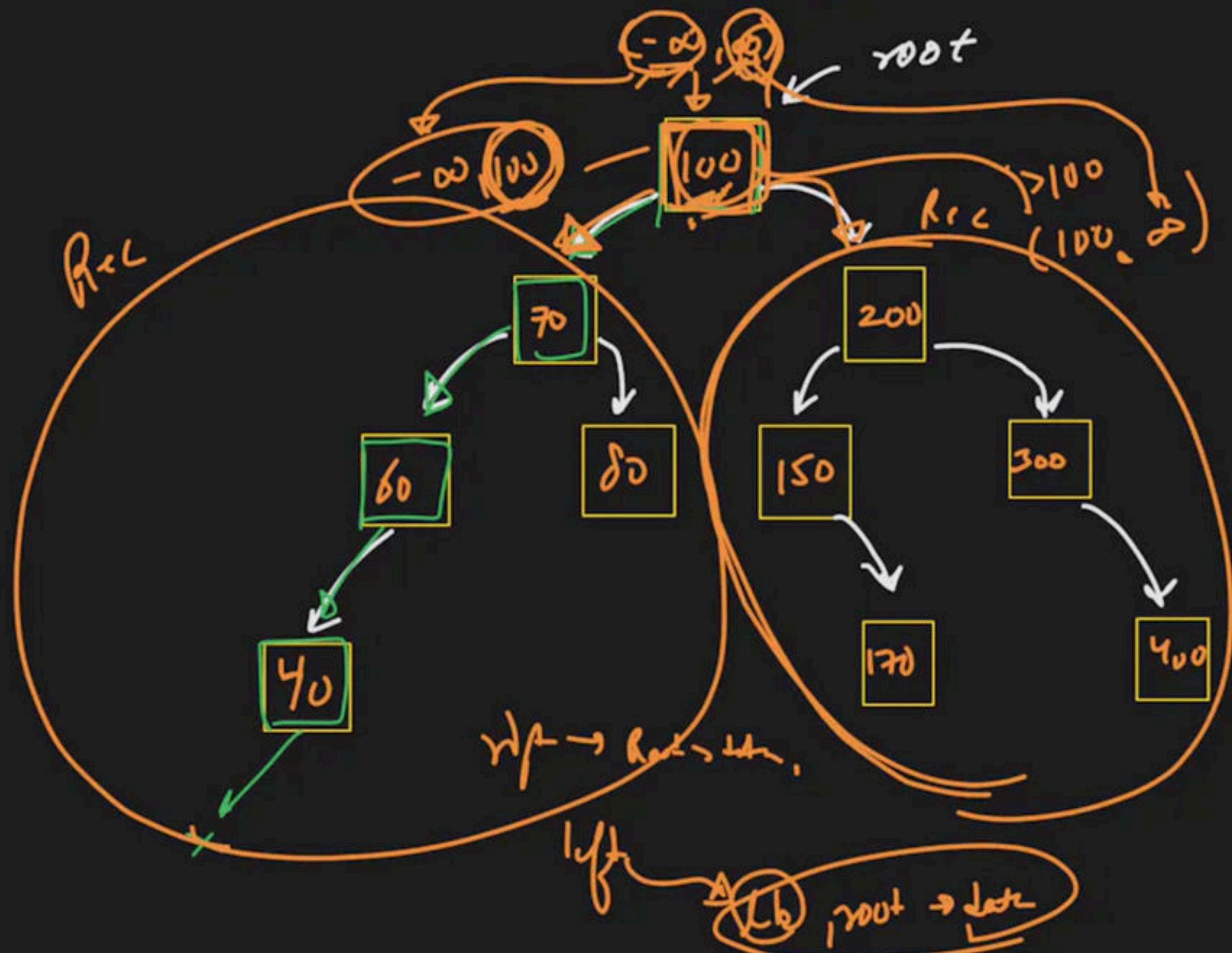


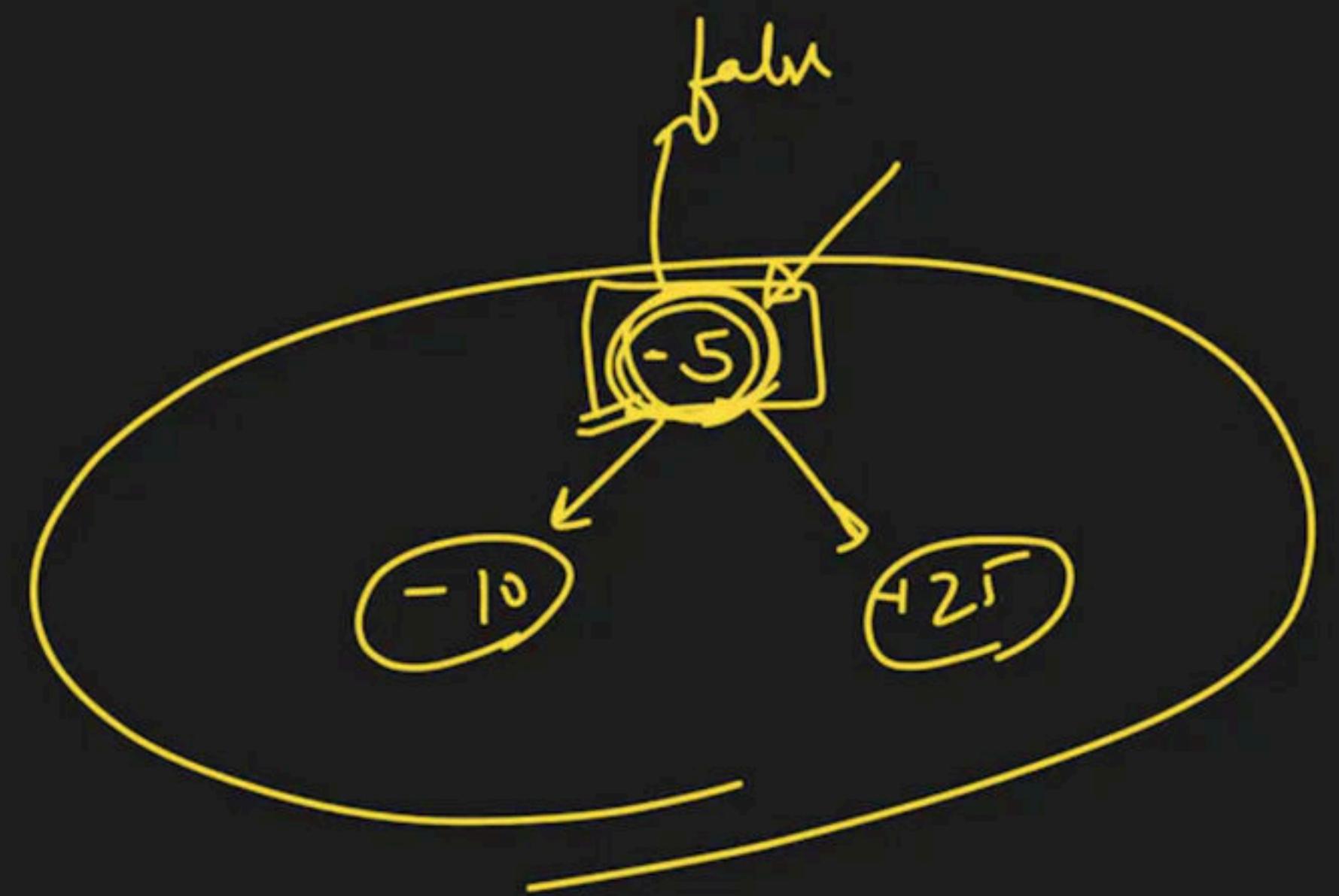
$\Rightarrow \beta_{51} \Rightarrow$



$BST \geq$







INF_min

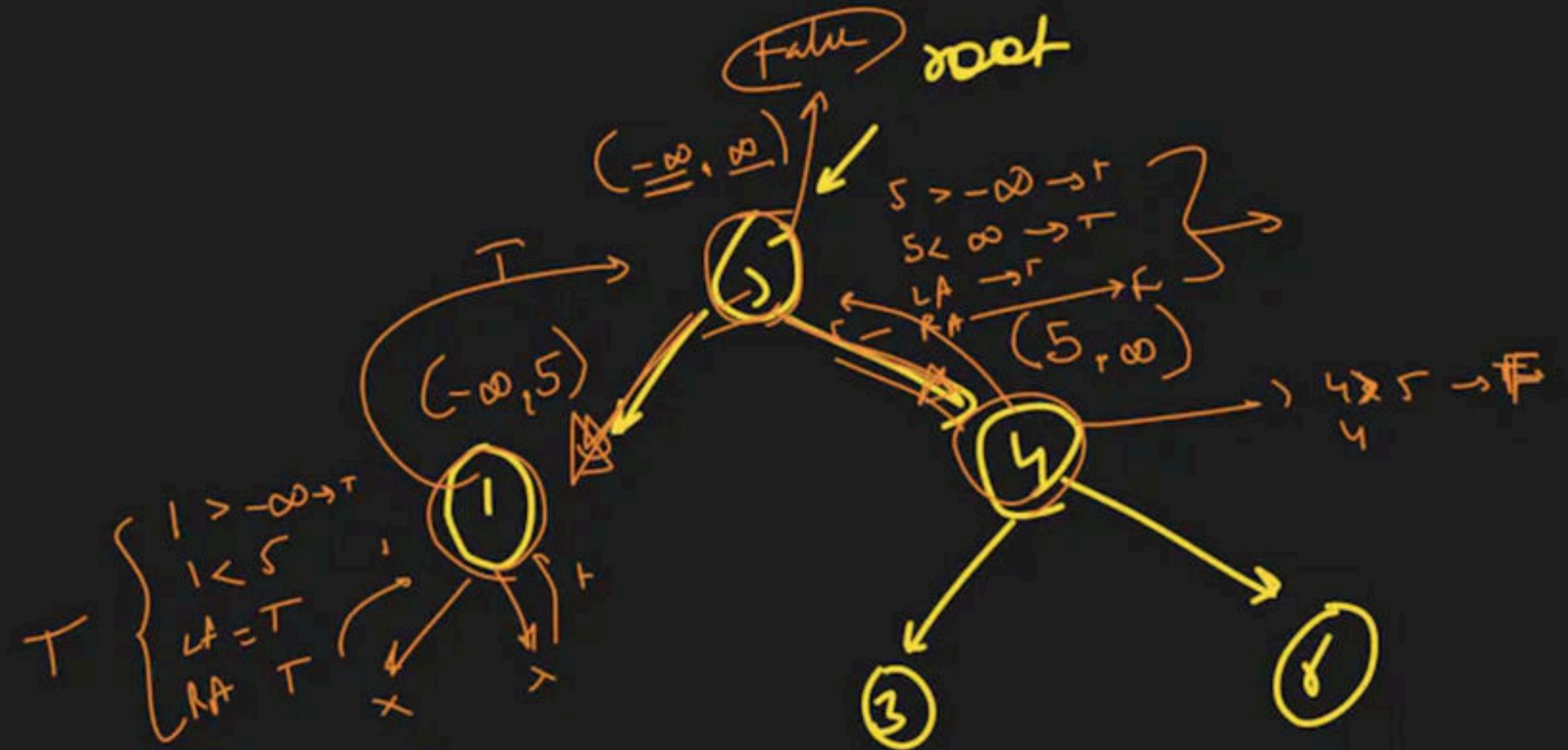
assume ↓

