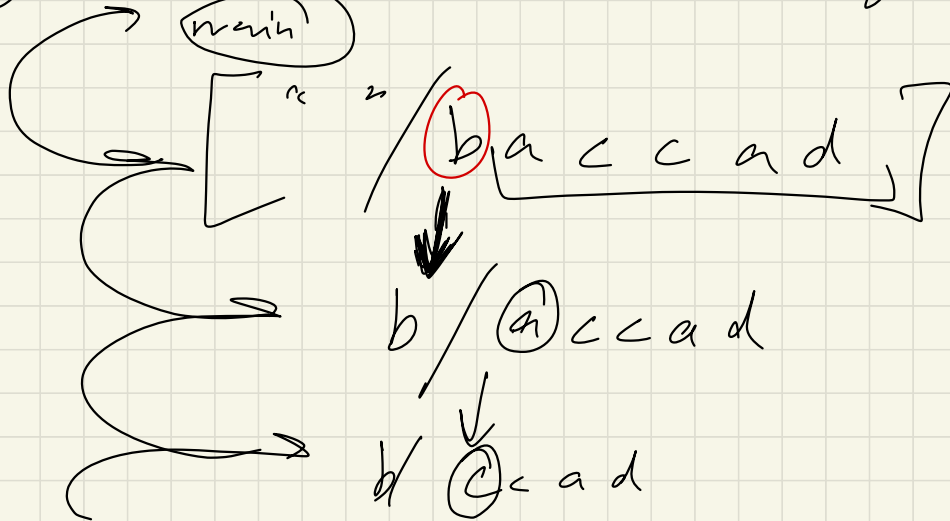


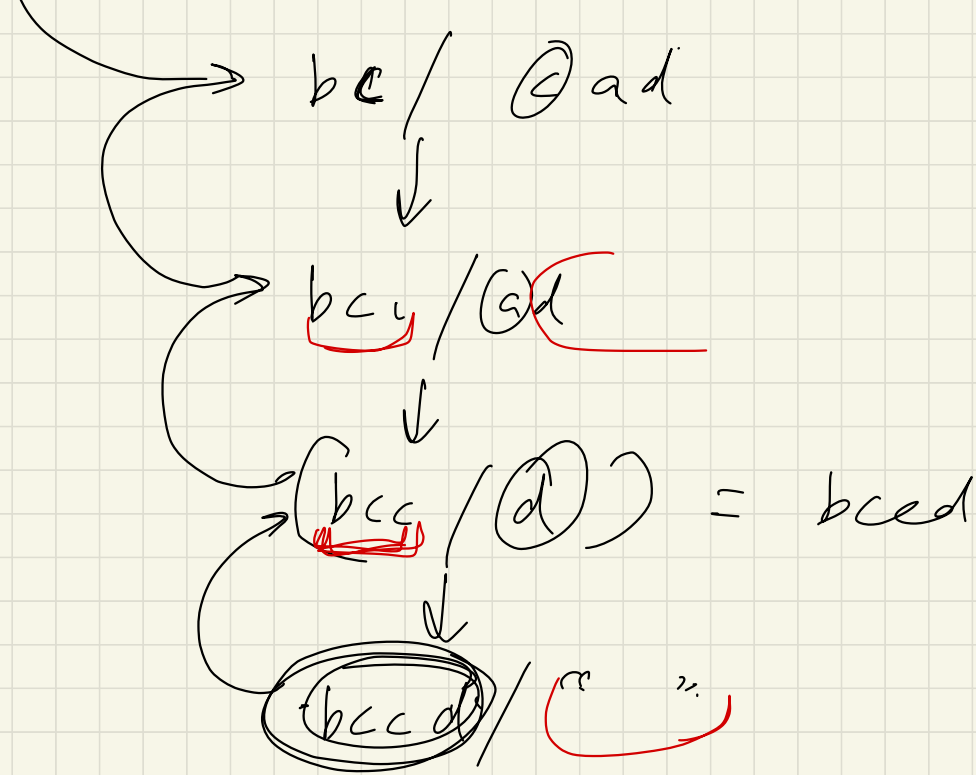

Basic Questions:

