Edit distance

word1 = "ab xyz"

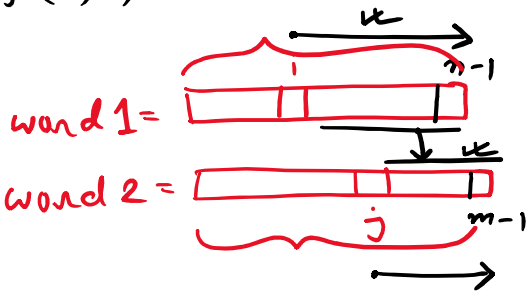
word2 = "a b x y z"

6

1 + 3 = 4

Defination

f(i,j) = min operations to convert substr(word1, i, N) to substr(word2, j, M)



f(0,0)

Transition

word1 = p a x b y

word2 = p q r y z

① Insert
② Replace
③ Delete

① word1[i] == word2[j]

↳ f(i,j) = f(i+1, j+1)

② word1[i] != word2[j]

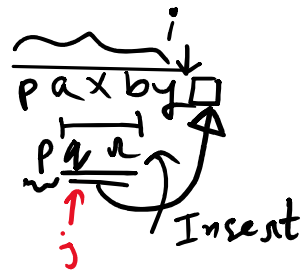
$$f(i,j) = \min \begin{cases} 1 + f(i, j+1) \\ 1 + f(i+1, j+1) \\ 1 + f(i+1, j) \end{cases}$$

Base Case

f(i, M) = N - i → Deletes

f(N, j) = M - j → Inserts

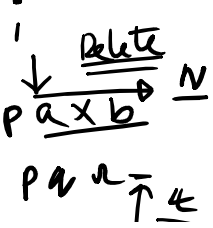
Insert ↳ word1 = p a x b y, word2 = p q r



N = |word1|

M = |word2|

Delete ↳ word1 = p a x b, word2 = p q r



Delete word 2 = p a r

$f(L, R)$ = True/False → 0/1

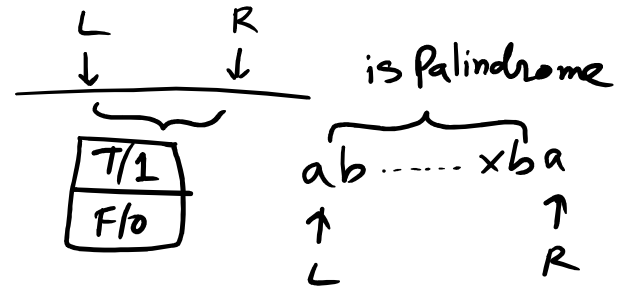
① $S[L] = S[R]$ and $f(L+1, R-1)$

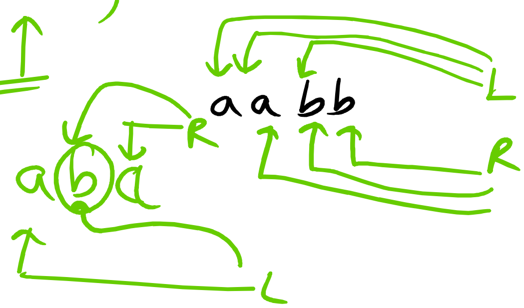
② False

MAX(R−L+1)

L ≥ R ⟶ True

(L, R) ⟶ 0/1





CV → Review

Company → Apply, LinkedIn

6 − 10 Months

Leetcode / P.S

Project → (1−2) Github

100 → 95 → 1 Month

100 → 95 → 6,7 Month

10 ↑ 5 ↑

Thesis

Problem Solving

Projects ⟶ (1 − 2)

OOP

Database

Networking and OS