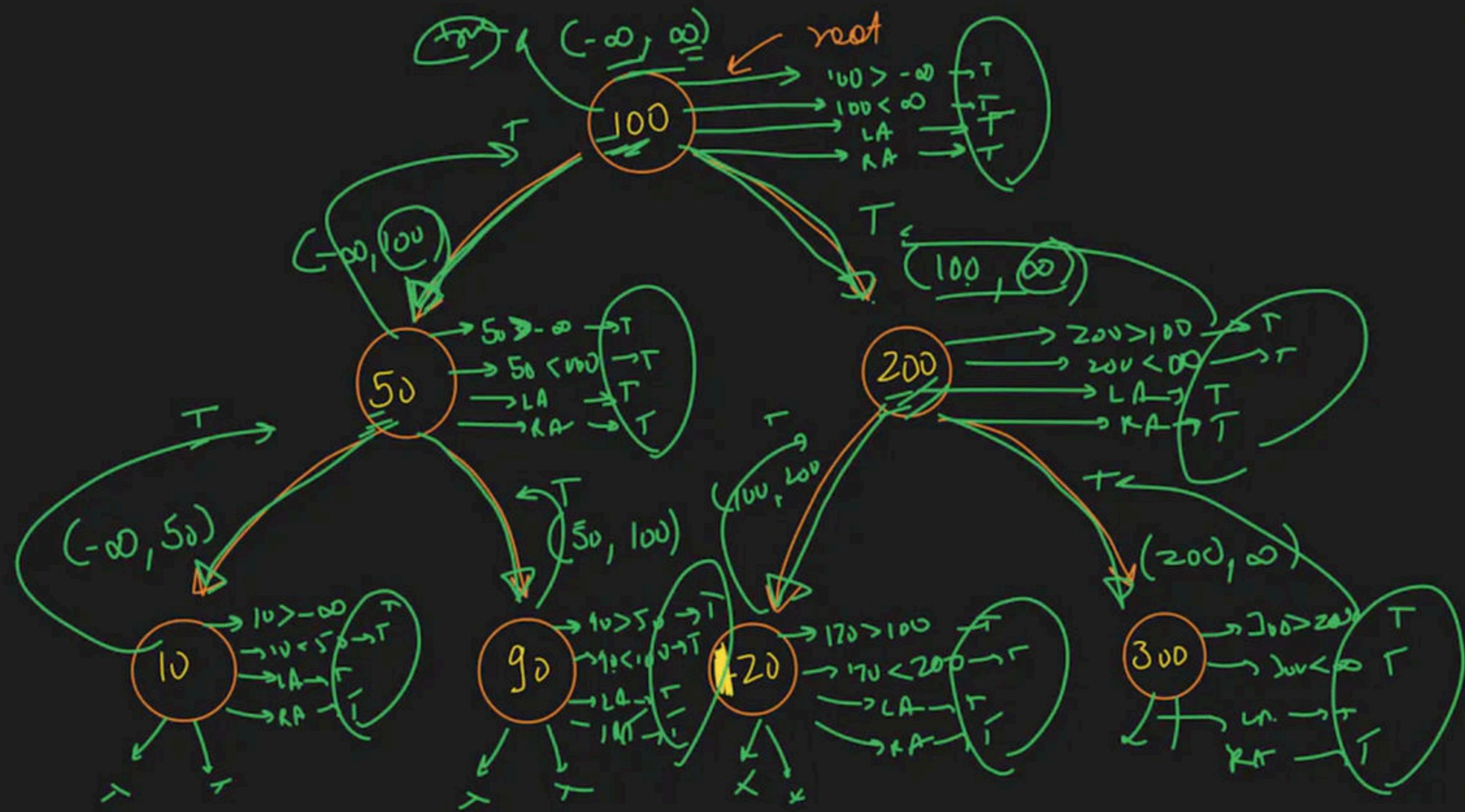
$-\infty < -6$

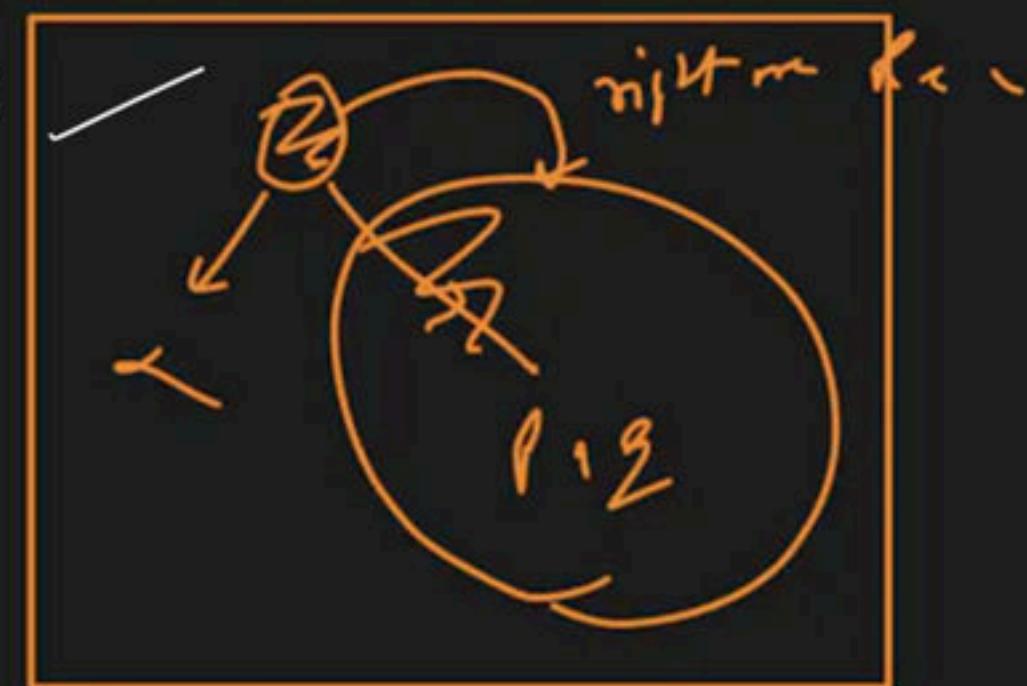
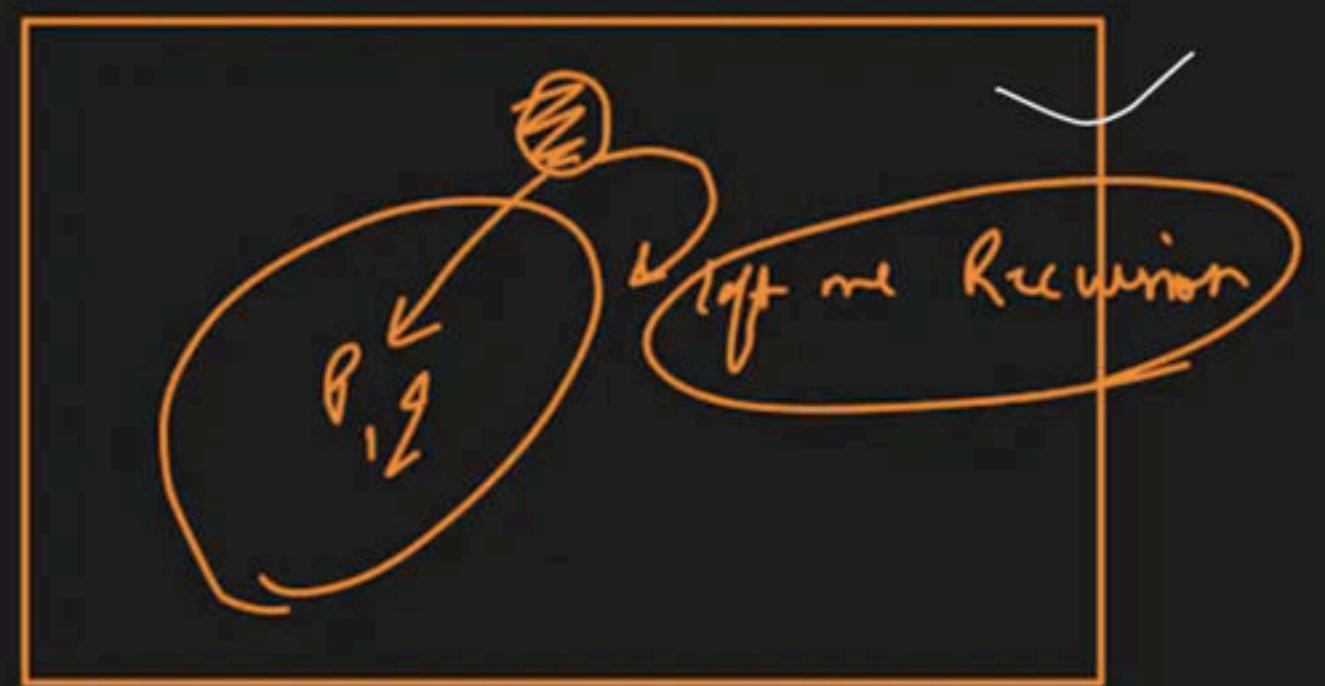
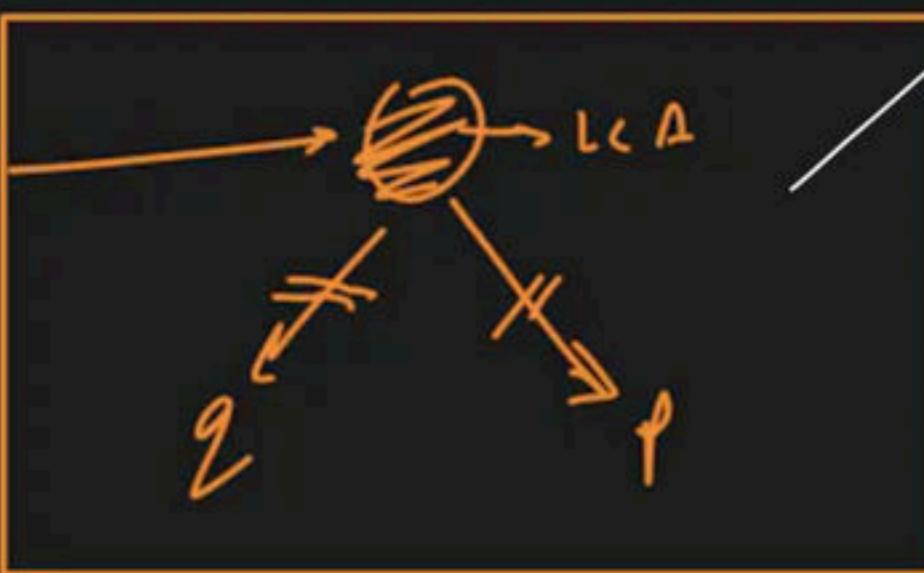
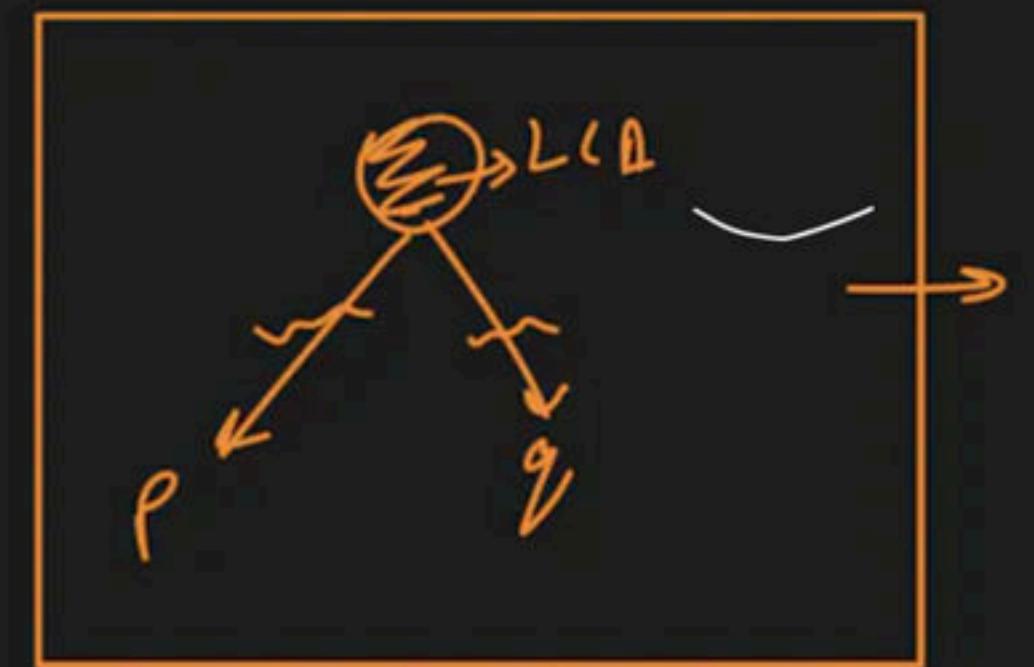
$-5 > -5$