Q: str = baccad ans = bccad

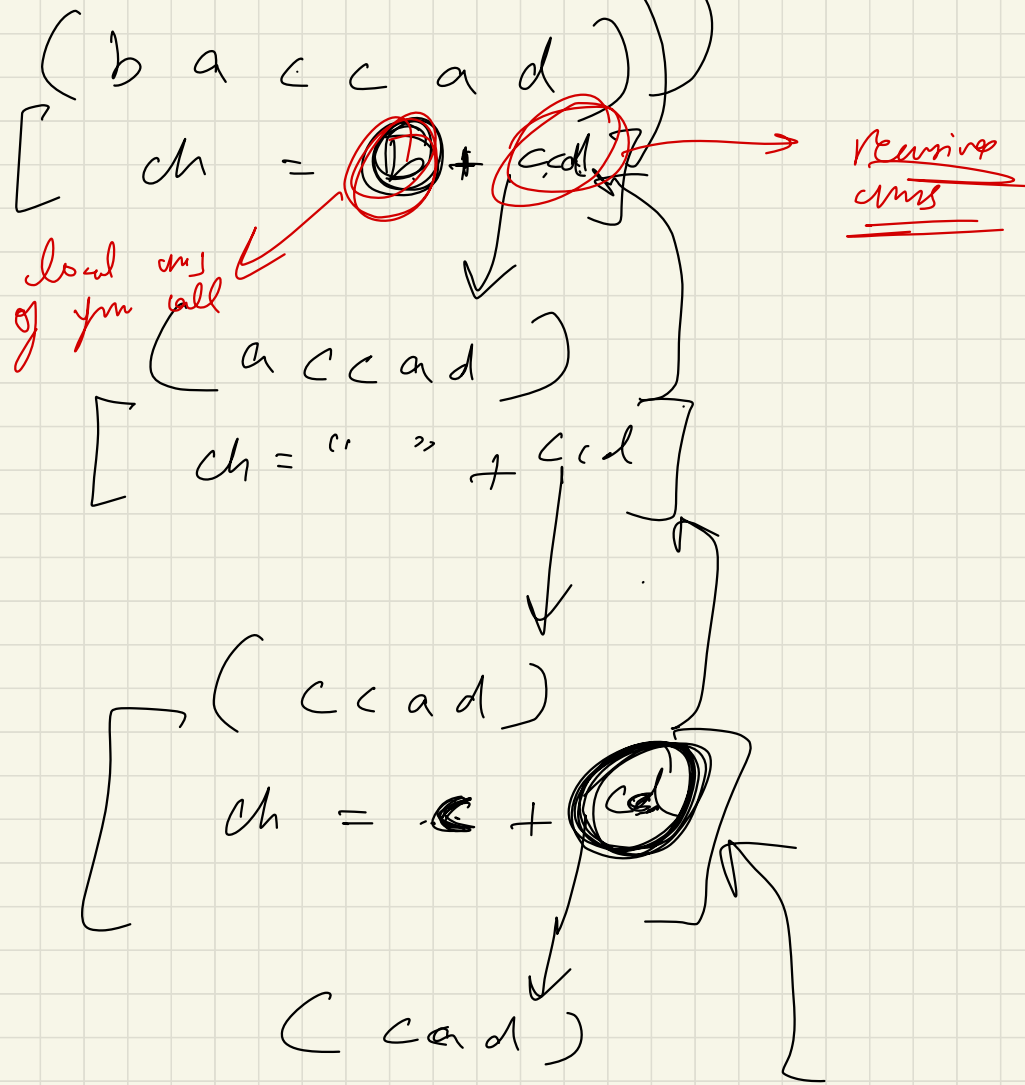
(1) Pass the ans string as argument \rightarrow can be passed to function

