Dynammic programming Motivation

Let $(a_n)_{n\in\mathbb{N}}$, $(b_m)_{m\in\mathbb{N}}$ Let $1 \le i \le n$, $1 \le j \le m$ Let us write the recursion tree from the recursive call e(i,j). e(i,j) e(i,j) = 1 + e(i-1,j-1) e(i,j) = 1 + e(i-1,j-1)

 $\max(\{\ell(i-1,j), \ell(i,j-1)\})$ $0 - \{1+\ell(i-2,j-1)\}$ $0 - \{1+\ell(i-2,j-1)\}$

max((€(i-2, i)), ((i-1, i-1)

max(f(i-1,j-1),f(i,j-2))

There's a possibility that we'll need to compute move than once the recursive call f(i-1,j-1). We can store the return value of that recursive call

and therefore compute it only once.