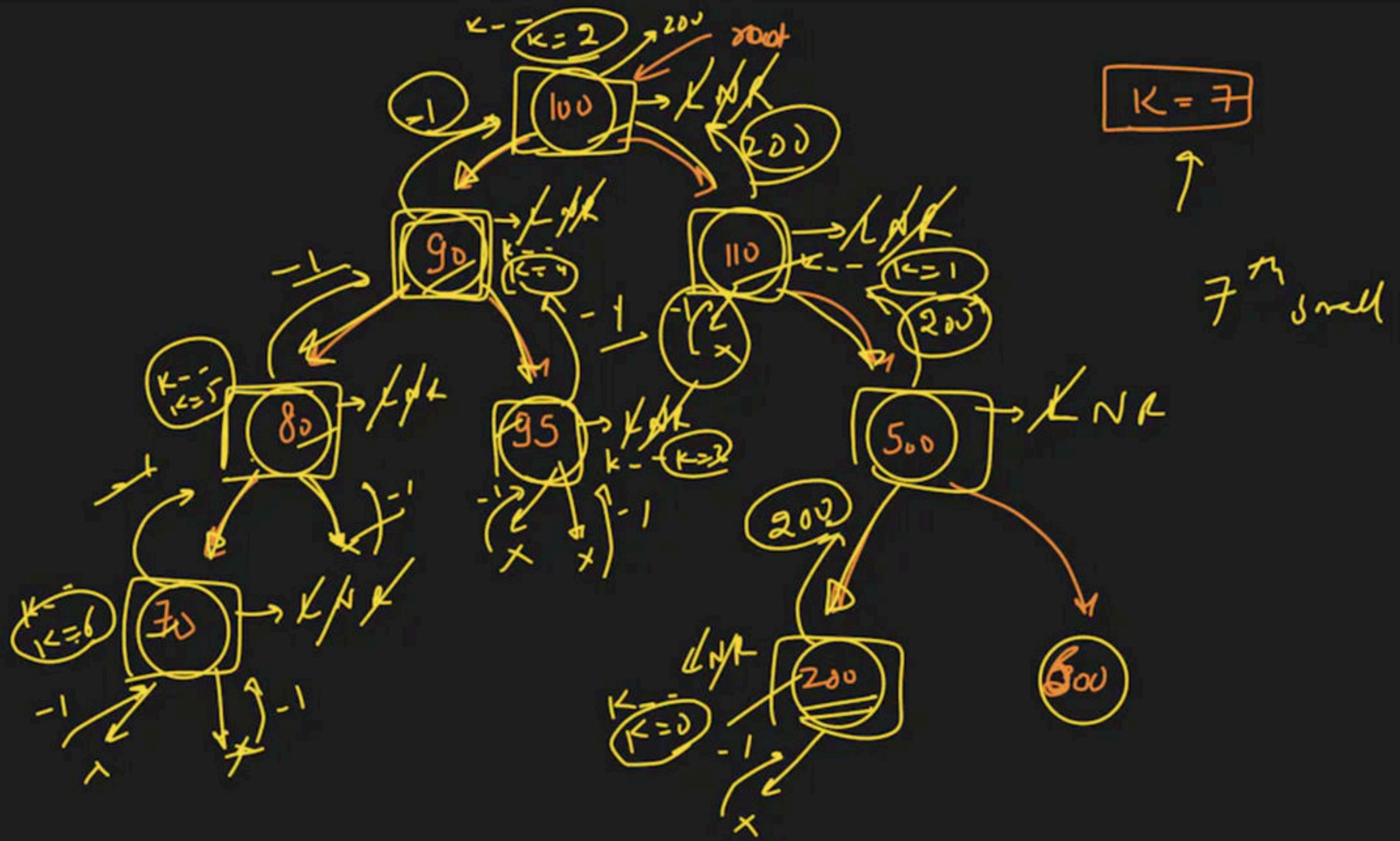
~~falsc~~

> → falsc
 < → falsc



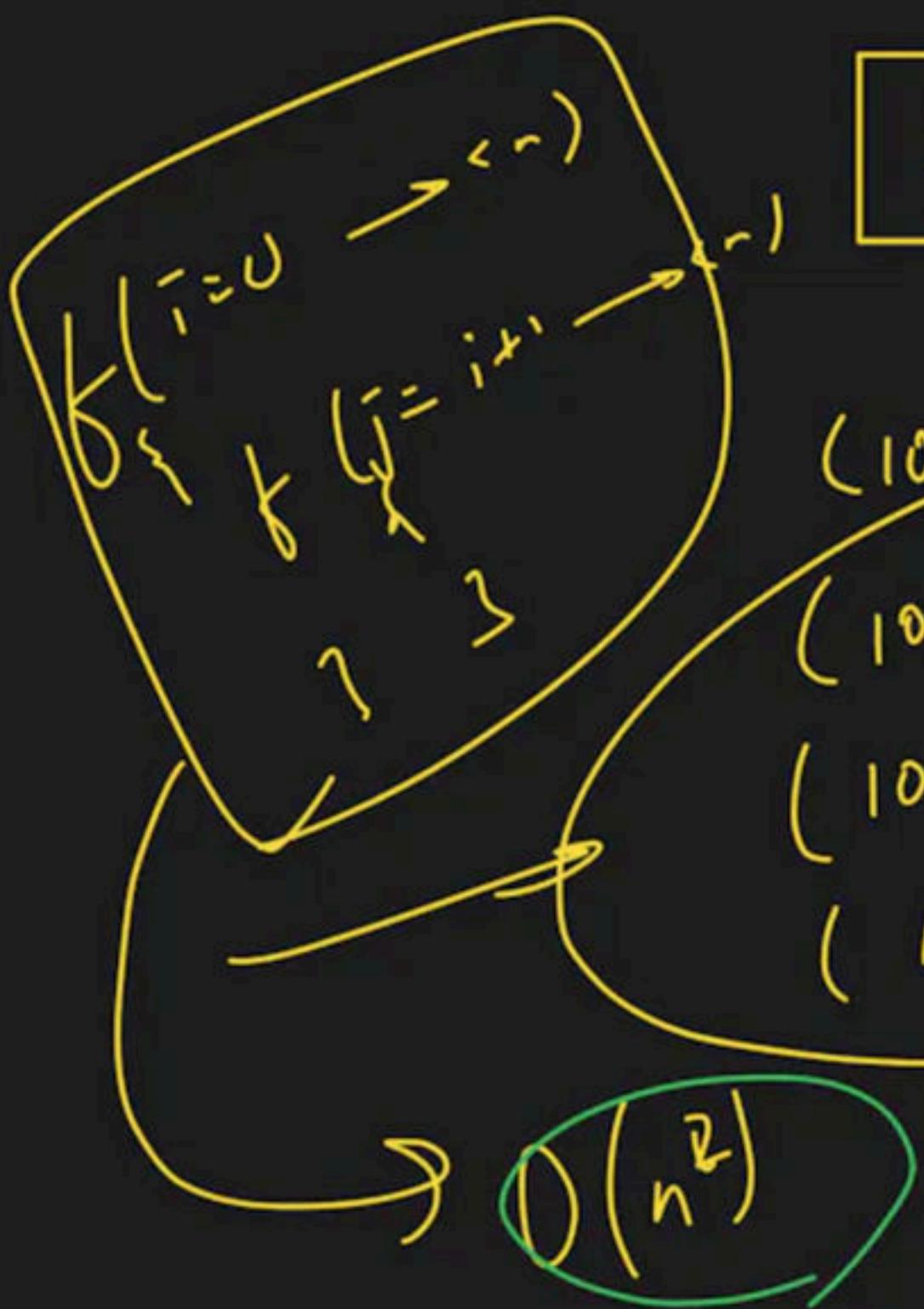






vector

10	20	5	15	30
----	----	---	----	----

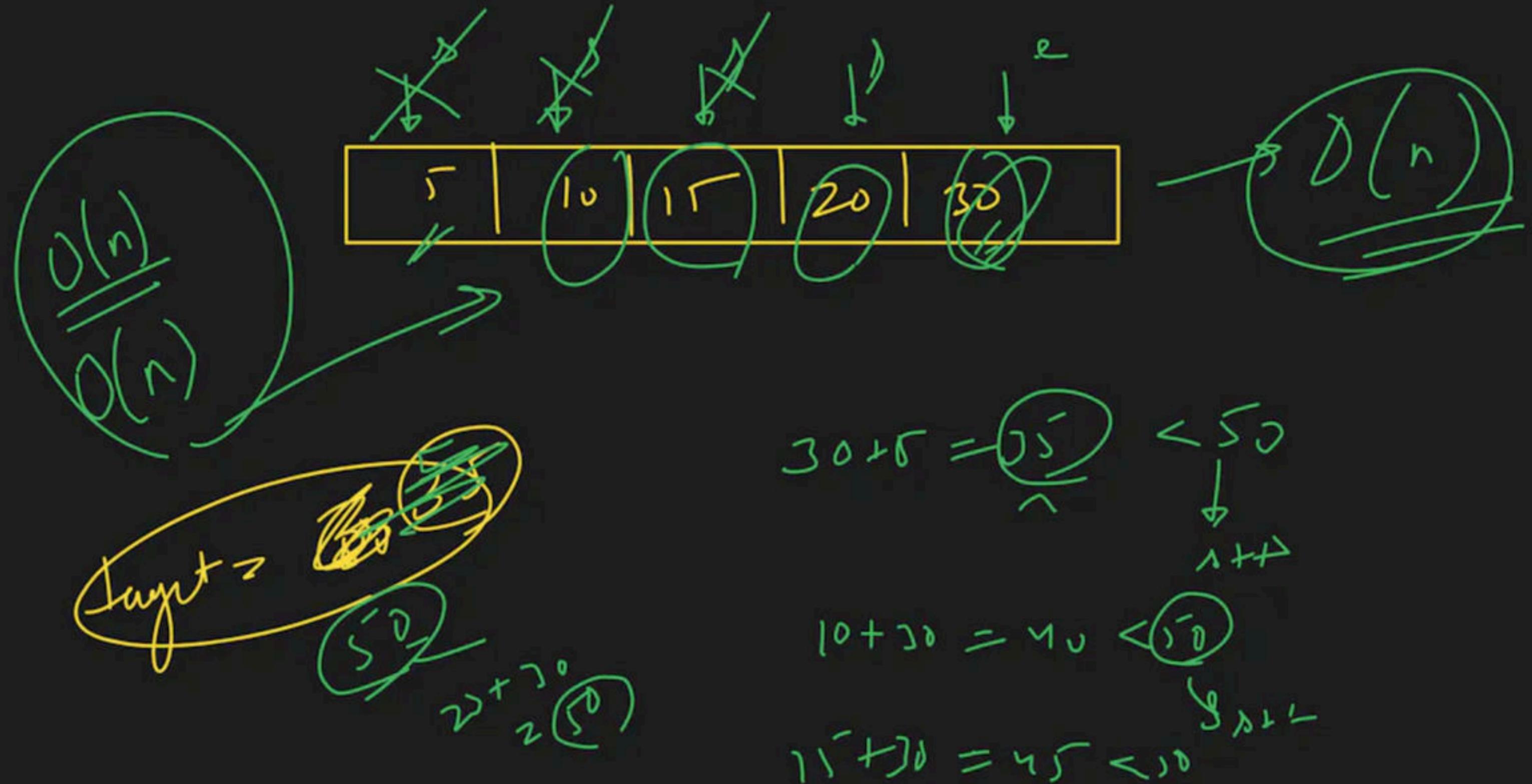


States in the search space:

- (10, 20)
- (20, 5)
- (5, 15)
- (15, 30)
