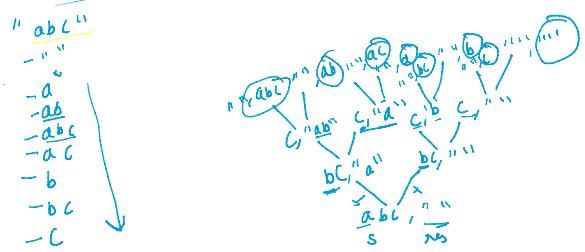
2-March

02 March 2022 19:06

LCS:- Longest Common Subsequence

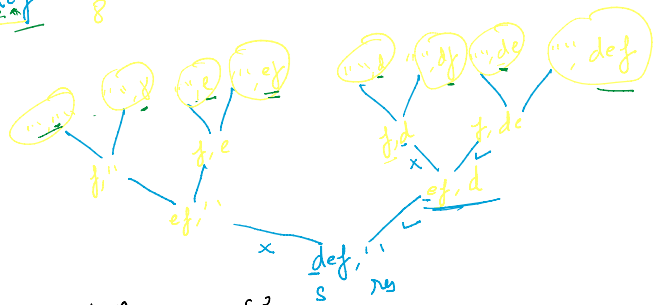
https://leetcode.com/problems/longest-common-subsequence/

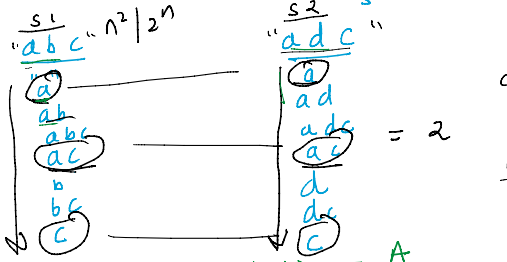


H.W

T.C => 2^n | n = length of given string

"def"





= 2

ac

abcdefghijkc

abcdef n^2

ss("abc") = (a)(ss(bc)) — A

+

"" (ss(bc)) — B

ss("adc") = (a)(ss(dc)) — C

+

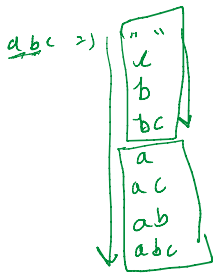
("") (ss(dc)) — D

A = (curr)(ss(s1 rem))

B = ("")(ss(s1 rem))

C = (curr)(ss(s2 rem))

D = ("")(ss(s2 rem))



A = (curr)(ss(s1 rem))

B = ("")(ss(s1 rem))

C = (curr)(ss(s2 rem))

D = ("")(ss(s2 rem))

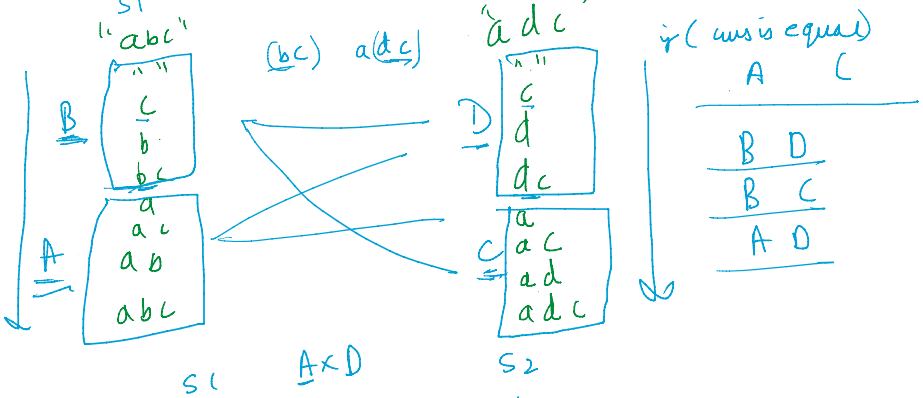
s1 "abc"

s2 "adc"

(bc) a(dc)

if (curr is equal)

A	C
B	D
B	C
A	D



A x D

s1

s2

S1 A × D S2

adc eabc

S1 B × C S2

eabc adc

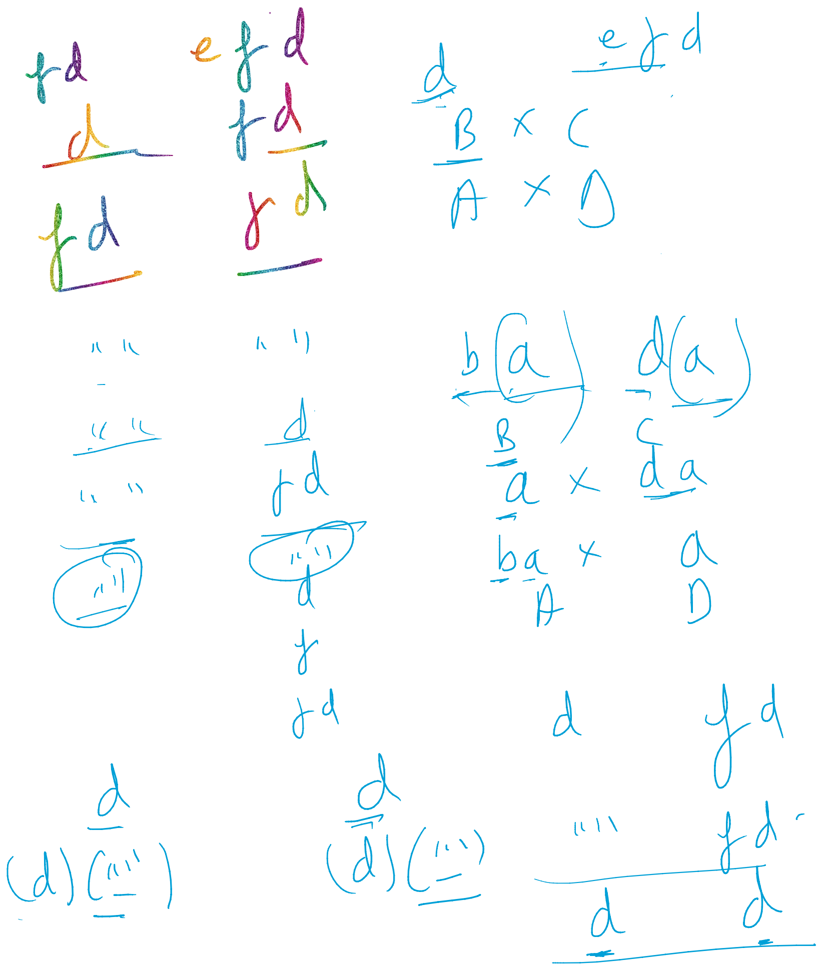
A = (curr) (SS(S1 rem))
B = ("") (SS(S1 rem))

C = (curr) (SS(S2 rem))
D = ("") (SS(S2 rem))

		0 a	1 e	2 f	3 d	4 ""
0	e	3	3	2	1	0
1	c	2	2	2	1	0
2	f	2	2	2	1	0
3	d	1	1	1	1	0
4	""	0	0	0	0	0

fd fd d fd ( )

B = ("") SS(S1 rem) = "…"
C = (curr) SS(S2 rem



Coin Change :-

arr [2, 1, 3], tar = 5

5
- 2, 2, 1
- 2, 3
- 1, 1, 1, 1, 1
- 1, 1, 1, 2
- 1, 1, 3