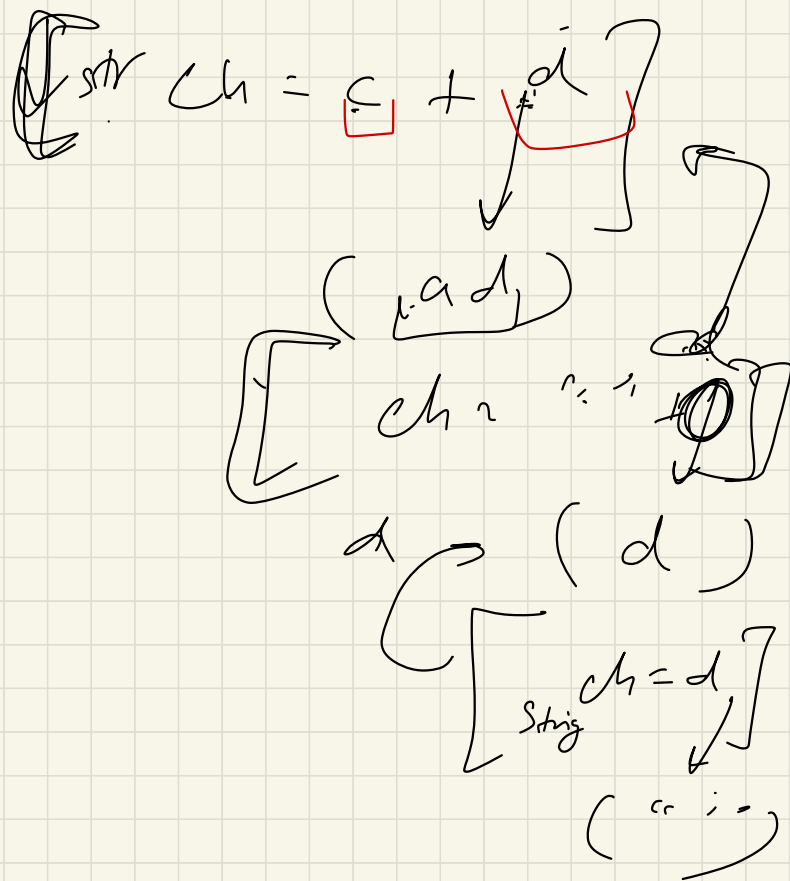
(2) Create the ans variable in function body \rightarrow new





