Hashmaps & Tries - Class 2

Special class

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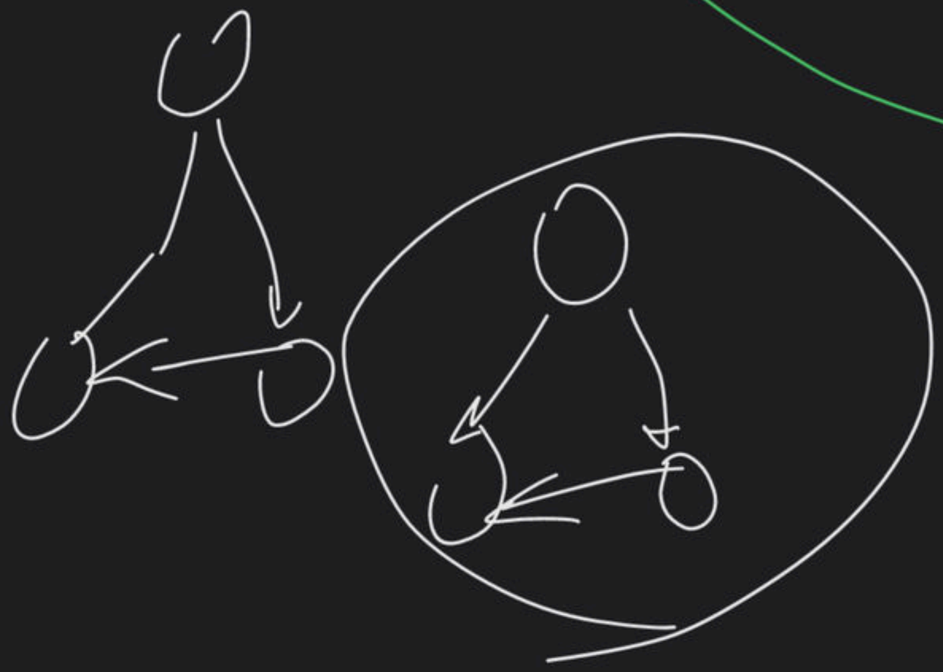
Tries:

D.S

Definition

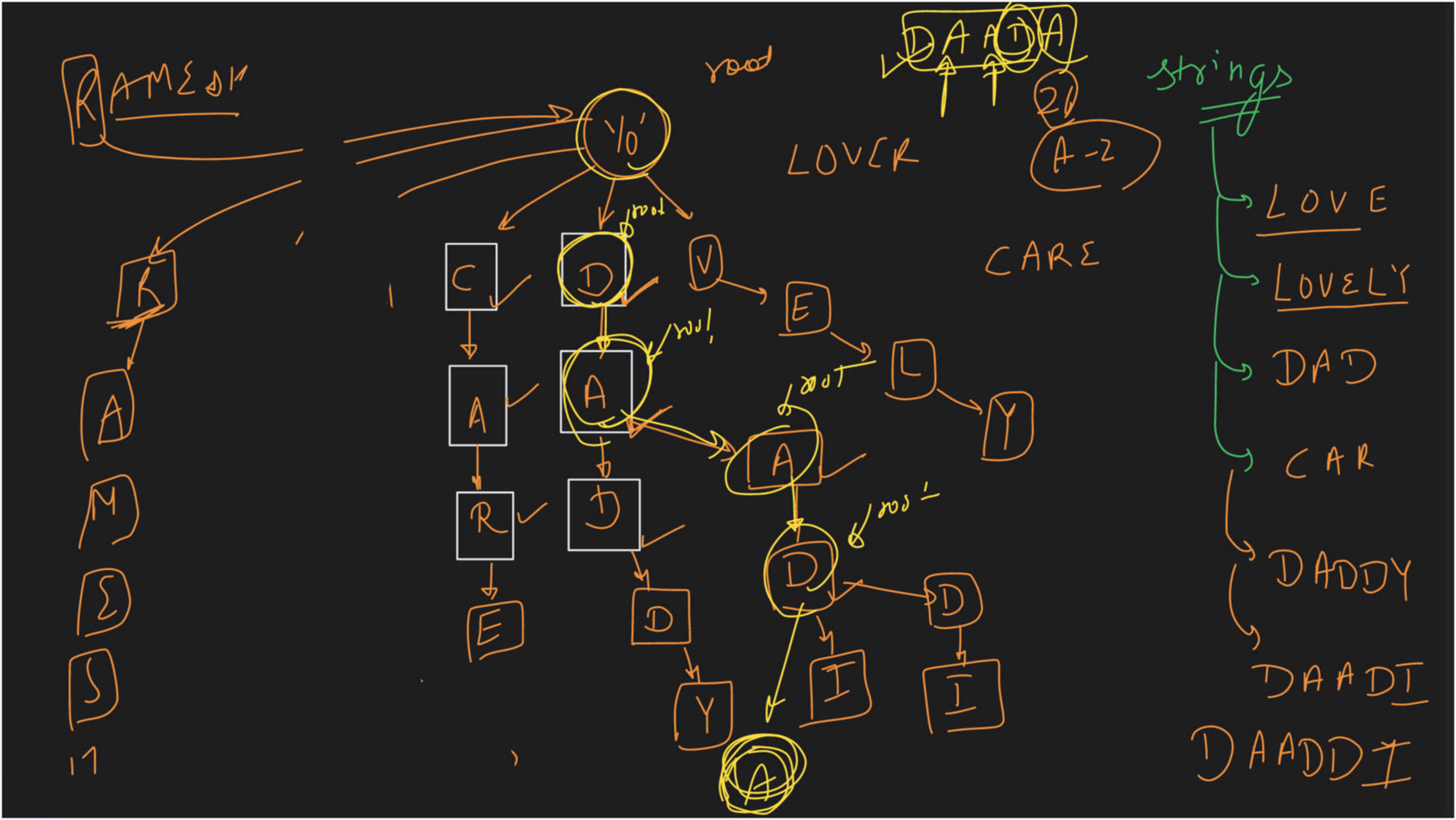
Multi-way Tree structure

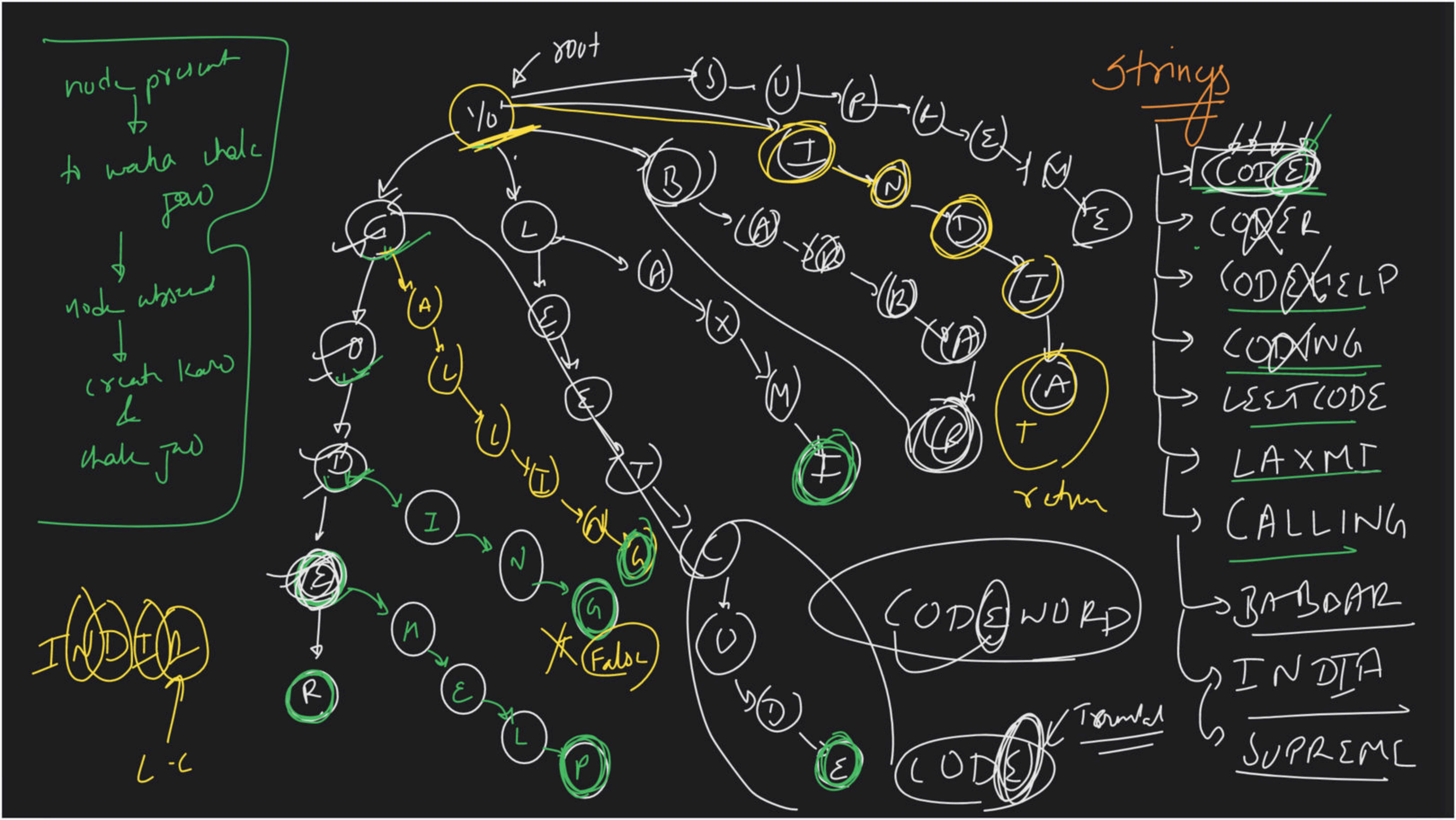
pattern - searching

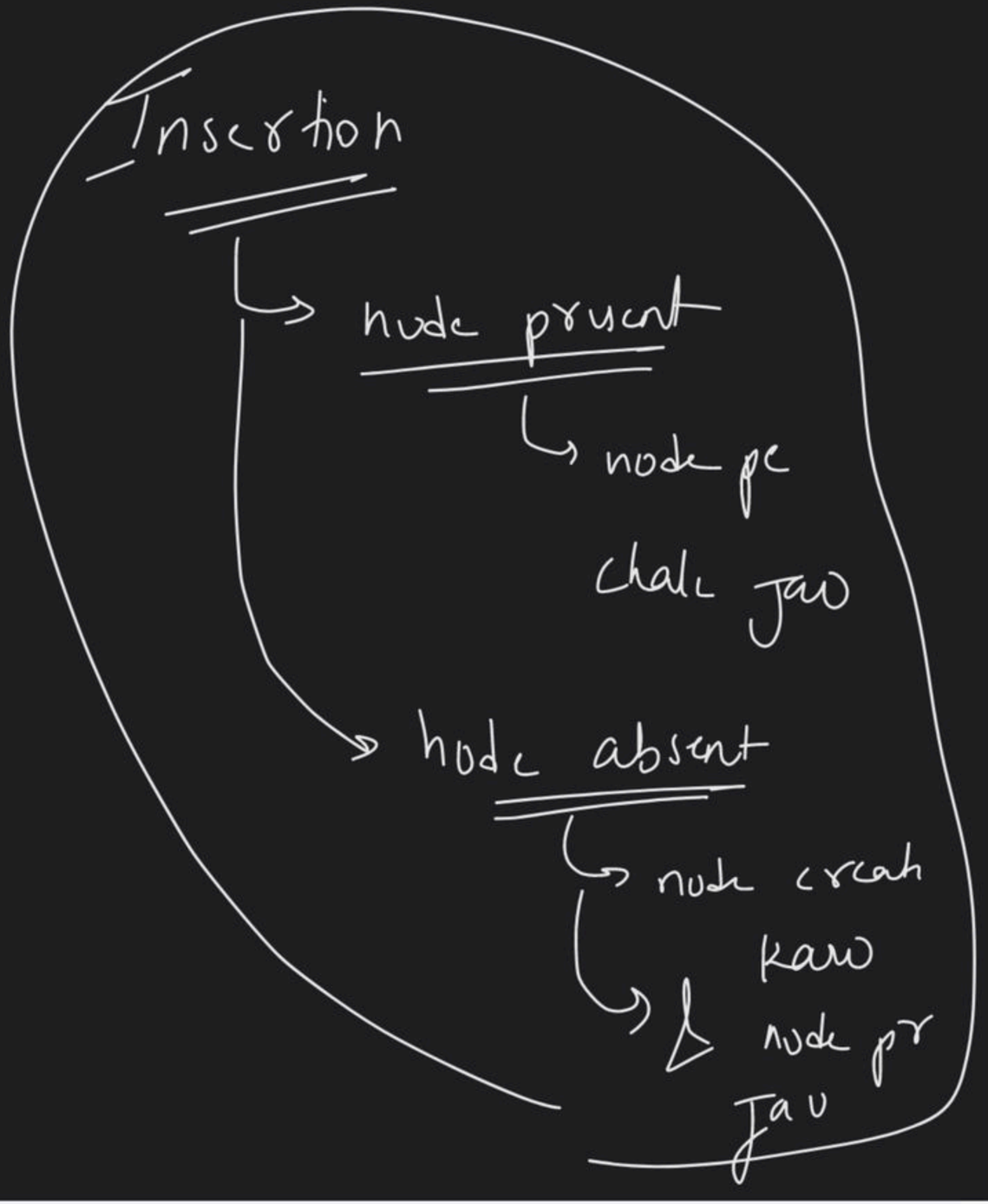


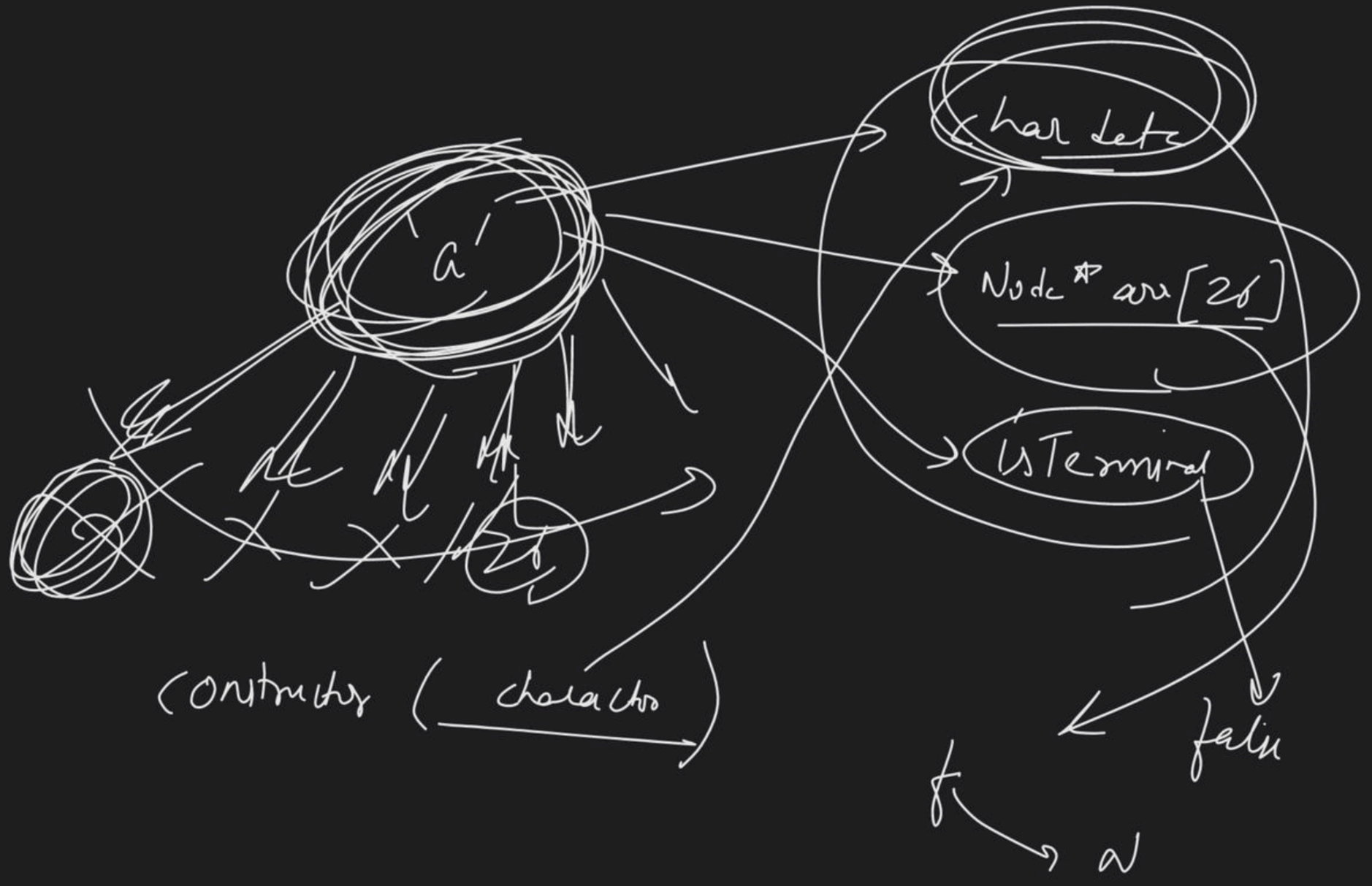
pattern length