- (10, 5)
- (20, 15)
- (5, 30)
- (10, 30)
- (10, 15)
- (20, 30)



inorder
search



$\Rightarrow BST$

① Traverse \rightarrow Hash map

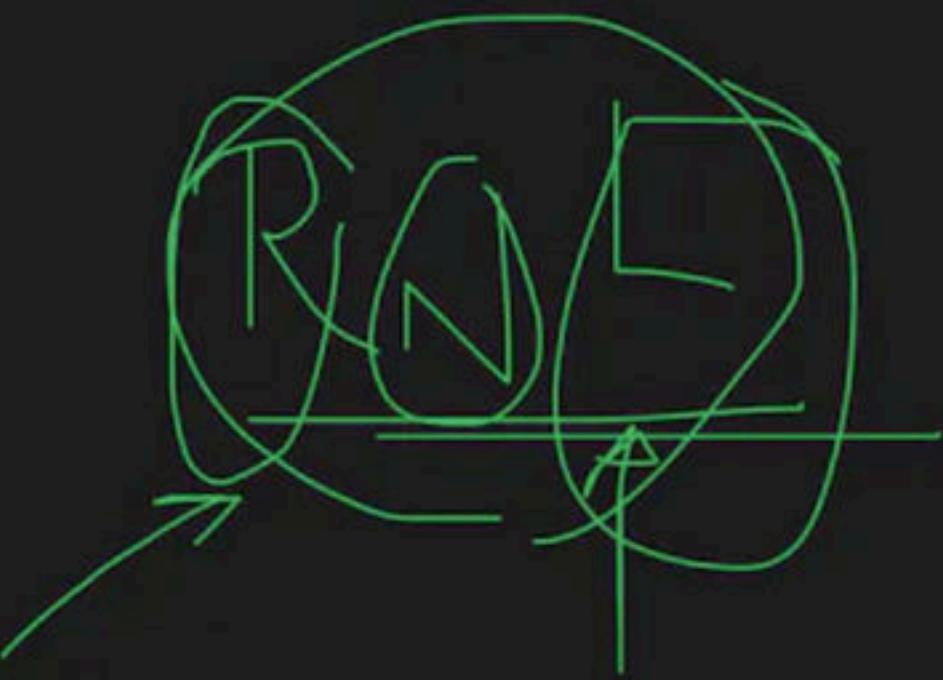
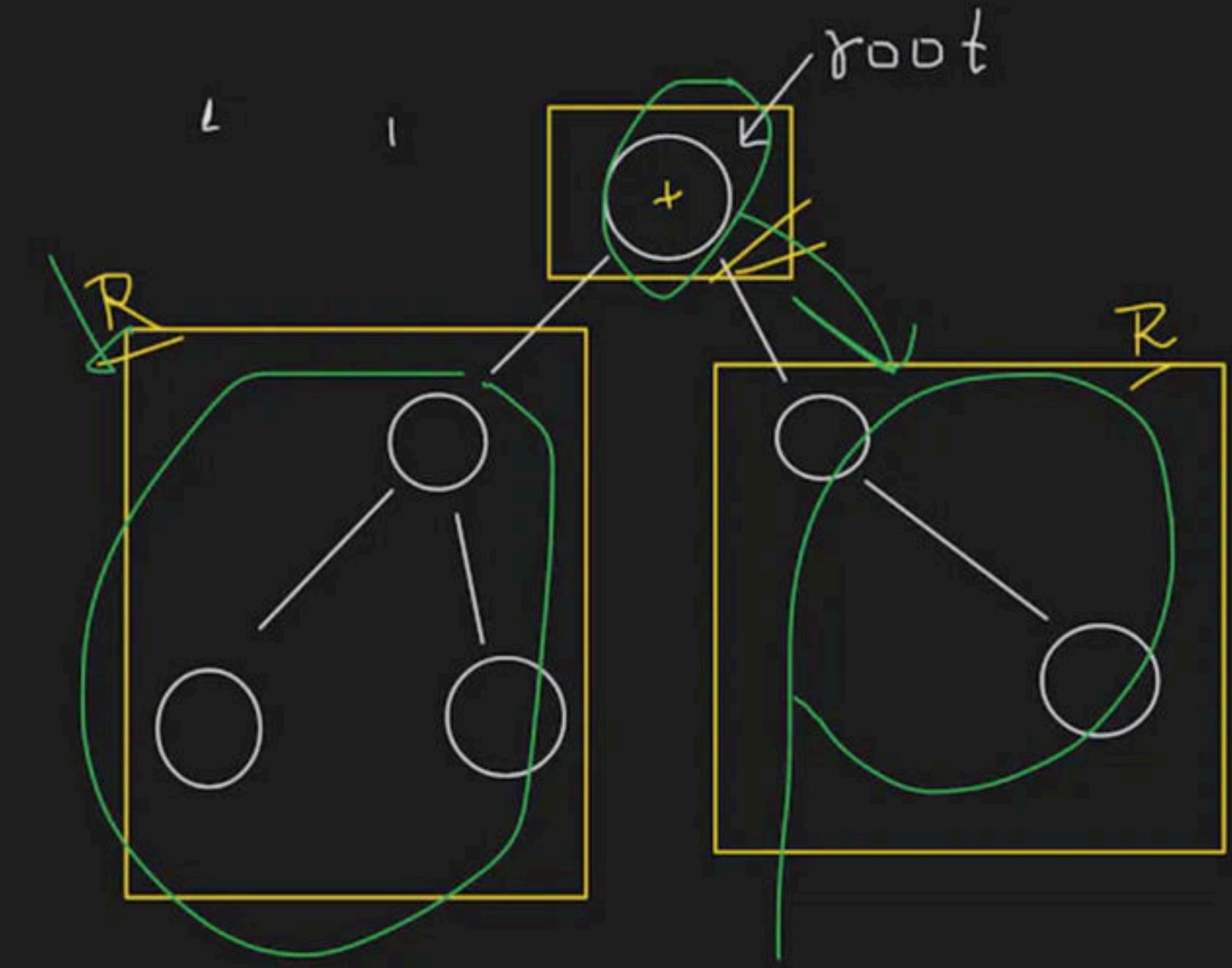
② Traverse \rightarrow k-value \rightarrow find in map

