1. minCostVC

MinCost[i, j] =

M[i, j], *if i = 0*.

+inf, *if j < 0 or j >= m*.

M[i, j] + min(MinCost[i - 1, j - 1], MinCost[i - 1, j],

MinCost[i, j + 1]), *if 1 < i < n*.

Run time: O(m * n) where n is the number of rows and m is the number of columns.

2. stringAlignment

AlignCost[i, j] =

4 * i, *if j = 0*.

+inf, *if i = 0*.

AlignCost[i - 1, j - 1],

if 1 < i <= n and 1 < j <= m and x[i - 1] = y[j - 1].

min(AlignCost[i - 1, j - 1] + 2, AlignCost[i - 1, j] + 4),

if 1 < i <= n and 1 < j <= m and x[i - 1] != y[j - 1].

Run time: O(m * n) where n is the length of x and m is the length of y.