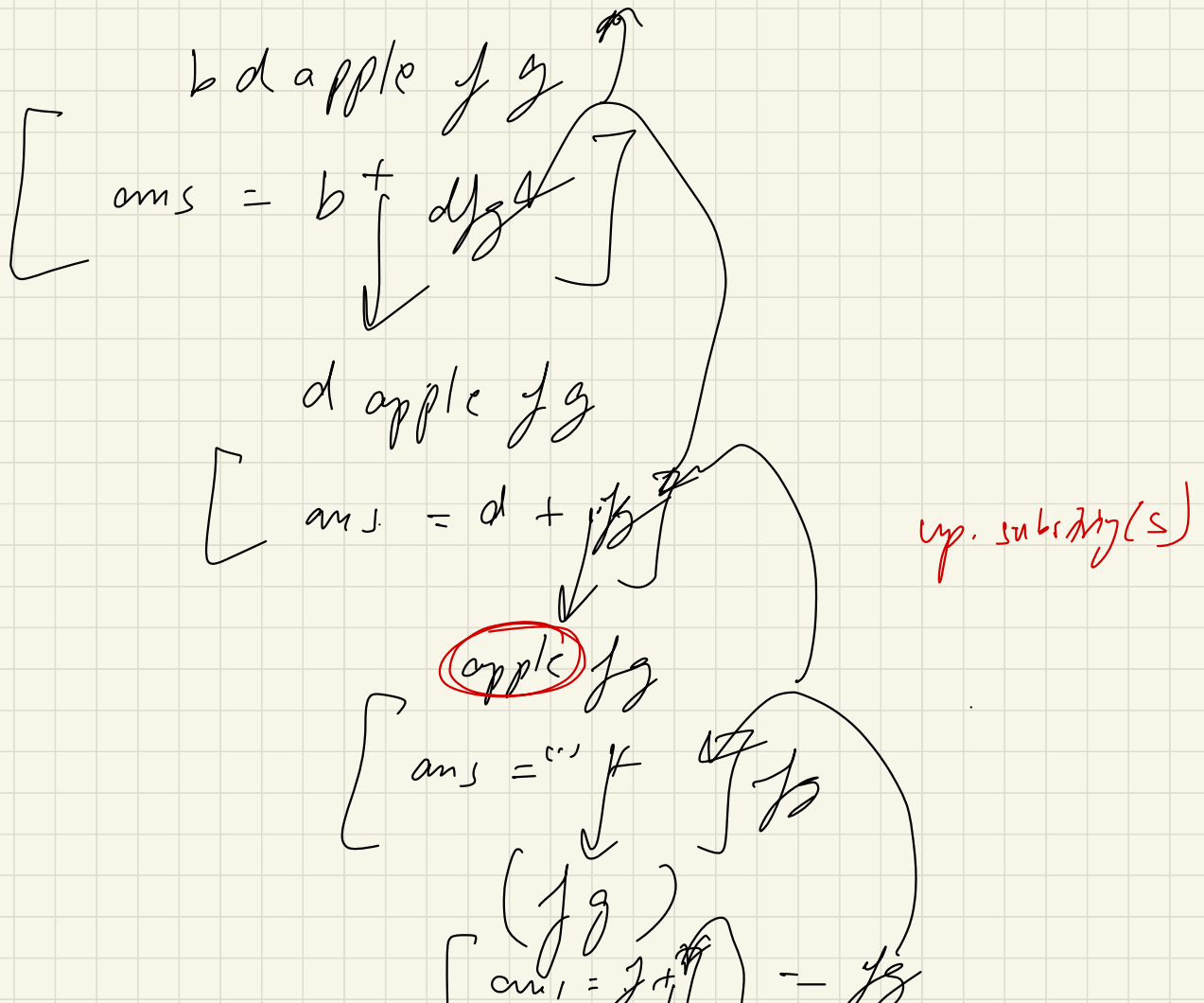
manit

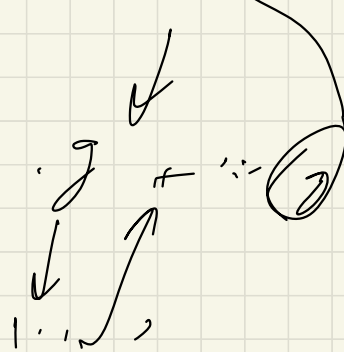




bdys

Q:





Subsets:

★ Permutations & combinations

★ Subsets \rightarrow Non-adjacent collection.

$$[3, 5, 9] \rightarrow \left[\begin{array}{l} [3], [3, 5], [3, 9], \\ [3, 5, 9], [5, 9], [5], [9] \end{array} \right]$$