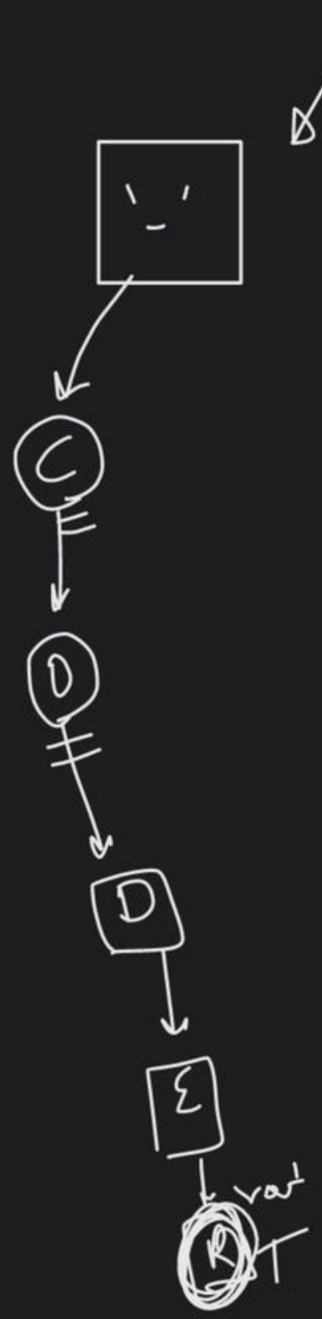
$\propto$ time complexity


RAMESH
root
DAADA
26
A-Z
strings
LOVER
CARE
LOVE
LOVELY
DAD
CAR
DADDY
DAADI
DAADDI
root
root
root
root
R
A
M
E
S
C
D
V
E
L
Y
A
A
R
D
E
D
Y
A
D
D
I
I
A


node present
to waha chale jao
node absent
create karo
&
chale jao
root
Strings
CODE
CODER
CODEHELP
CODING
LEETCODE
LAXMI
CALLING
BABBAR
INDIA
SUPREME
INDIA
L-C
CODEWORD
CODE
Translate
False
return


Insertion
node present
node pe
chale jao
node absent
node create
karo
node pr
jao


