

Lo-7

$lcs(i, j) \rightarrow$  longest common subsequence of 2 strings i.e.  $u[1:i]$  &  $v[1:j]$

LCS of strings starting from  $l$  to  $i$  & other string from  $l$  to  $j$

	<u>l</u>	<u>b</u>	<u>a</u>	<u>b</u>	<u>a</u>	<u>b</u>	<u>a</u>
<u>l</u>	0	0	0	0	0	0	0
<u>a</u>	0	0	1	1	1	1	1
<u>a</u>	0	0	1	1	2	2	2
<u>b</u>	0	1	1	2	2	3	3
<u>b</u>	0	1	1	2	2	3	3
<u>a</u>	0	1	2	2	3	3	4
<u>b</u>	0	1	2	3	3	4	4

The Longest common subsequence is } bbab

$$lcs(i, j) = \max \left\{ \begin{array}{l} \text{if } u[i] = v[j] \\ \quad + lcs(i-1, j-1), \\ lcs(i-1, j), lcs(i, j-1) \end{array} \right.$$