

FELIPE BRAZ

22.1.4036 Distância de edição

1) for $i=0,1,2 \dots m$:

$$E(i,0)=i;$$

for $j=1,2, \dots, n$:

$$E(0,j)=j;$$

for $i=1,2, \dots, m$:

for $j=1,2, \dots, n$:

$$E(i,j) = \min \{ E(i-1,j)+1, E(i,j-1)+1, E(i-1,j-1) + \text{diff}(i,j) \}$$

return $E(m,n)$

		A	L	G	O	R	I	T	M	O
	0	1	2	3	4	5	6	7	8	9
L	1	1	1	2	3	4	5	6	7	8
O	2	2	2	2	2	3	4	5	6	7
G	3	3	3	2	3	3	4	5	6	3
A	4	3	4	3	3	4	4	5	6	7
R	5	4	4	4	4	3	4	5	6	7
I	6	5	5	5	5	4	3	4	5	6
T	7	6	6	6	6	5	4	3	4	5
M	8	7	7	7	7	6	5	4	3	4
O	9	8	8	8	7	7	6	5	4	3

Distância = 3

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global MANTEM 0
global TROCA 1
global INSERE 2
global APAGA 3

function imprimeOperacoes(x[1..n], y[1..m], E[0..n,0..m])
    i = n
    j = m

    aux = max(n, m)
    operacoes = []*t

    while ((i != 0) and (j != 0)):
        if (E[i][j] == E[i-1][j-1] + diff(x[i-1], y[j-1])):
            if (x[i-1] != y[j-1]):
                operacoes[aux] = TROCA
            else:
                operacoes[aux] = MANTEM
            i = i - 1
            j = j - 1
        elif (E[i][j] == E[i][j-1] + 1):
            j = j - 1
            operacoes[aux] = INSERE
        elif (E[i][j] == E[i-1][j] + 1):
            i = i - 1
            operacoes[aux] = APAGA
        aux = aux - 1

    while (i != 0):
        operacoes[aux] = APAGA
        aux = aux - 1
        i = i - 1

    while (j != 0):
        operacoes[aux] = INSERE
        aux = aux - 1
        j = j - 1

    i = 1
    j = 1

    for k in range(1, max(n, m)):
        if (operacoes[k] == MANTEM):
            print("Mantém o caractere x[i]")
            i = i + 1
            j = j + 1
        elif (operacoes[k] == TROCA):
            print("Troca o caractere x[i] pelo y[j]")
            i = i + 1
            j = j + 1
        elif (operacoes[k] == INSERE):
            print("Insere o caractere y[j]")
            j = j + 1
        elif (operacoes[k] == APAGA):
            print("Remove o caractere x[i]")
            i = i + 1
```