

## Combination Sum I

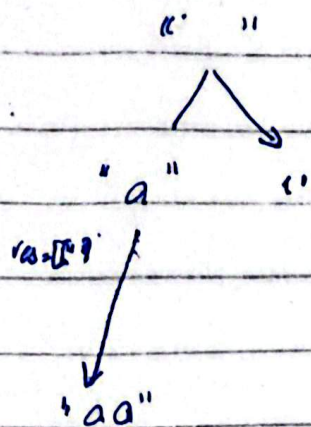
→ when ever there is a sub-sequence or combination of sub-sequence problem always jump to recursions.

→ to pick element from an array and then make same combination we always approach pick and no pick approach.

arr = [2, 3, 6, 7], target = 7

first combination = [2, 2, 3]

→ So we have to decide if we are picking or not picking the element.



$res = ['aa']$

$\vdots$

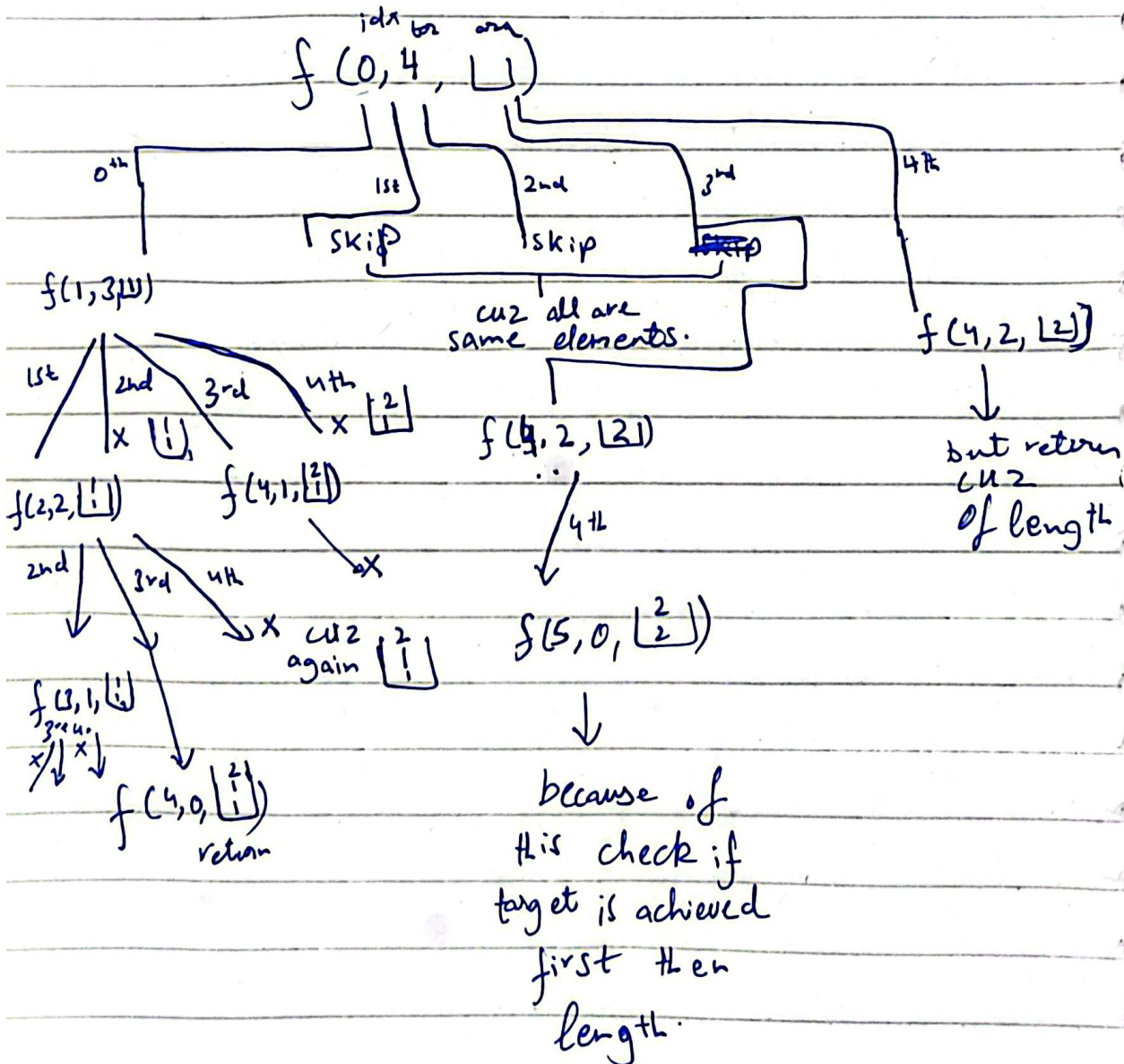
$res = ['aaa']$

## Combination of Sum II

(i) first sort the array:

arr = [1, 1, 2, 2, 2]      target = 4

in this we can not repeat the index





Wherever we are at 0 we try from 0 - n

When we are at 1 we try from 1 - n

→ that's why on every recursion we are looping on every stage.

and start of that loop is increasing on every stage.

and then remove on every step what is added.

→ also if  $arr[i] > \text{target}$  is greater than target we break and return cuz arr is sorted and all the other will be greater.

→ If the last one is picked and it's same like in CS2 problem then we should just skip cuz it can make that same subset again.

$[1, 2, 3]$

0th

1st

2nd

$f(0, [0], [1])$

$f(1, [0], [1])$

$f(2, [0], [1])$

$f(3, [0], [1])$

$f(3, [0], [2])$

$res = [1, 2, 3]$