

Here's the grid for *hish* vs. *vista*.

	V	I	S	T	A
H	0	0	0	0	0
I	0	1	0	0	0
S	0	0	2	0	0
H	0	0	0	0	0

FINAL ANSWER      NOT THE FINAL ANSWER  
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One thing to note: for this problem, the final solution may not be in the last cell! For the knapsack problem, this last cell always had the final solution. But for the longest common substring, the solution is the largest number in the grid—and it may not be the last cell.

Let's go back to the original question: which string has more in common with *hish*? *hish* and *fish* have a substring of three letters in common. *hish* and *vista* have a substring of two letters in common.

Alex probably meant to type *fish*.

## Longest common subsequence

Suppose Alex accidentally searched for *fosh*. Which word did he mean: *fish* or *fort*?

Let's compare them using the longest-common-substring formula.

	F	O	S	H
F	1	0	0	0
O	0	2	0	0
R	0	0	0	0
T	0	0	0	0

vs

	F	O	S	H
F	1	0	0	0
I	0	0	0	0
S	0	0	1	0
H	0	0	0	2