Maps & Sets

Part – 3

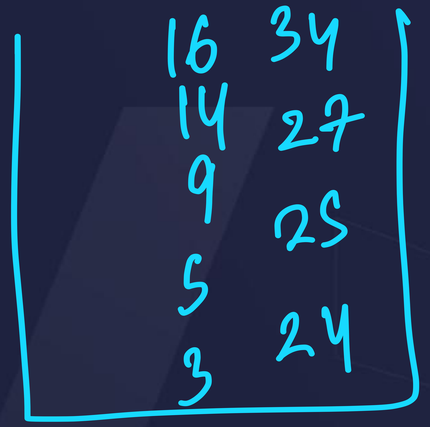
Raghav Garg

Ques: Subarray Sum equals K [Leetcode - 560]

arr = { 3, 2, 4, 5, 2, 8, 1, 2, 7 } K = 9

pre = { 3, 5, 9, 14, 16, 24, 25, 27, 34 }

count = 01 2 3 4



Set

Ques: Subarray Sum equals K [Leetcode - 560]

arr = {-1, -1, 1} k = 0

↳ pre = {-1, -2, -1}

Count = 0

-2-0

-1-k

-1-0 = -1

Ques: Subarray Sum equals K [Leetcode - 560]

arr = {1, -1, 0 3

pre = {1, 0, 0 3

k = 0

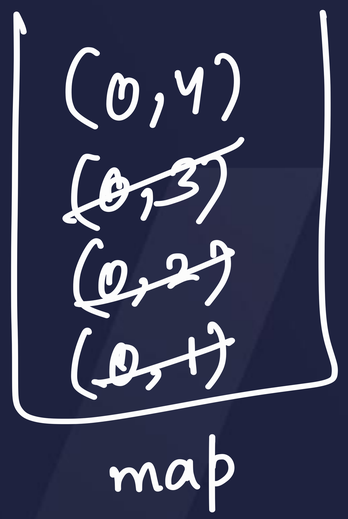
Count = 0 1 2 3

Ques: Subarray Sum equals K [Leetcode - 560]

