Algorithm 1: MinSeqAlign(X, Y)

```
a = 1; // mismatch penalty
b = 2; // gap penalty
m = |X|, n = |Y|;
p = 0^{m×n};
for i = 0 to m-1 do
    for j = 0 to n-1 do
        cpa = x[i]==y[j]?0:a;
        if i×j = 0 then
            // for edge nodes
            pa = cpa + b*max(i,j);
            pn = b+ i>j?p[i-1,j]:p[i,j-1];
        else
            pa = cpa + p[i-1,j-1];
            pn = b + min(p[i-1,j],p[i,j-1]);
        end
        p[i,j] = min(pa,pn)
    end
end
return p[m-1,n-1];
```