

## LONGEST COMMON SUBSEQUENCE

GIVEN THE ARRAY PROPERTIES, THE PROBLEM OF FINDING THE LCS CAN BE REDUCED TO THE ONE OF FINDING THE LONGEST INCREASING SUBSEQUENCE IN AN ARRAY OF INDICES. HERE IS AN EXAMPLE:

4	7	5	2	3	6	10	a
4	4	2	5	5	7	3	b
0	0	3	2	2	1	4	index

increasing subsequence of index



common subsequences of a and b

THEN, THE PROBLEM CAN BE SOLVED WITH A COMPLEXITY OF  $O(n \log n)$  BY USING THE BINARY SEARCH APPROACH TO FIND THE LONGEST INCREASING SUBSEQUENCE EXPLAINED IN CLASS (SEE EX. 5 PS1)