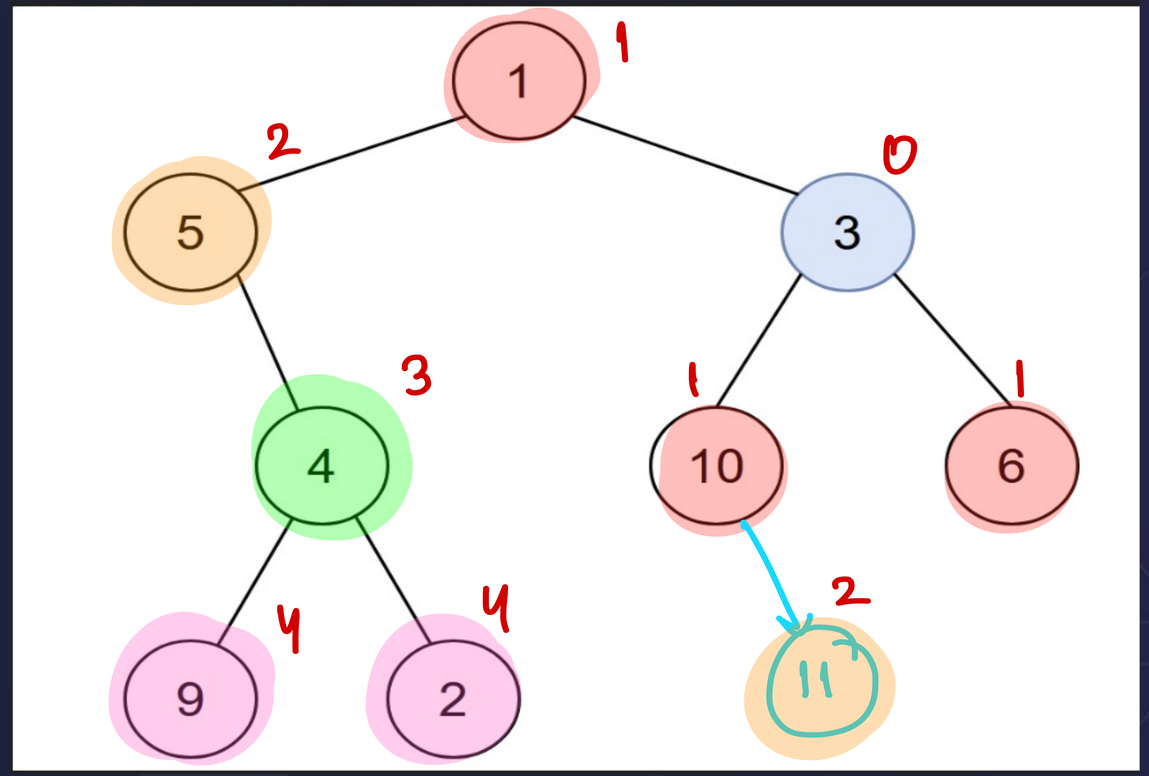
arr = {0, 0, 0, 0} K = 0

pre = {0, 0, 0, 0}

c = 0 1 2 3 4 6 7 10



Ques: Amount of Time for Binary Tree to be Infected [Leetcode - 2385]



start = 3

at time = 0 3

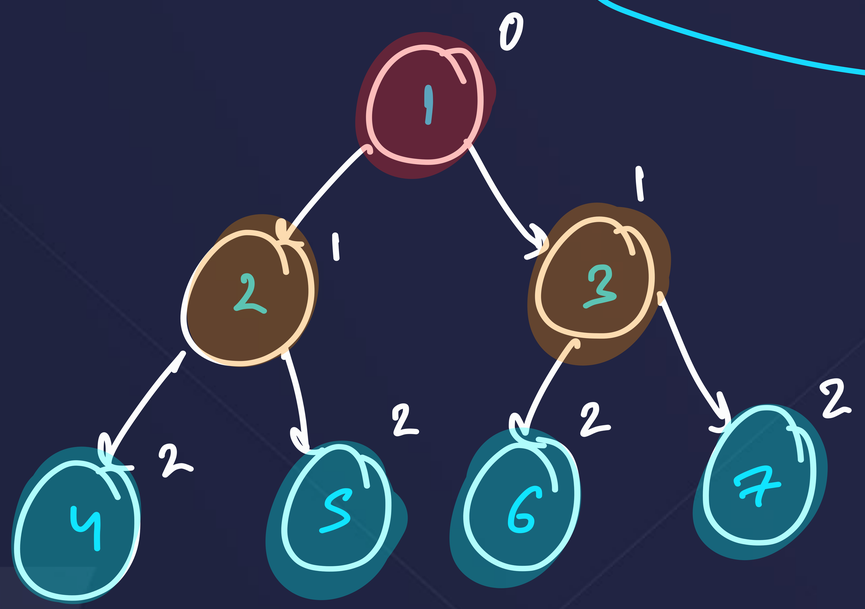
time = 1 1, 10, 6

time = 2 5, 11

time = 3 4

time = 4 9, 2

Ques: Amount of Time for Binary Tree to be Infected [Leetcode - 2385]