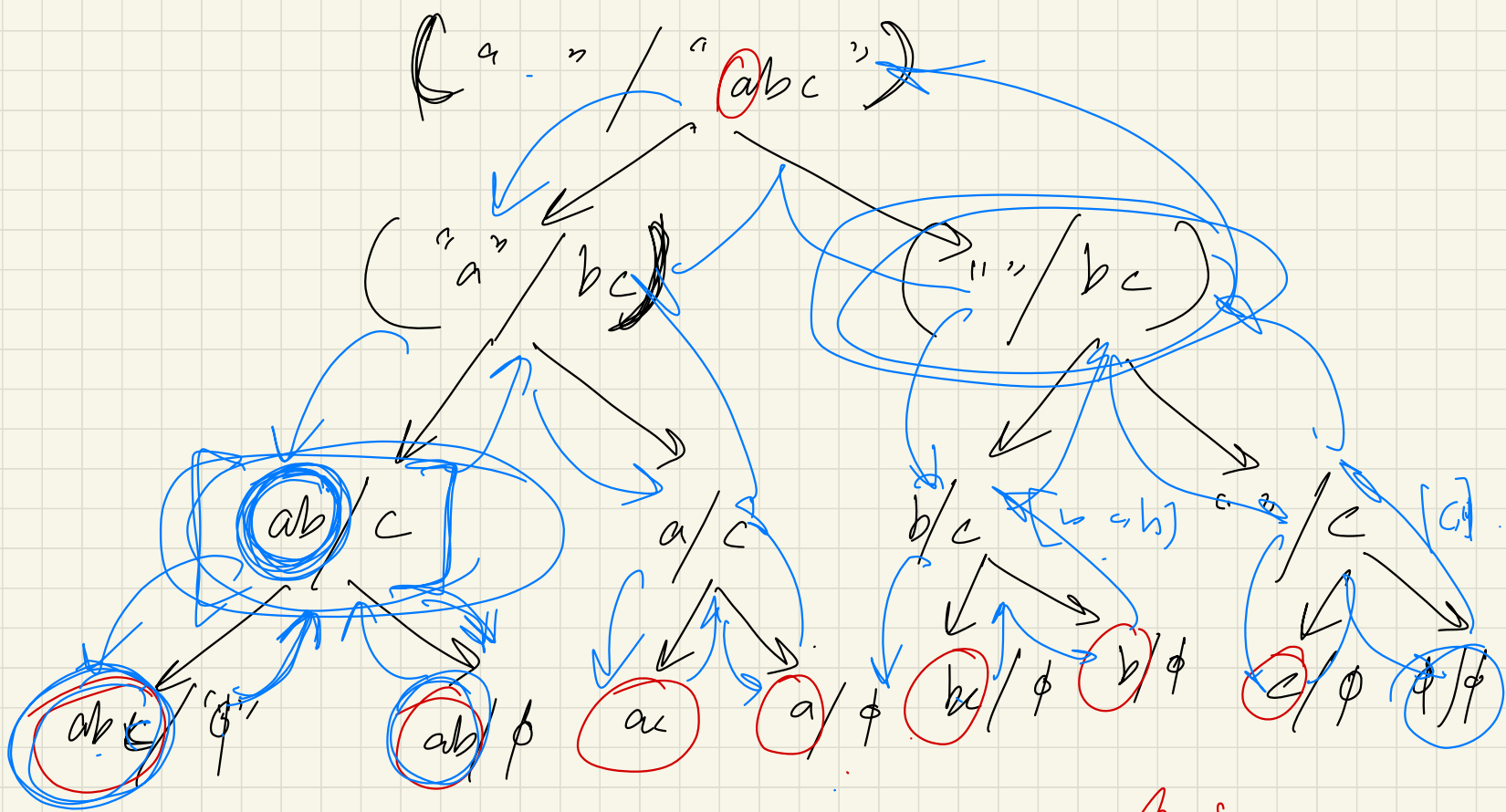
* Recursion & Iteration

str = "abc"

ans = ["a", "b", "c", "ab", "ac", "bc",
"abc"]

WVI

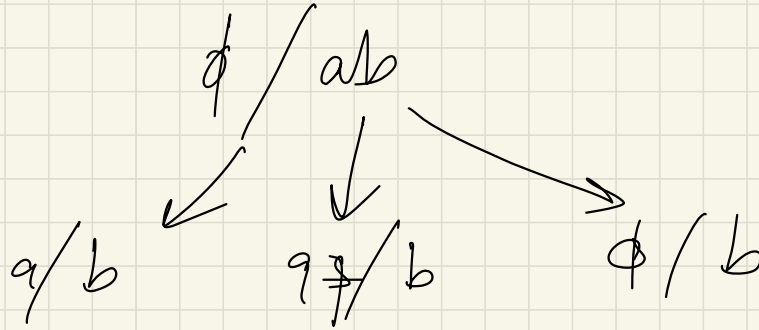
* This pattern of taking some elements & removing some is known as this subset pattern.