Two A+B+C

Binary Search Trees Class-3

Special class

2 Min



Rec

Sort

DLL

=====

In
L → NLR

RNL

b

1 - 2 - 3 - 4

Root

RL

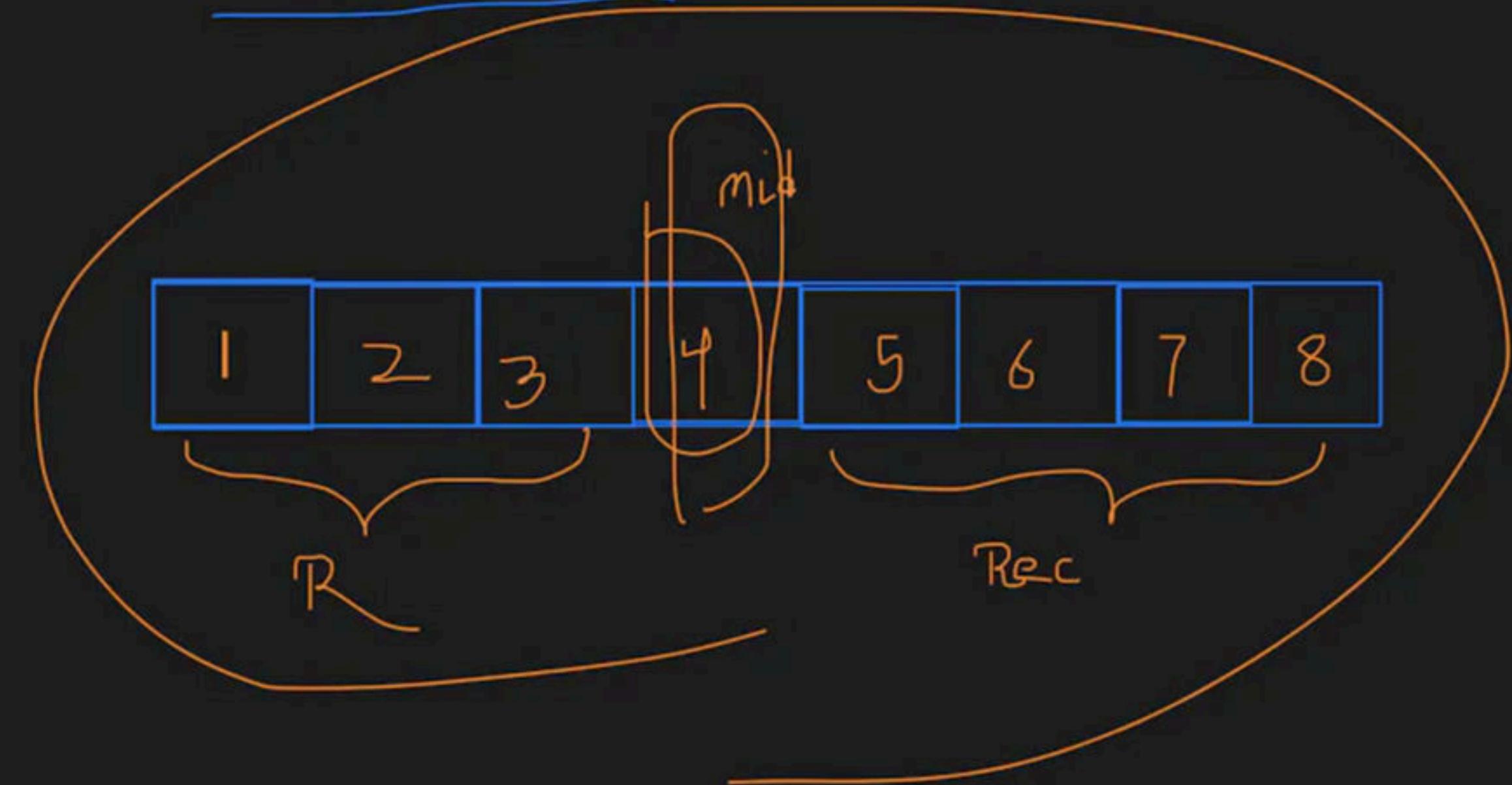
b

head

6 - 7 - 8 - 10

1' - 2' - 3'

→ Sorted DLL → BST

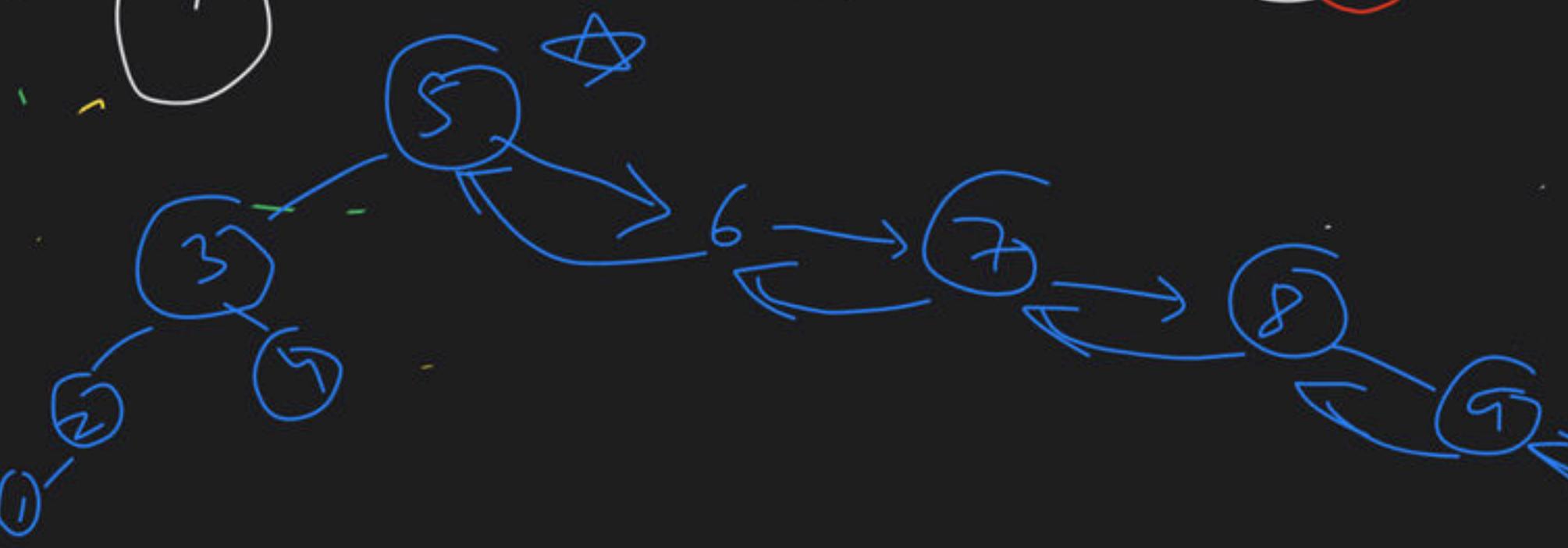
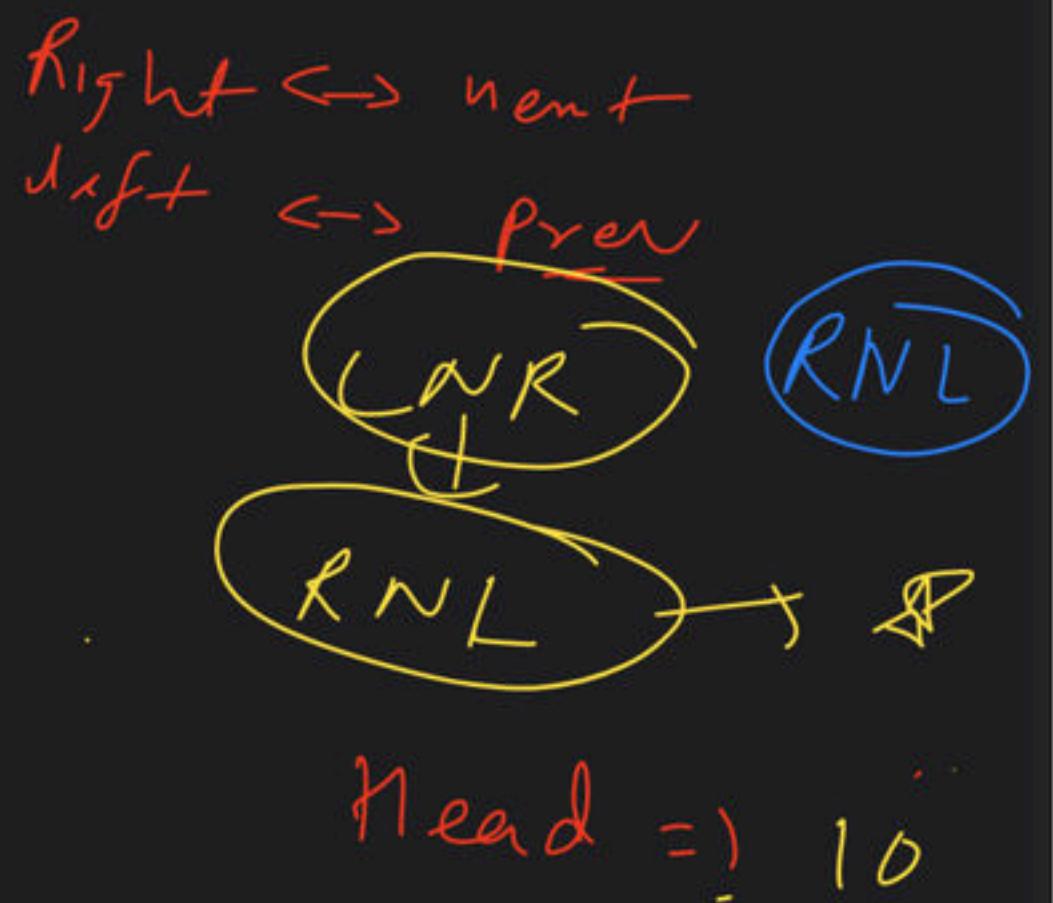
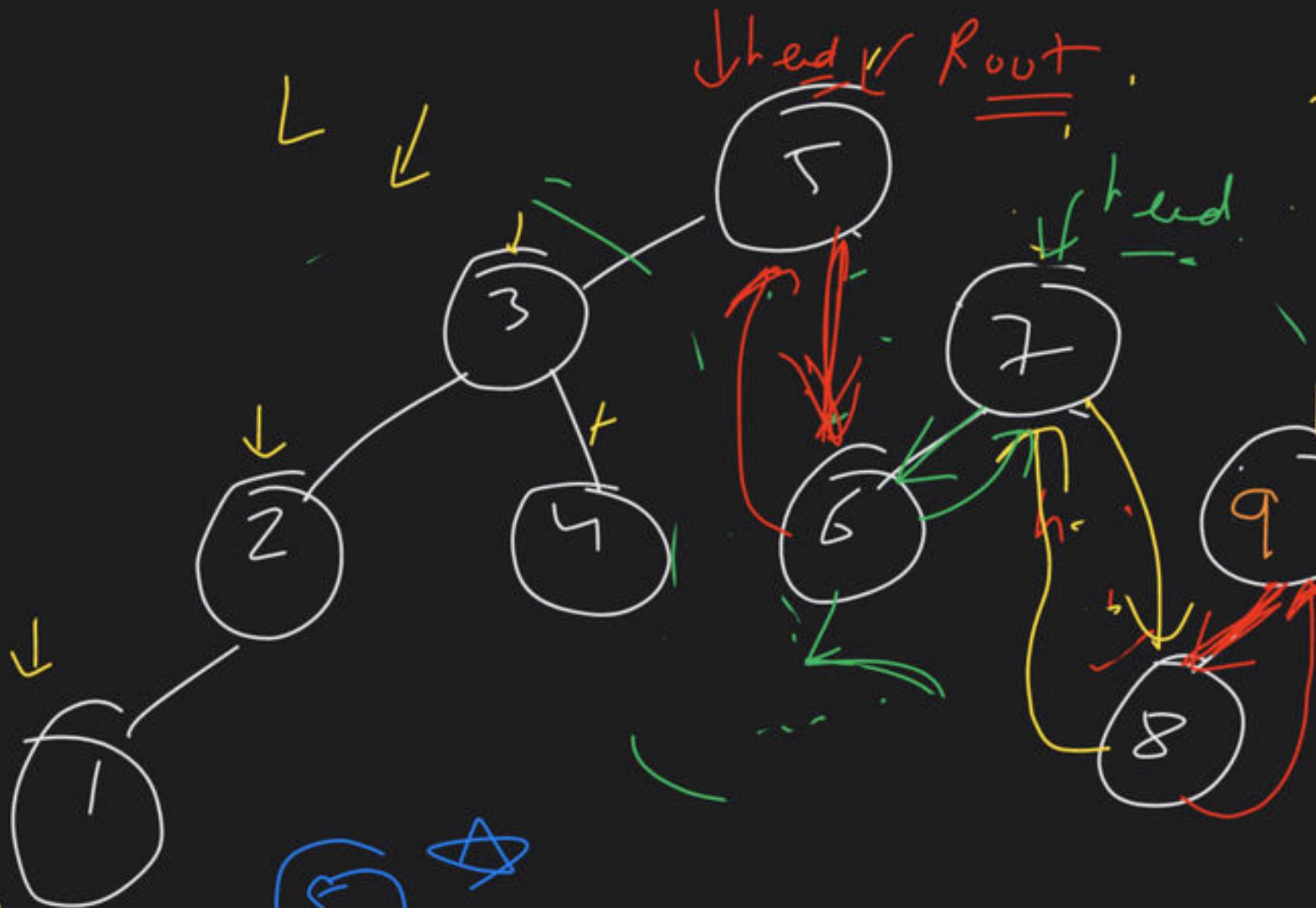