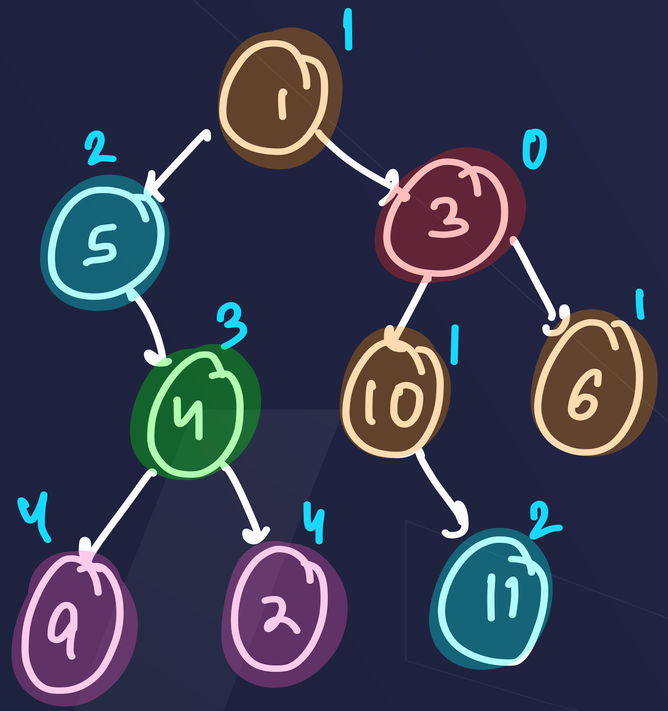


level - wise infection

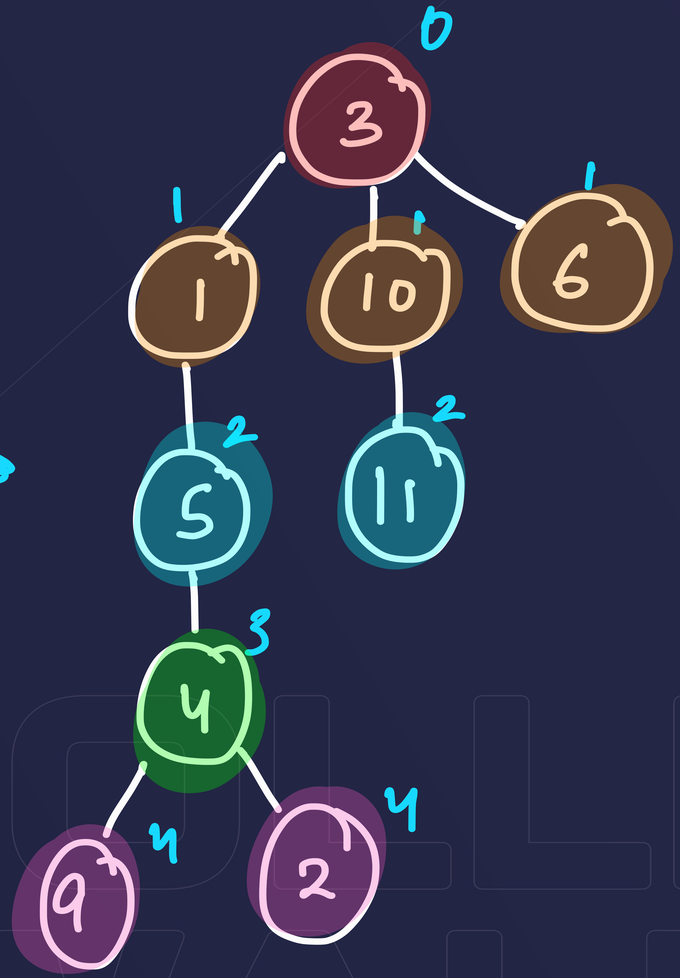
→ Is basically the (no. of levels-1) in the tree from the perspective of the given infected node

BFS : Breadth first Search → 'Queue'

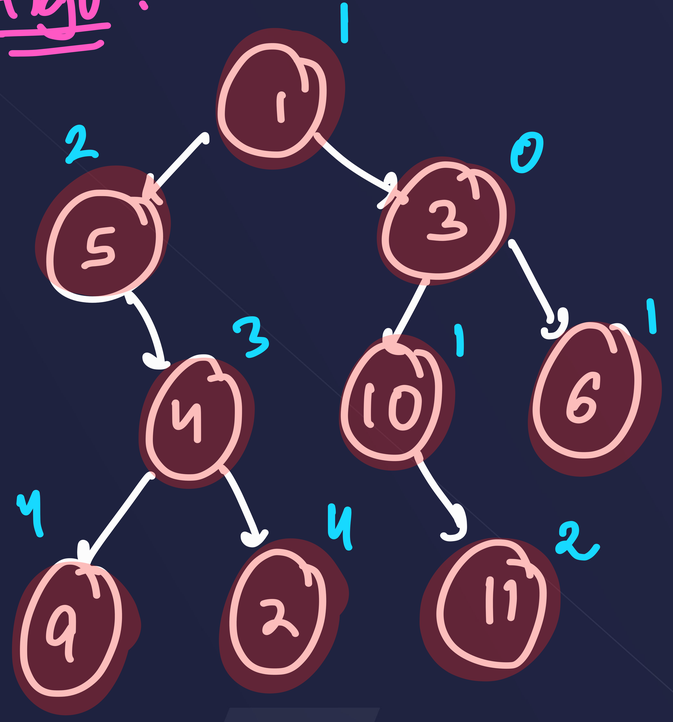
Level Wise



I have bent the tree



Algo :



(11,10)
(6,3)
(10,3)
(2,4)
(9,4)
(4,5)
(3,1)
(5,1)

parent

2
9
4
5
11
1
6
10
3

isInfected

Queue < pair < Node, int >> q

level

f b

front = (2, 4)