'a'
char data
Node* arr[26]
isTerminal
false
constructor (character)
f
a



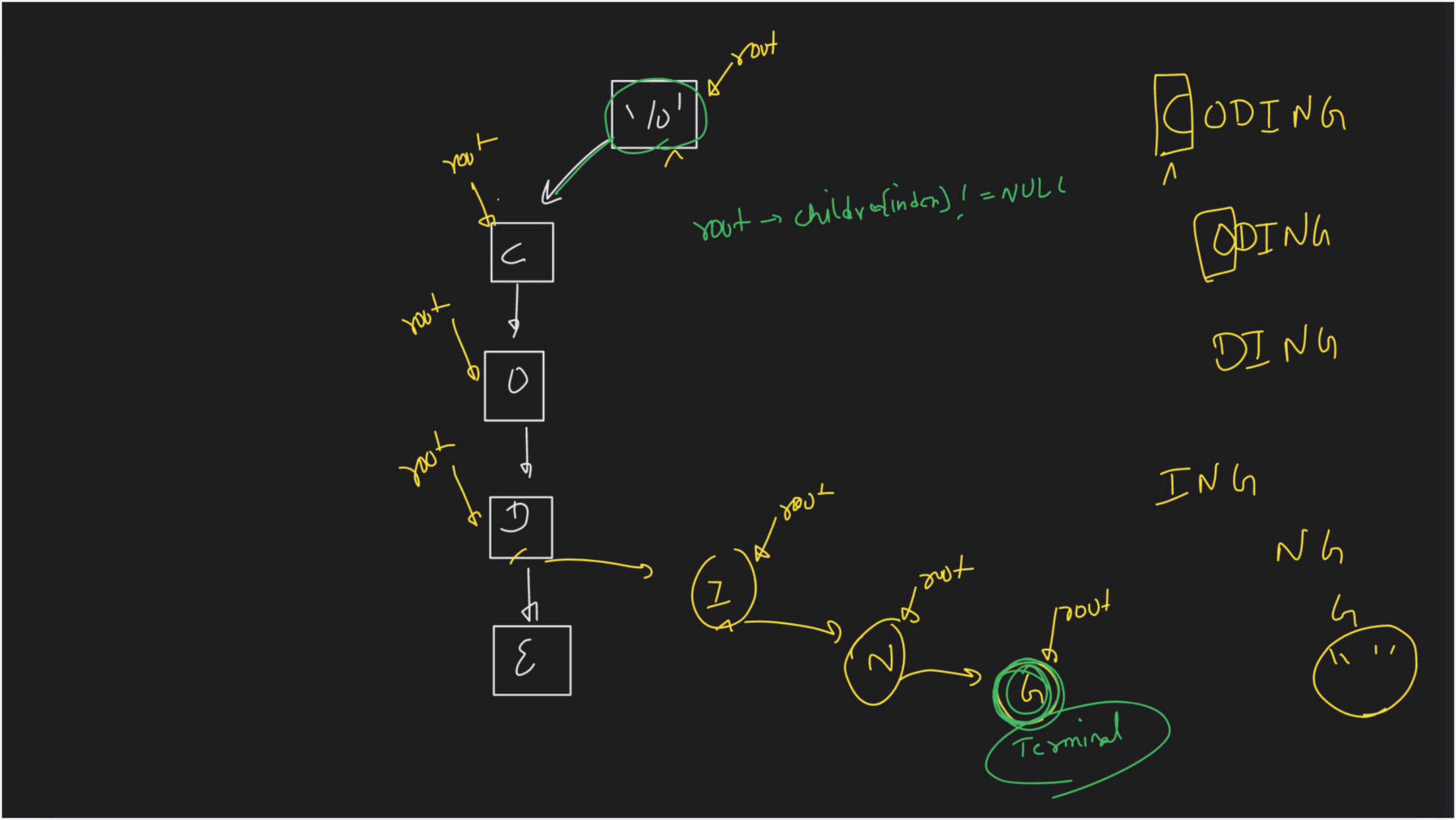
CODER