Node *

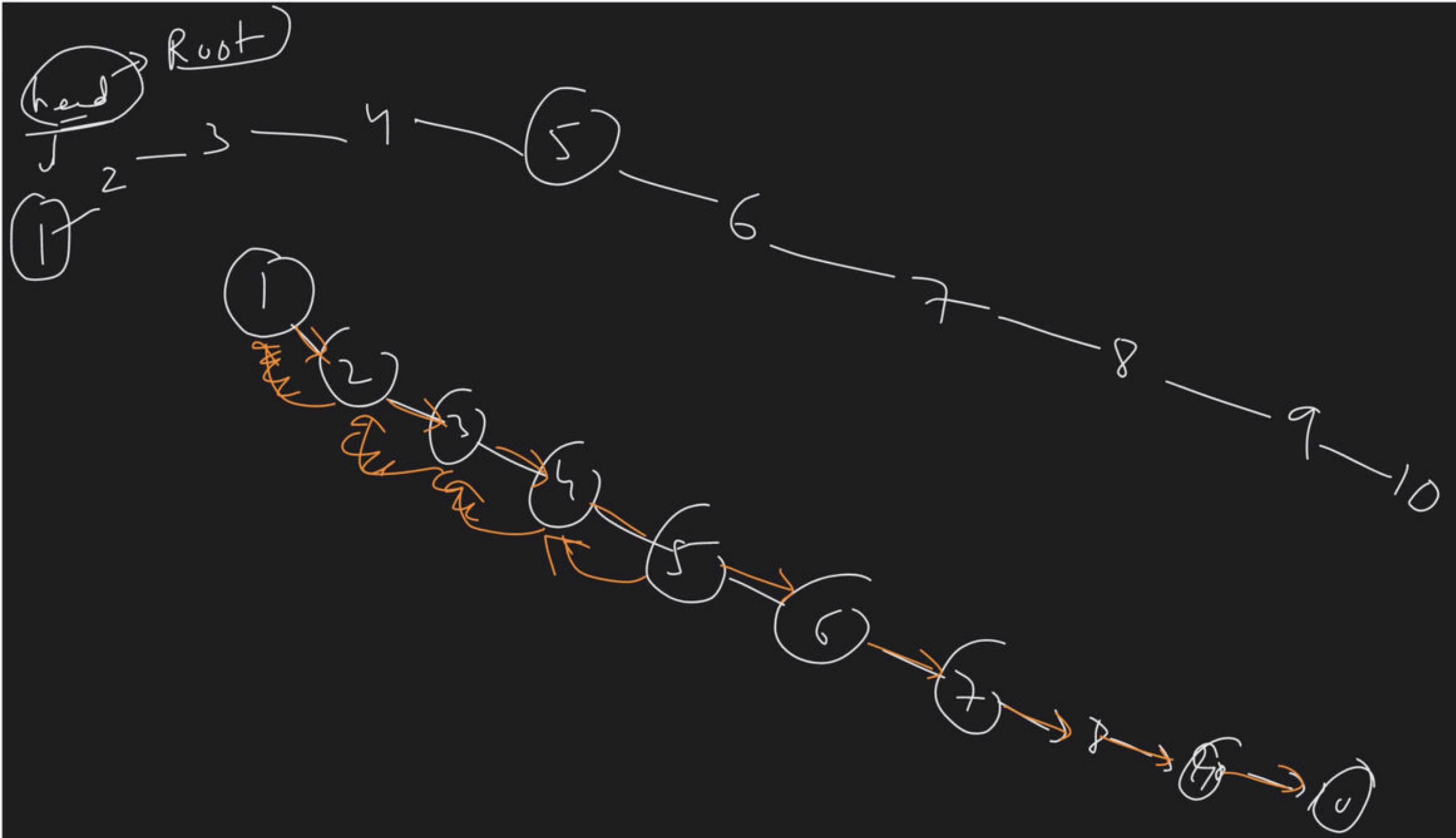
{

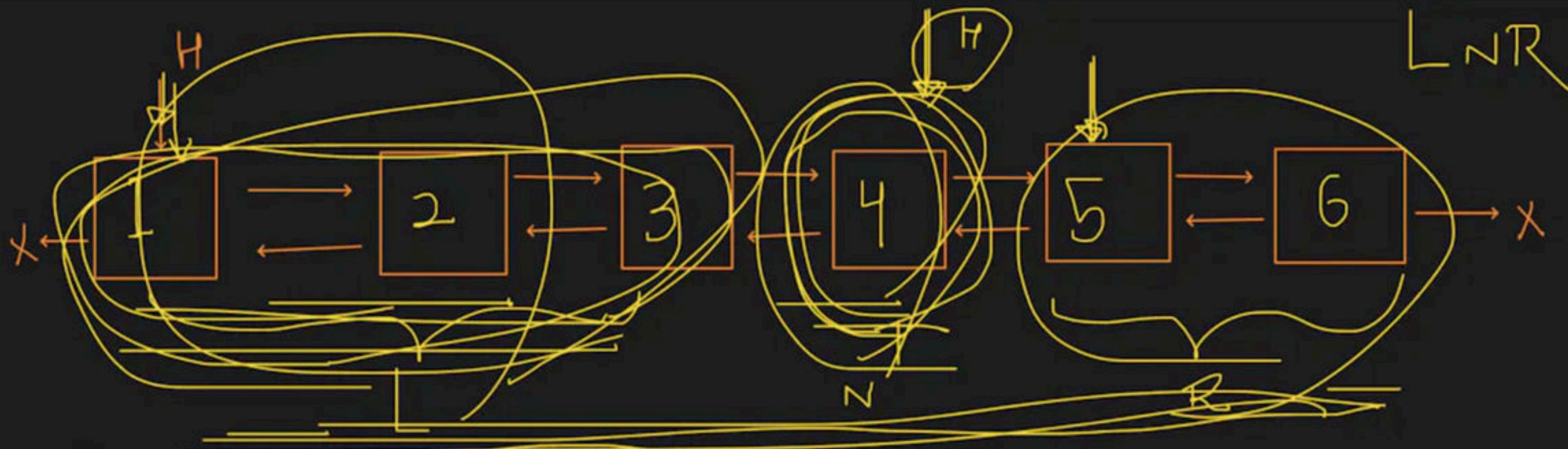
}

solve (Head , n)



- ① Root \rightarrow right = head
- ② head \neq null
head \rightarrow left = root
- ③ head = root