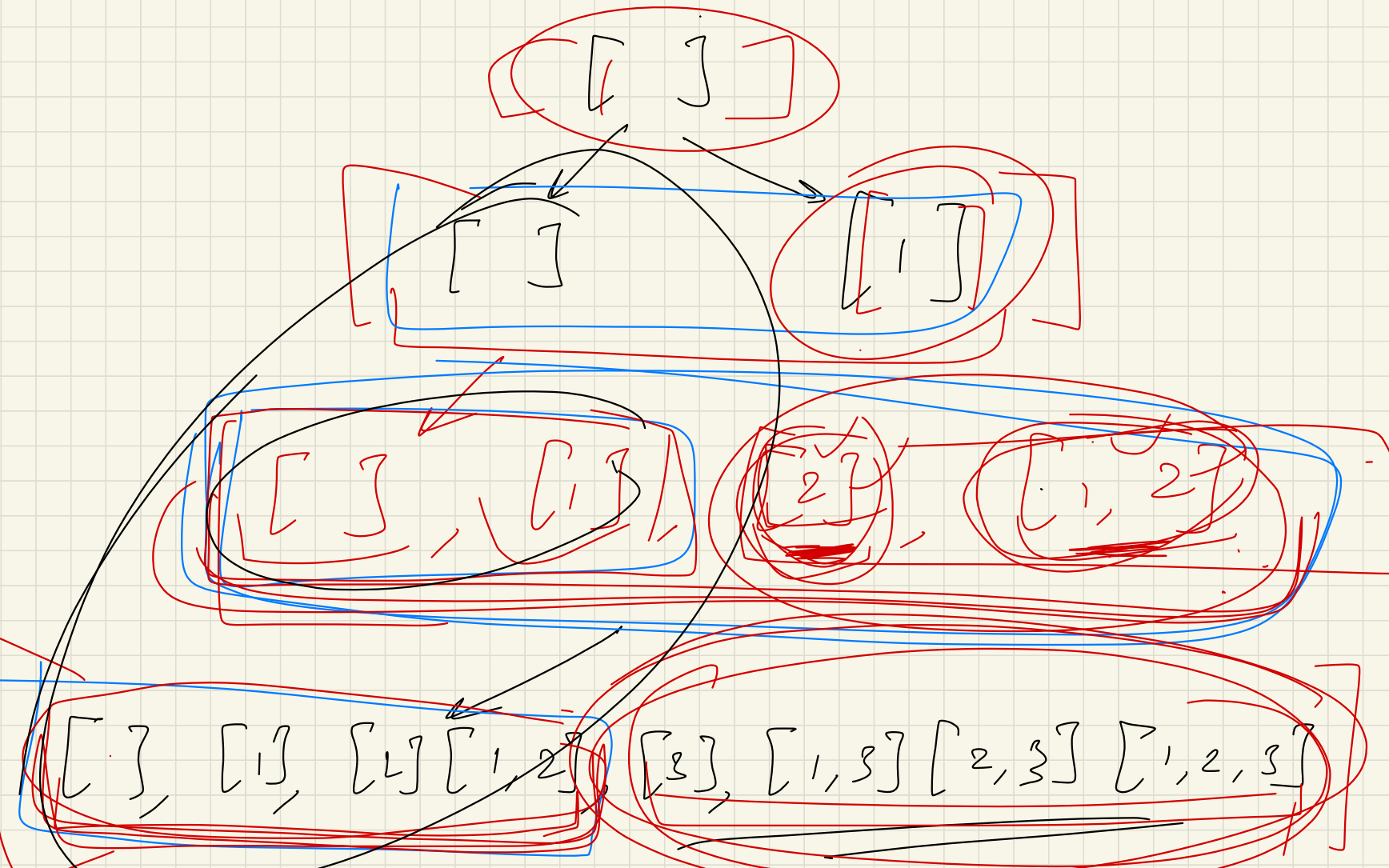
Ans

abc, ab, ac, a, \dots

$str = "ab"$



$arr = [1, 2, 3]$



$[[], [], [], [] \dots]$ Ans

Time complexity

$$O(N \times 2^N)$$

no. of subsets.