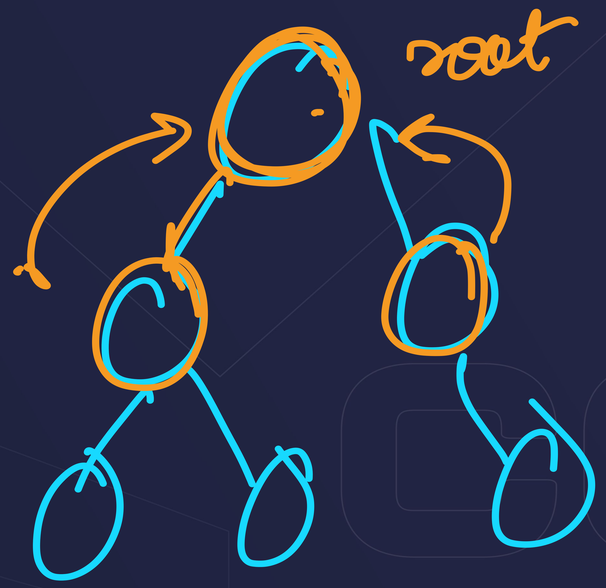
unmap < Node, Node > parent;

child parent

unset < Node > isInfected;

Step-1 : Find the node with given value 'start'

Step-2 : Mark the parent nodes



Ques: Group Anagrams [Leetcode - 49]

arr = { eat, tea, tan, ate, nat, bat } → n elements

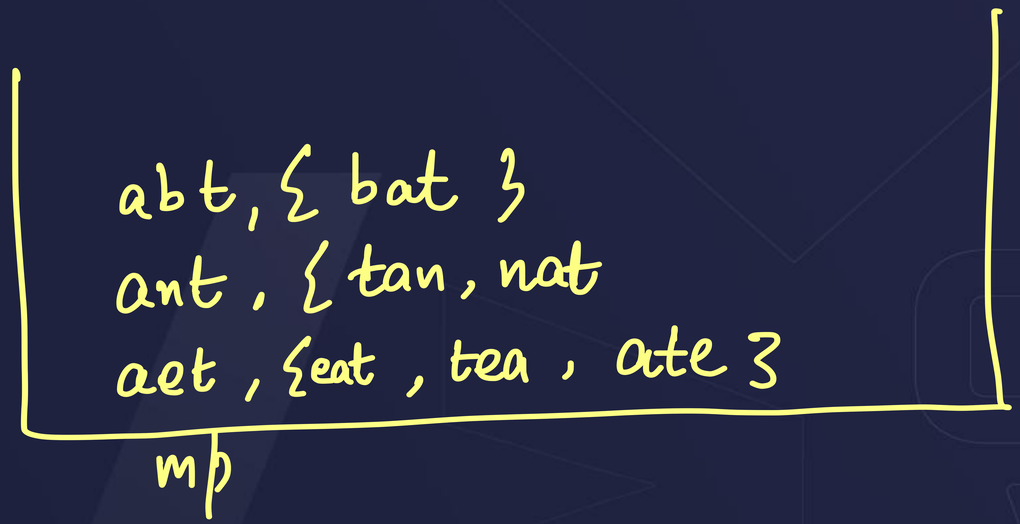
↓

K

→ KlogK

→ T.C. = O(n · KlogK)

S.C. = O(n*K)



un_map< string, vector <string> > mp;

Ques: Determine if Two Strings are Close [Leetcode - 1657]

Ques: Determine if Two Strings are Close [Leetcode - 1657]

Str1 = c a b b b a

Str2 = a b b c c c

c → 1

a → 2

b → 3

a → 1

b → 2

c → 3

Swap2(c, a)

a c b b b c

Swap (b, c)