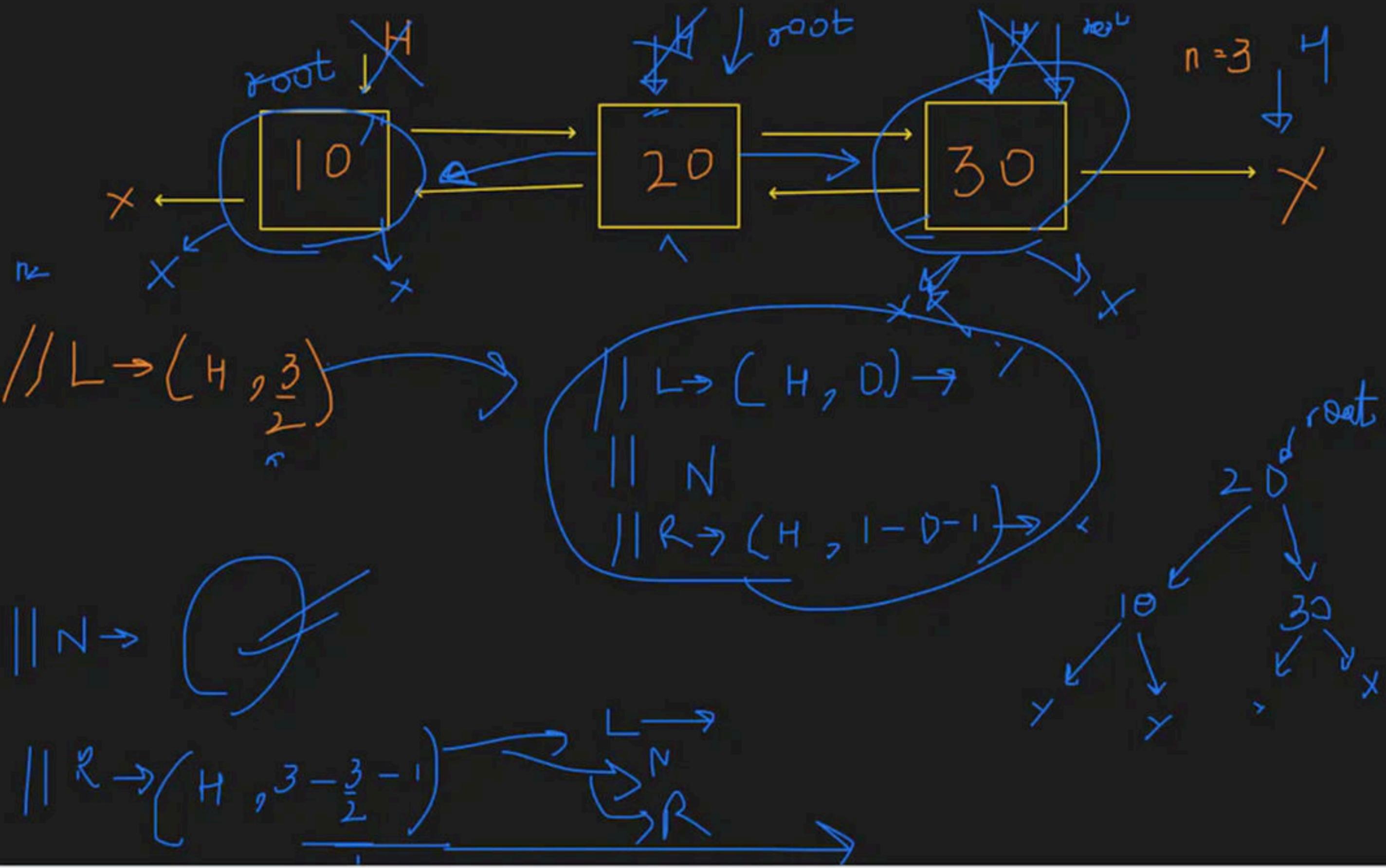
$\rightarrow L \rightarrow Rec_{head, \frac{n}{2}}$

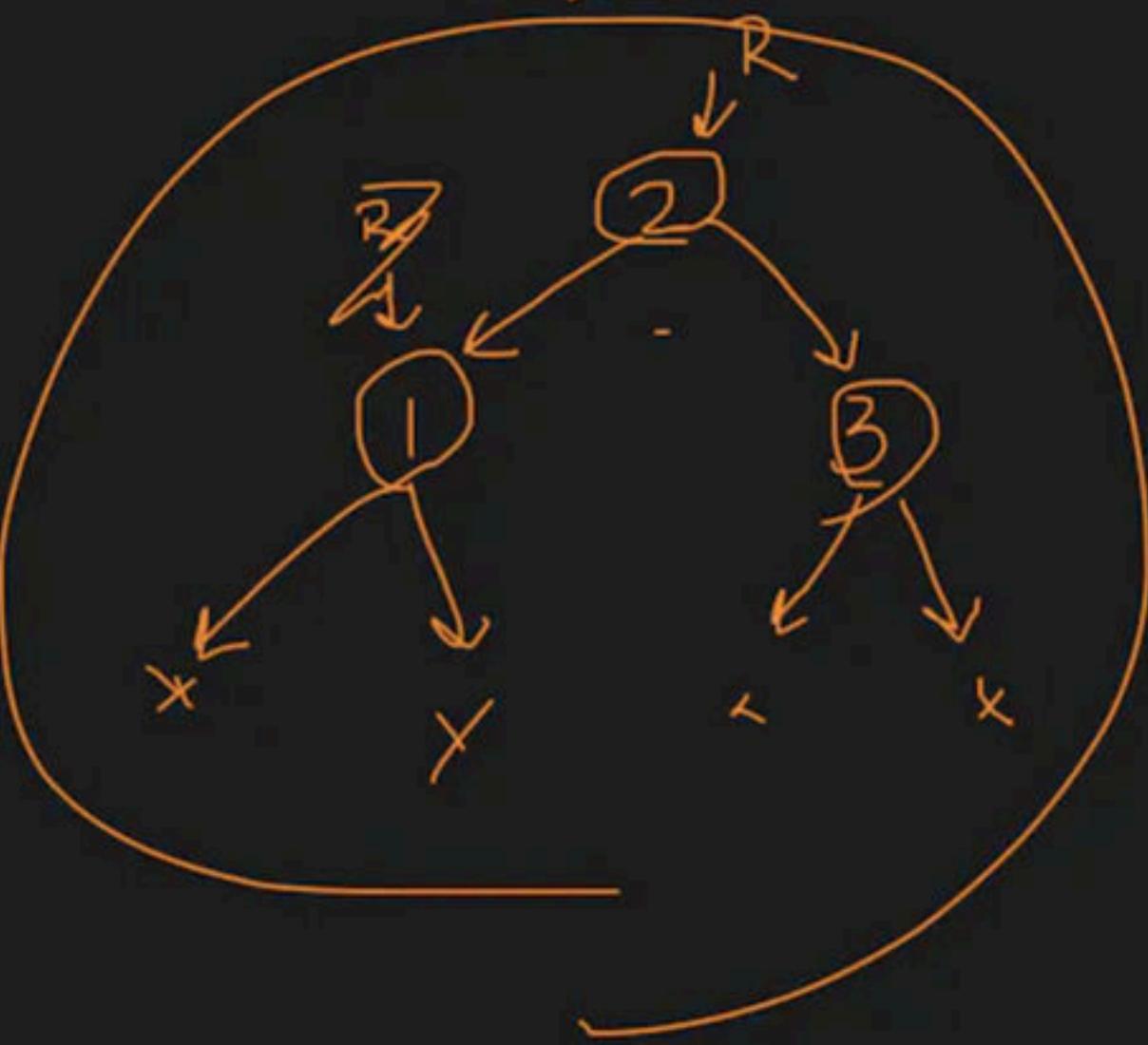
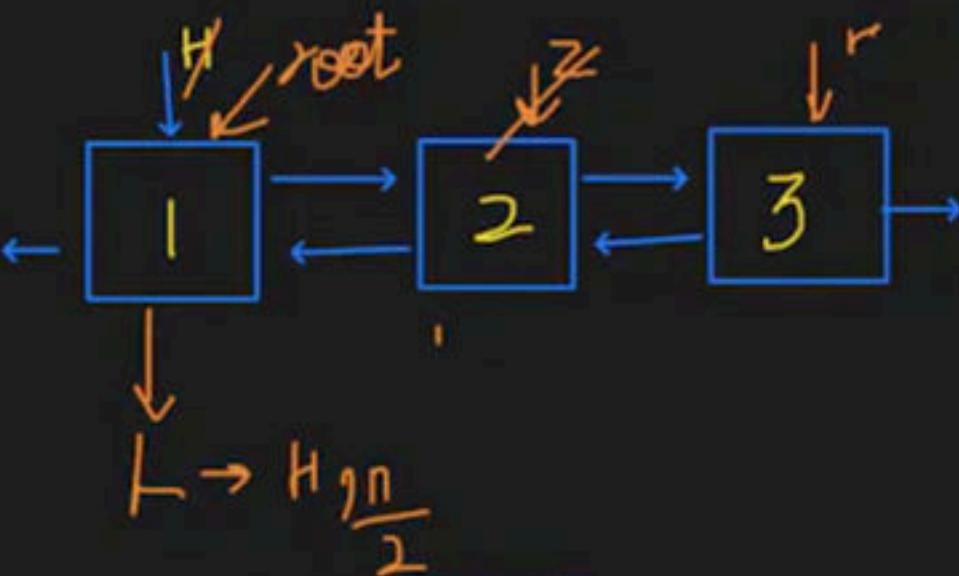
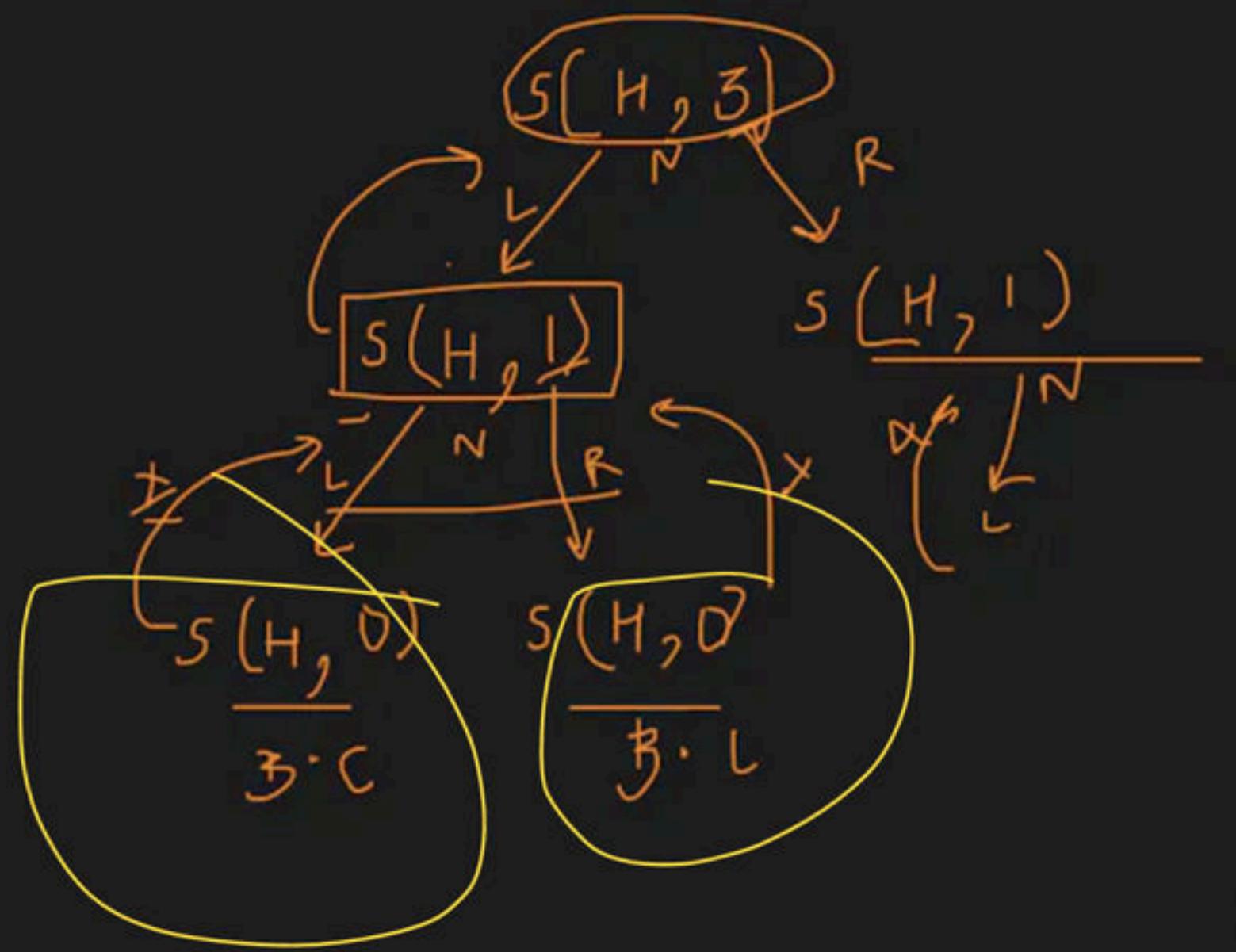
$\rightarrow \textcircled{N} \rightarrow \text{root} = head$
 $\text{root} \rightarrow left = LST$

