Longest Common Subsequence
Given two strings or by Find the longest common subsequence.
Eq:
a: abbababa
b: pabbabc
bba is a common subsequence.
The LCS Algrothin:
1. LCS(D,N) = N
$3. LCS(A,b) = \Lambda$ $3. LCS(AA,bA) = LCS(A,b) A$
4. LCS(aa,bb) where a +b = max&LCS(a,bb), LCS(aa,b)}
Visualized:
X X
a,b, aarb
abb = aabb
STOPE STOPE
9 O(2) speed O(n2) Speed
Niamastri
$ \land $
0 0 $1 \leftarrow 1$ $1 \leftarrow 1 \leftarrow 1 \leftarrow 1 \leftarrow 1$
+ 0 0 1 < 1 2 3 < 3 < 3 < 3 < 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
C 0 ← 0 1
LUS = "aate"
Found by concatenation of the diagonals