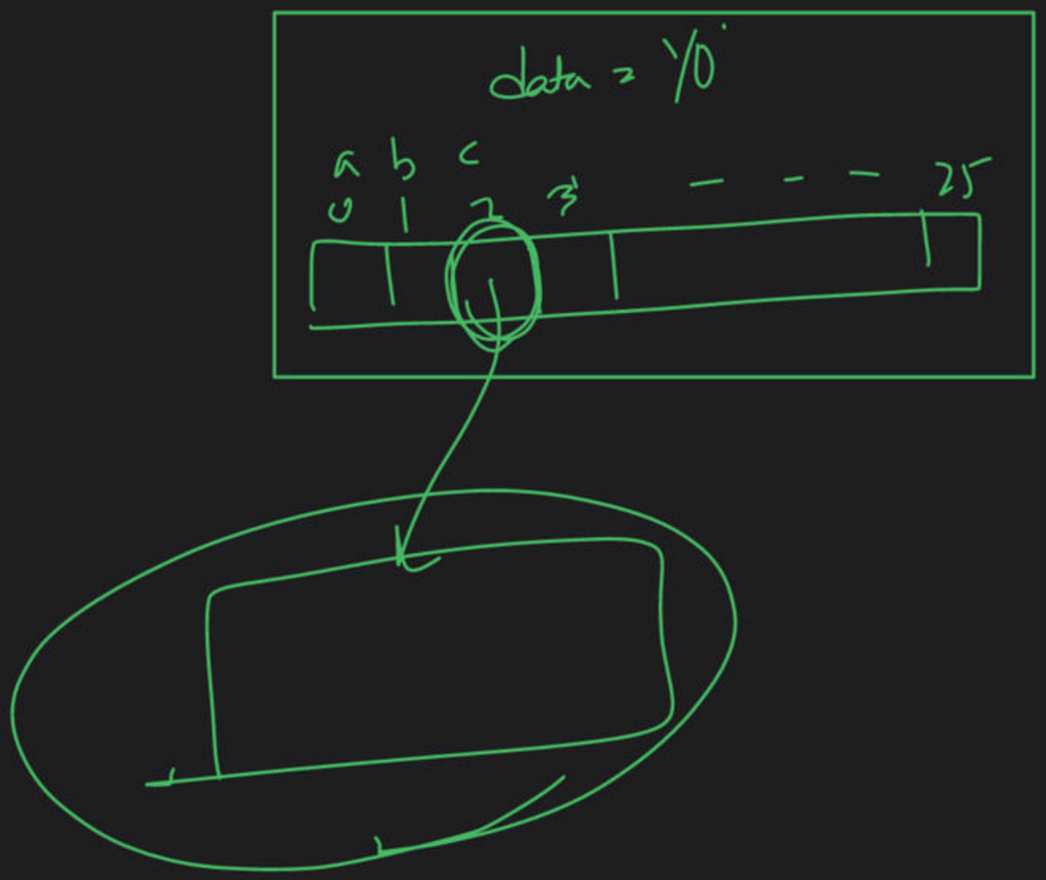
ODER

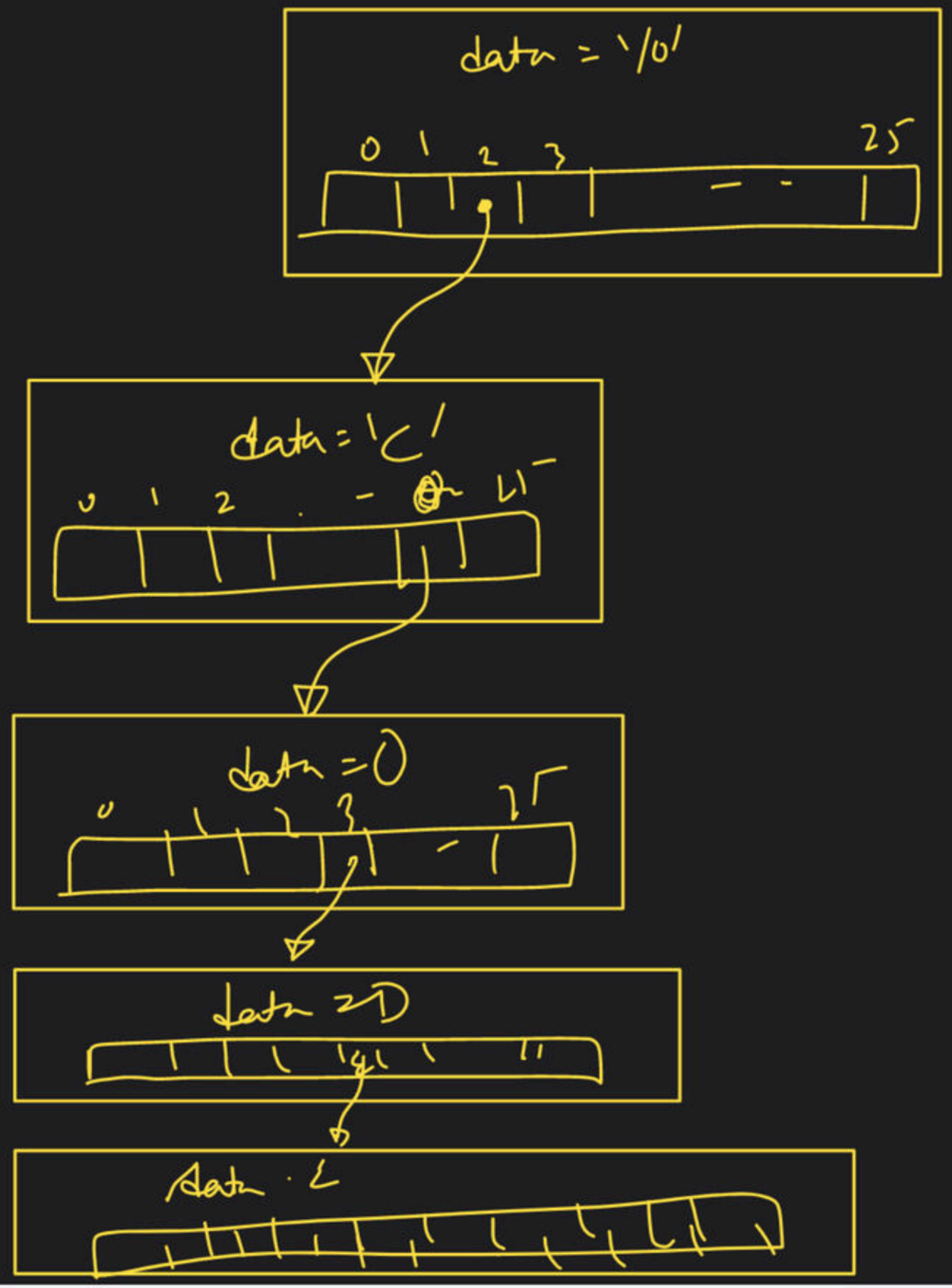
DER

ER

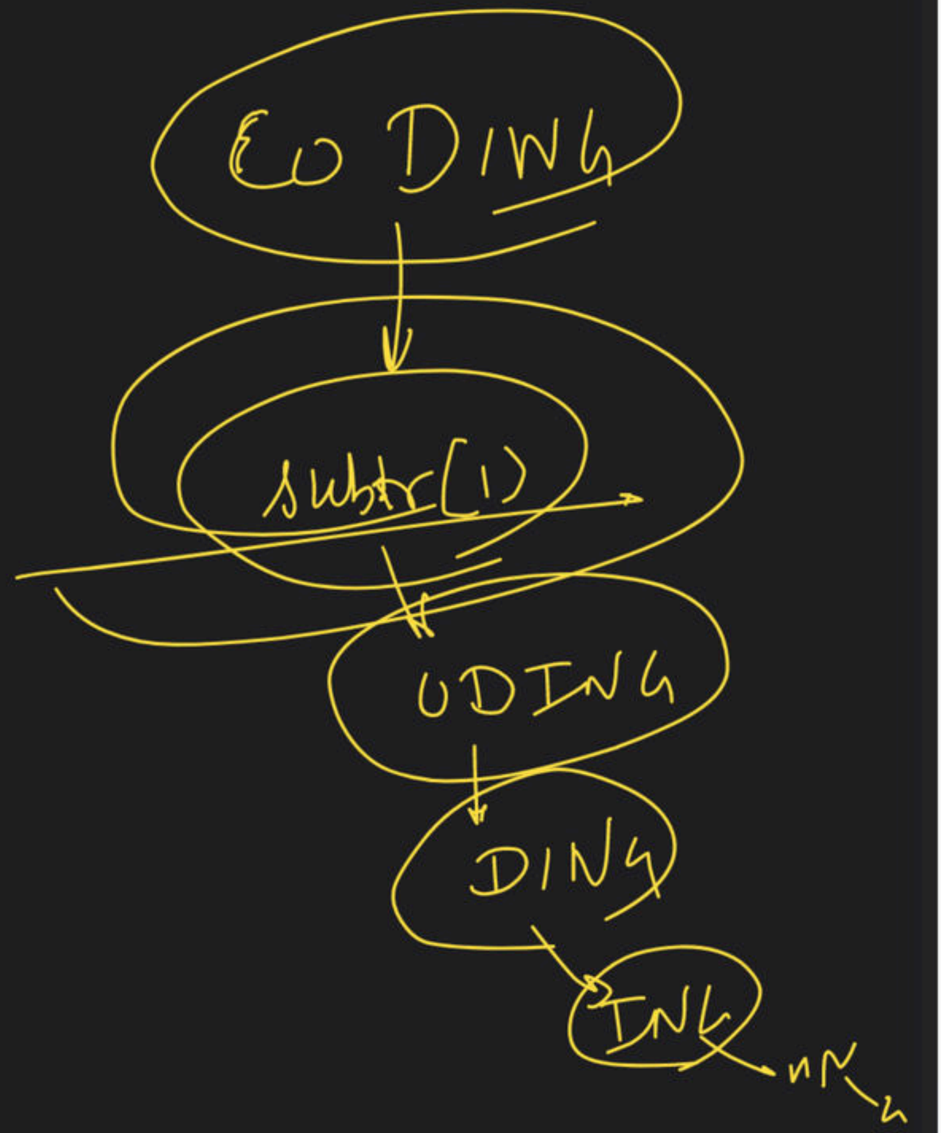
R