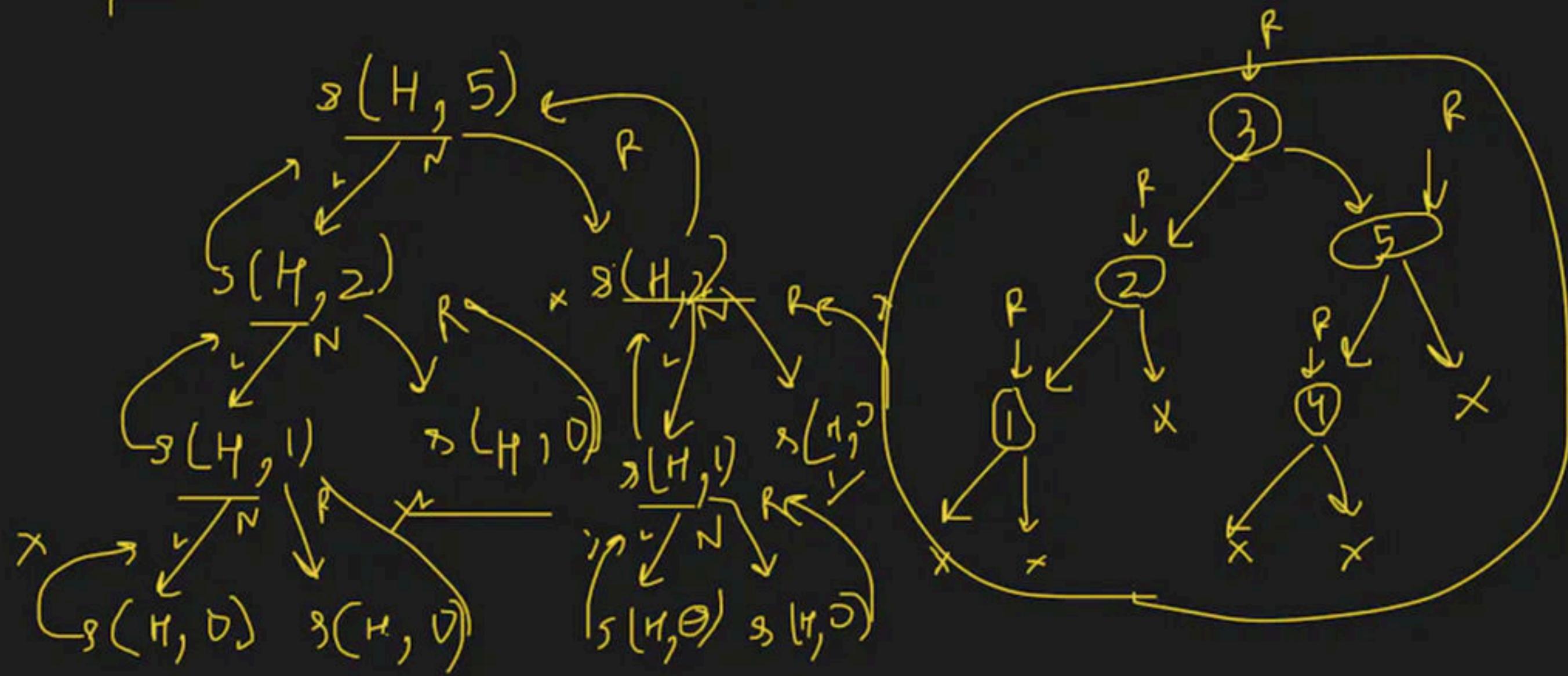
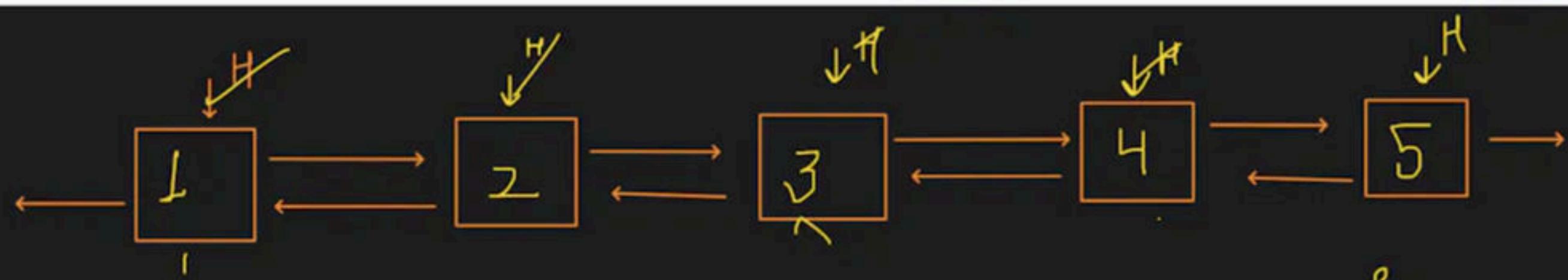
$h = H \rightarrow Right$

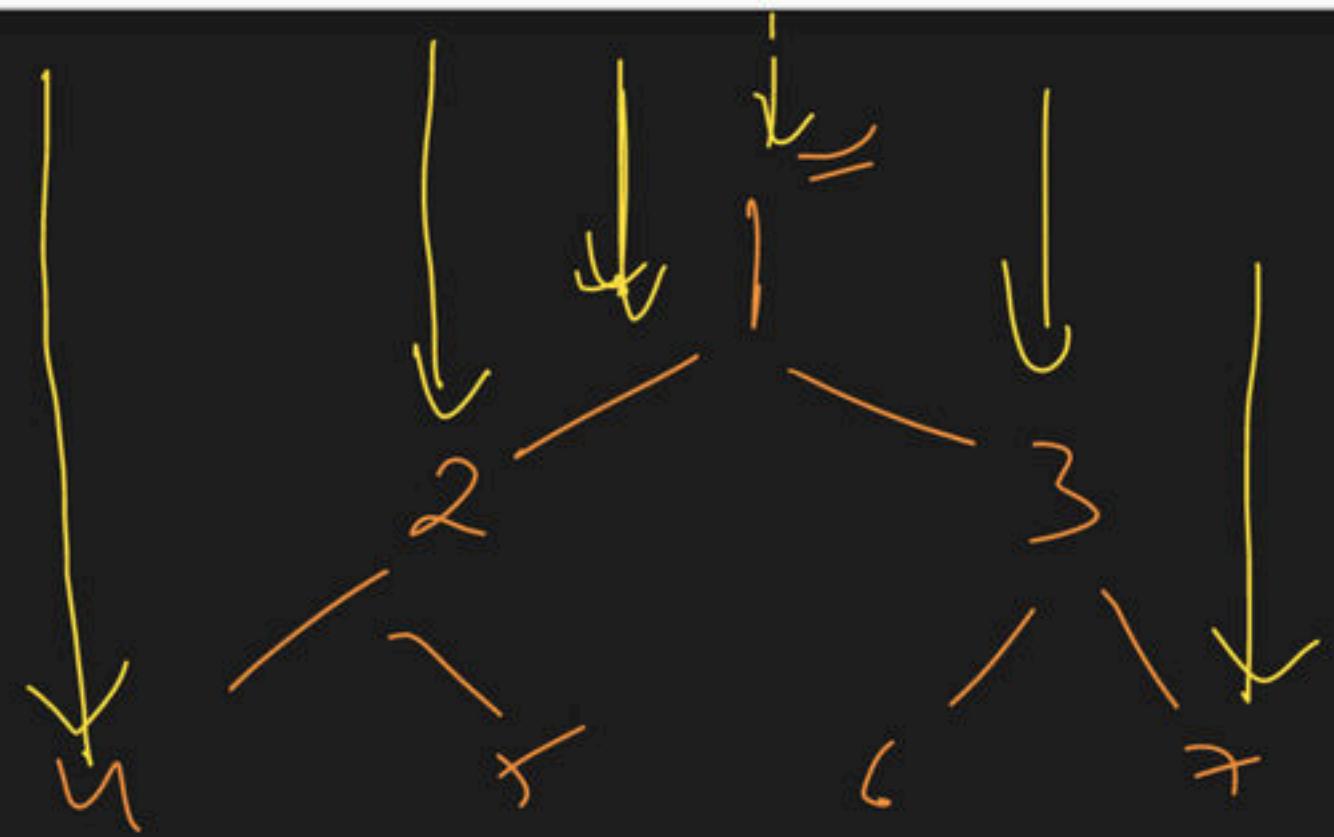
$\rightarrow R \rightarrow Rec_{(h, h - \frac{n}{2} - 1)}$

LNR









4 2 // 3 7

