Print All Permutations Of A String Iteratively Logic
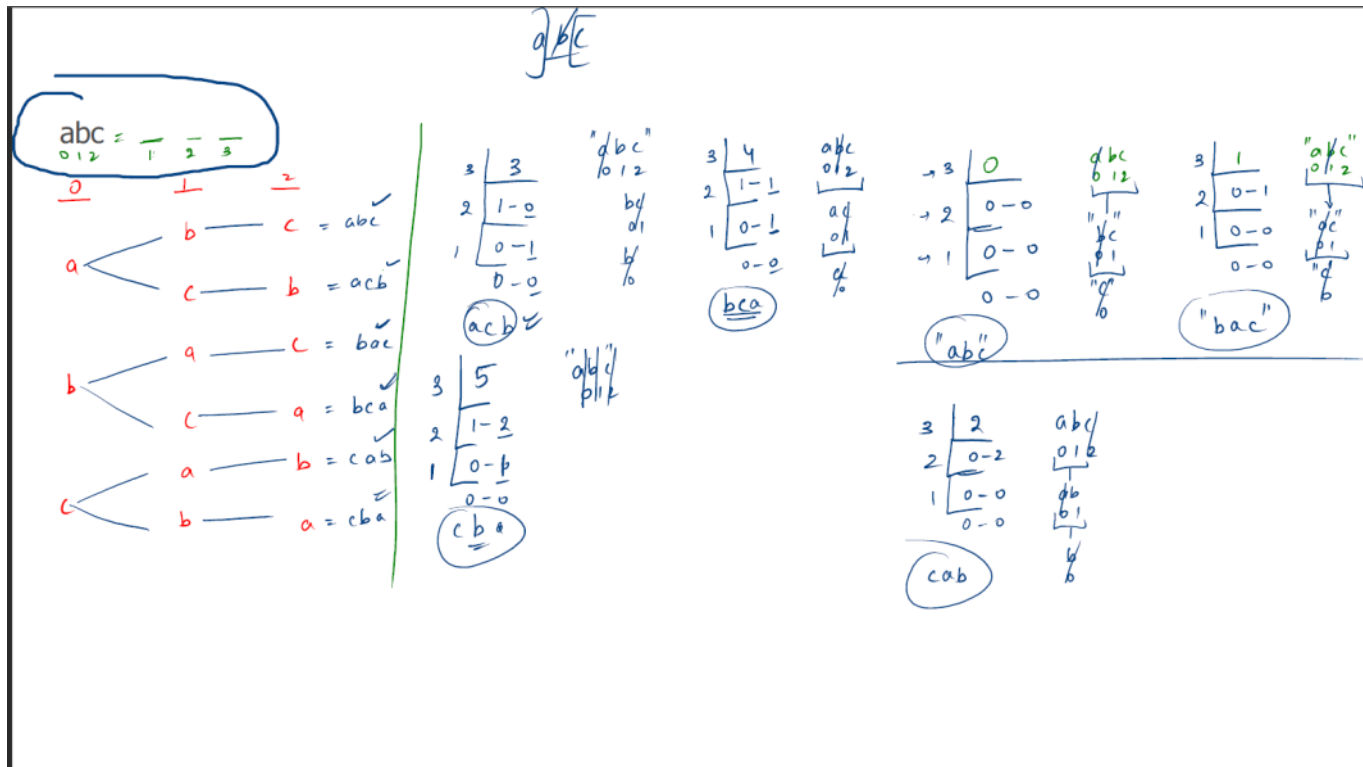

Let str ki length hai = n
To logic ye hai ki hum 0 se lekar n! - 1 tak ek ek krke num pe ek process krte hai

Process :
Hum ek no. lete hai aur us no. ko hum str.length() se divide krna start krte hai
Aur jo rem aata hai us index wale char ko permutation wali string me add kr lete hai
Aur us char ko string se remove kr dete hai
Aur jo quotient aaya tha wo agle baar ke division me dividend yani apna no. bn jaata hai aur divisior 1 se decrease ho jaata hai

Example :

Lets string is abc
To str.length is 3.
Total permutation is 3! - 1 = 5
To process hogi 0 se 5 pe ek ek krke
 humne ek no. liya lets say 4
Ab is no ko pahle 3 se divide kiya to rem aya 1 aur quotient 1
Ab 1 index wala char yani b permutation string me daal diya
Aur divisior ko decrease kr diya
To ab permutation string = b
    no./ dividend = 1
    divisior = 2
    string = ac
Ab firse process ki to rem aya 1 wo 1 index wala char permString me daal diya
To ab permutation string = bc
    no./ dividend = 0
    divisior = 1
    string = ac
Ab firse process ki to rem aya 0 0 index wala char permString me daal diya
To ab permutation string = bca
    no./ dividend = 0
    divisior = 0

string = ""

Is trh hume ek permutation mil gya