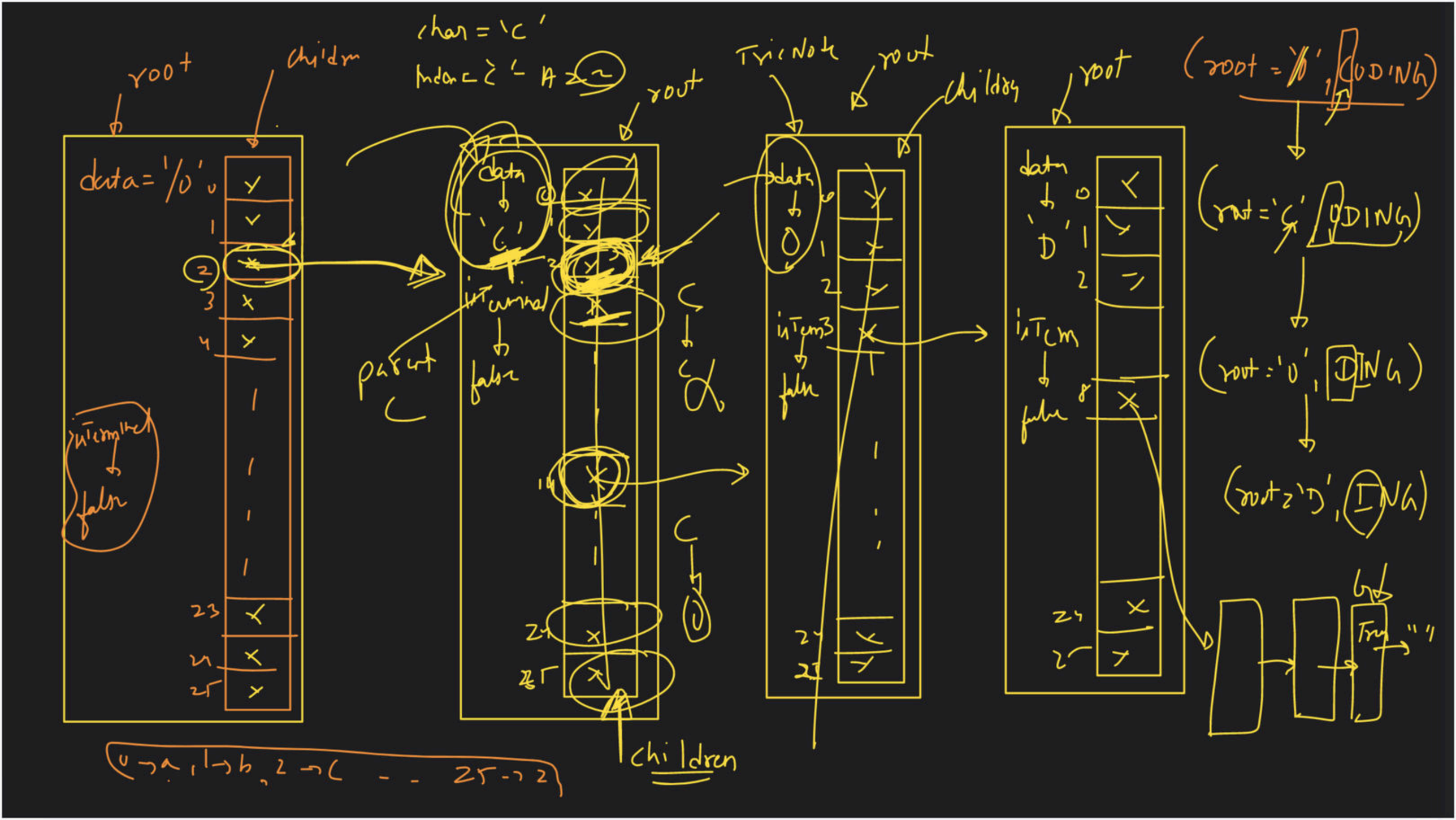

root
'\0'
root
C
root
O
root
D
E
root->children[index] != NULL
CODING
ODING
DING
ING
NG
G
root
I
root
N
root
G
Terminal