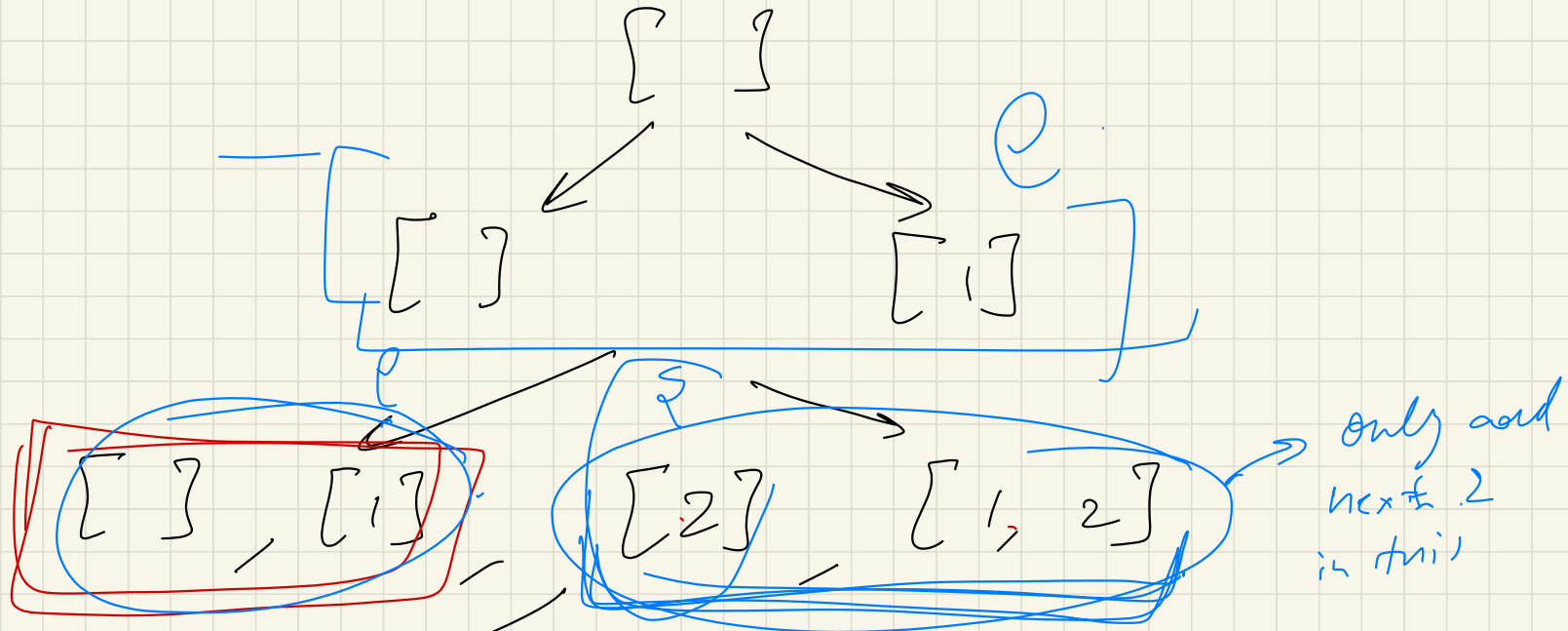
Space:

$$O(2^N \times N)$$

Total subsets

Space taken
by each subset
= $O(N)$

curr = ①, ②, 2



only add
next 2
in trail

$[]$, $[1]$, $[2]$, $[1, 2]$, $[2]$, $[1, 2]$, $[2, 2]$, $[1, 2, 2]$

★ When you find a duplicate element, only add it to the newly created subset of previous step.

★ Because of above points duplicates have to be together. Sort the array.