Longest Common Substring

In LCS → longest common subsequence

we do

matching

$dp[i][j] = 1 + dp[i-1][j-1]$

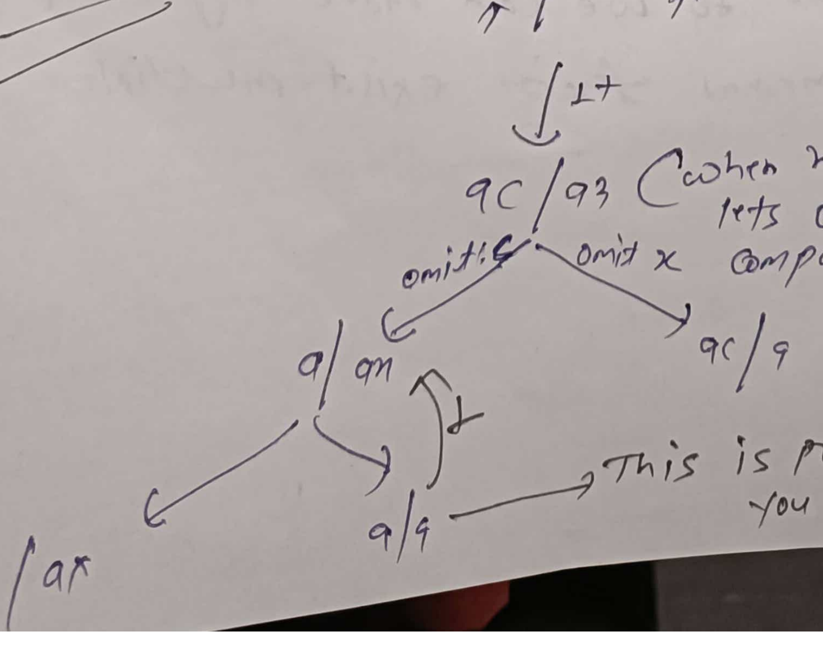
not matching

$dp[i][j] = max(dp[i-1][j], dp[i][j-1])$

why this not matching work here and modification done is way that

$dp[i][j] = 0$ when not matching

why



(when not matching. we do lets omit one portection & compare)

This is problem bcz ~~when~~ you omiting that & still comparing. That means when not match happened you omit & still comparing so not matching of LCS (longest common subsequence) not works.

You can't omit you need to be consecutive.

e.x.

"abcd" "abzd"

j →

i ↓

		a	b	z	d
	0	1	2	3	4
	0	0	0	0	0	0
a	1	0	1	0	0	0
b	2	0	0	1+1 2	0	0
c	3	0	0	0	0	0
d	4	0	0	0	0	1

matching if(str1[i] ==str2[j])
dP[i][j]= 1+dP[i-1][j-1];

not matching else dP[i][j]=0