

پیشینه زیر صندلی

LCS

A B C F D A B

C M K F D B C A R

i

C_{ij}

j

seq1: $\overset{i}{\rightarrow}$ B D C A B A

seq2: \downarrow A B C B D A B

C_{ij}

B D A B

B C B A

$\boxed{B C A B}$

		B	D	C	A	B	A
A	0	0	0	0	1	0	1
B	0	1	1	1	1	2	2
C	0	1	1	2	2	2	2
B	0	1	1	2	2	3	3
D	0	1	2	2	2	3	3
A	0	1	2	2	3	3	4
B	0	1	2	2	3	4	4

$C_{ij} \rightarrow C_{i-1,j-1} + 1$
 $C_{ij} \rightarrow \max(C_{i-1,j}, C_{i,j-1})$

def LCS (A, B) :

$O(n^m)$

$$C = \text{zeros}(n+1, m+1)$$

for $i = 1 \rightarrow n$

for $j=1 \rightarrow m$

$j = 1 \rightarrow m$
 $i \leftarrow A[i][j] = B[i][j] \rightarrow c[i-1][j-1] + 1$
 $c[i][j] \leftarrow \begin{cases} \text{if } c[i-1][j] > c[i][j-1] \rightarrow c[i-1][j] \\ \text{else } c[i-1][j] < c[i][j-1] \rightarrow c[i][j-1] \end{cases}$

Greedy

حریصانه

گولہ پستی لری

def fractional knapsack (weights, prices, w)
k = 0 ; i = 1 ; p = 0

weights \leftarrow Quick-Sort \leftarrow prices / weights
prices \checkmark

Greedy

X = zeros(1, n)

while (k \neq w) :
{ if (k + w[i] \leq w)
 x[i] = 1 ; p = p + p[i]

else :

$O(n \log n)$

$$u[i] = \frac{w-k}{w[i]}$$

$$p = p + \frac{w-k}{w[i]} \times p[i]$$

i++

}

return

x, p