⇒ a b c c c b

a b c c c b

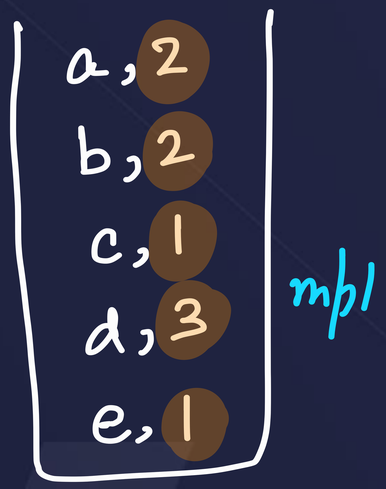
a b c c b c

a b c b c c

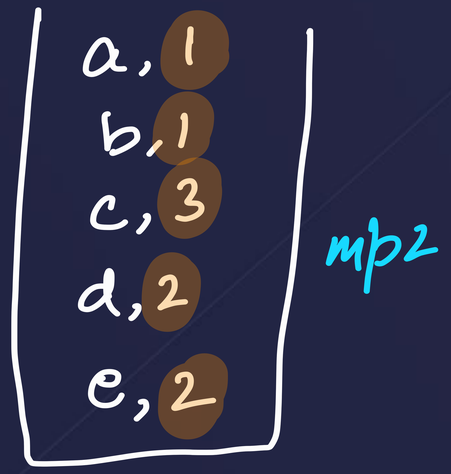
a b b c c c

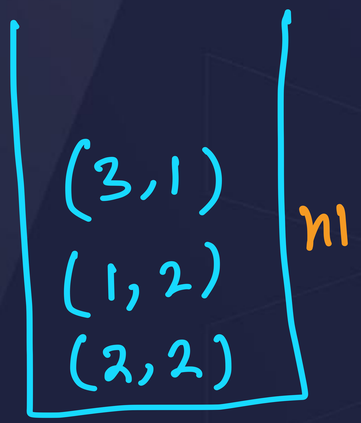
Ques: Determine if Two Strings are Close [Leetcode - 1657]

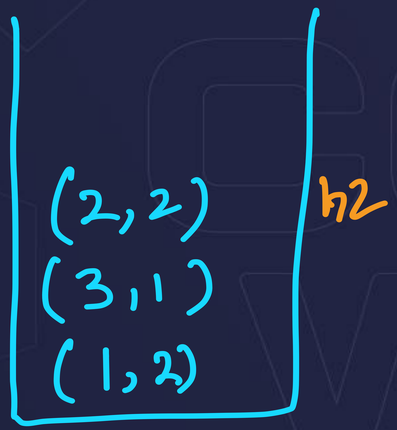
a a b b c d d d e



e e d d c c c a b







Ques: Check if Array Pairs are Divisible by K [Leetcode - 1497]

{1, 2, 3, 4, 5, 10, 6, 7, 8, 9} K = 5

(1,4) (2,3) (6,9) (7,8) ,(5,10)

or

(1,9) (2,8) (3,7) (4,6) (5,10)

#Hint : Use % operator first

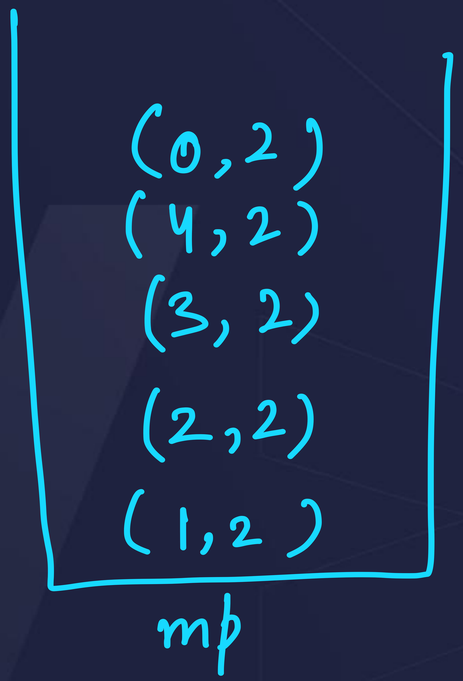
Ques: Check if Array Pairs are Divisible by K [Leetcode - 1497]

arr = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

K = 5

↳ {1, 2, 3, 4, 0, 1, 2, 3, 4, 0}

ele % K



Ques: Check if Array Pairs are Divisible by K [Leetcode - 1497]

arr = {-1, 1, -2, 2, -3, 3, -4, 4} k = 3

↳ {2, 1, 1, 2, 0, 0, 2, 1}

⇒ $ele = [(ele \% K) + K] \% K$

most important

$-a \% b = -[a \% b]$

theory

Collisions & all

isse pehle 3 heaps ke lecture

THANK YOU!

```
priority_queue<int> pq;
```