data = 10
a b c
0 1 2 3 — — — 25

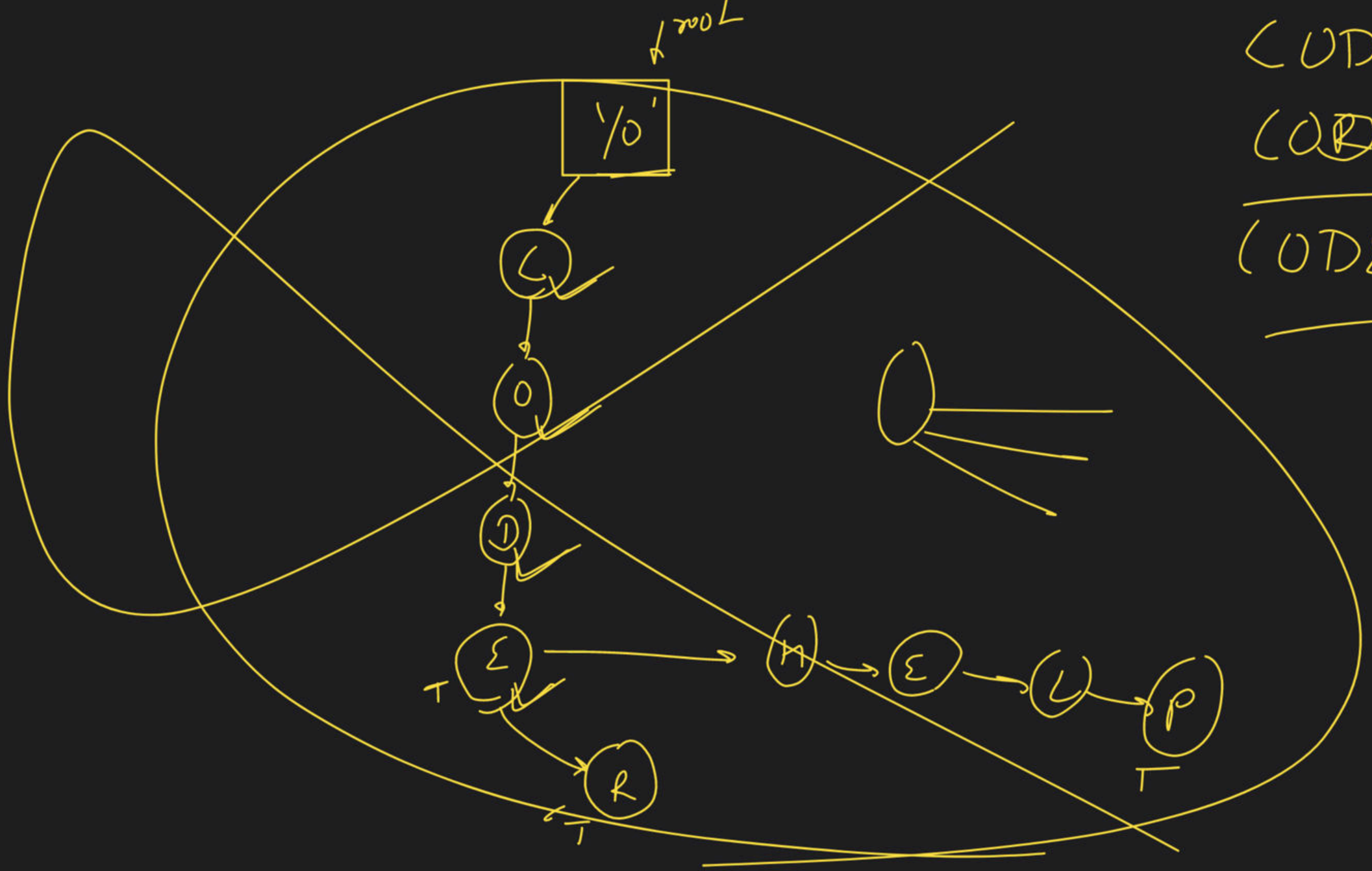

data = 'O'
0 1 2 3 25
data = 'C'
0 1 2 25
data = O
0 1 2 3 25
data = D
data = E

CODE


CODING
subtr(1)
ODING
DING
ING



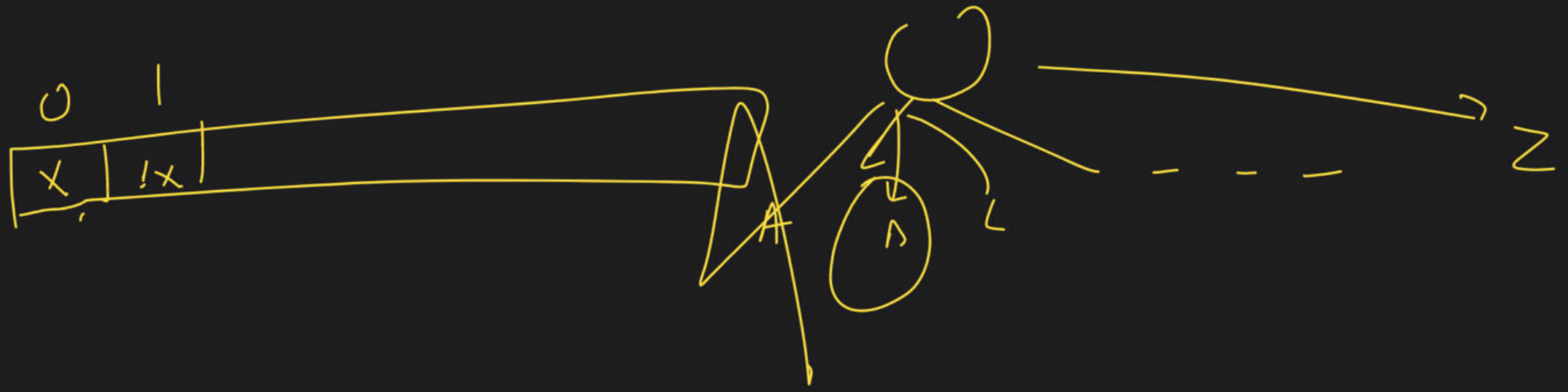
root
children
data = '/0'
0
1
2
3
4
23
24
25
interminal
false
char = 'C'
Index = 'C' - A
parent
C
data
'C'
interminal
false
C
C
C
children
TricNode
root
children
data
0
1
2
3
interm
false
24
25
root
data
'D'
0
1
2
interm
false
8
24
25
(root = '/0', CODING)
(root = 'C', ODING)
(root = '0', DING)
(root = 'D', ING)
Tree
0 → a, 1 → b, 2 → c - - 25 → z



CODE

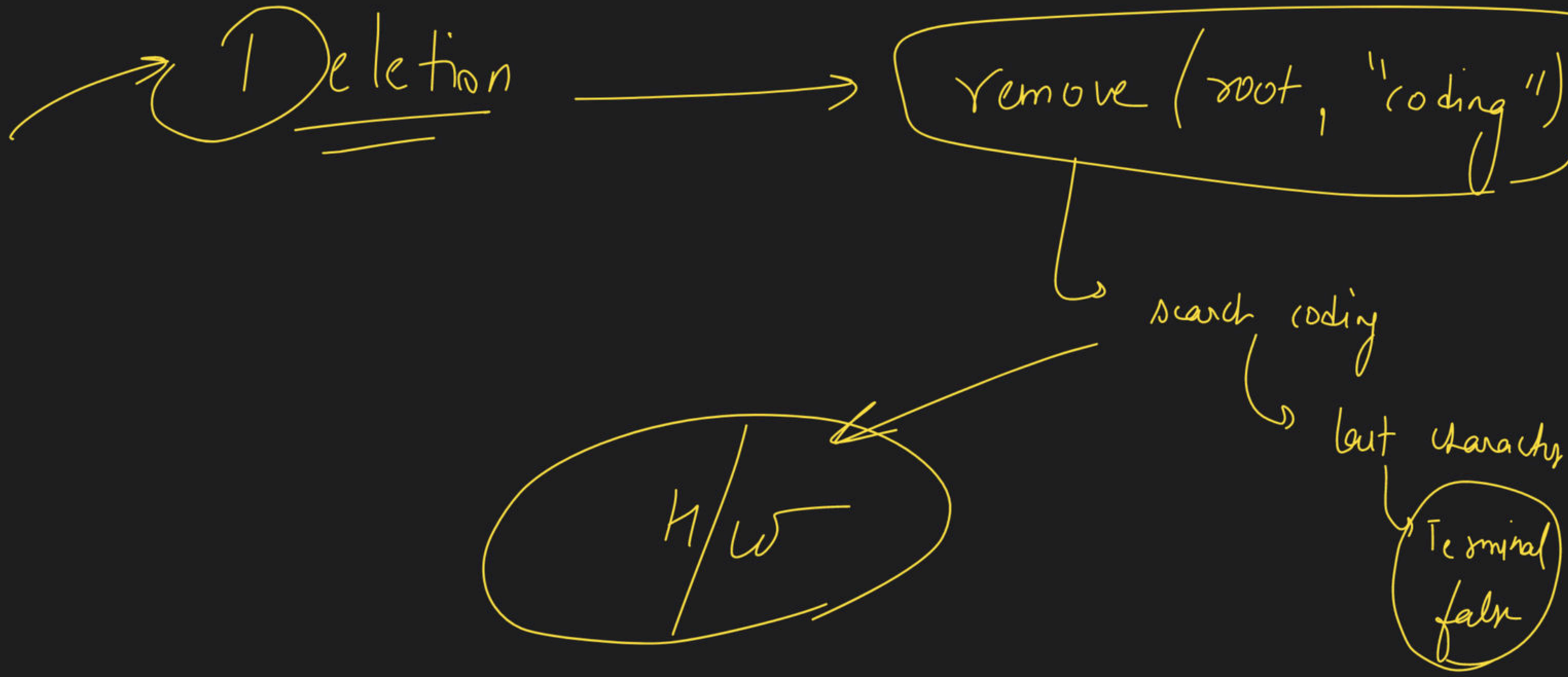
CODER

CODEMCLP


0
1
x
!x
z

W. Layer = L

T.C → O(L)


Deletion
remove(root, "coding")
search coding
but Hierarchy
Terminal
false
H/W