

This is due at 9:59 AM on the morning of Wednesday, May 12.

These are meant as guided exercises to reinforce the algorithms from lecture. You are encouraged to understand how the algorithms from class work. Rather than memorizing the code, understand how each works and which decisions are made at each stage.

These are deliberately more time consuming than the test questions I plan to ask on this topic.

1. Fill in the full LCS table for TOWARD and THOUSAND using the algorithm from lecture.

		T	O	W	A	R	D
	0	0	0	0	0	0	0
T	0	1	1	1	1	1	1
H	0	1	1	1	1	1	1
O	0	1	2	2	2	2	2
U	0	1	2	2	2	2	2
S	0	1	2	2	2	2	2
A	0	1	2	2	3	3	3
N	0	1	2	2	3	3	3
D	0	1	2	2	3	3	4

2. Find the Edit Distance between SITTING and KITTEN using the algorithm from lecture. Show both the table and find the actual edit distance. After filling in the table, determine how many insert/deletions happen and how many substitutions happen. Do not count lining up two letters that do match as a substitution, even though the algorithm from class did determine that when computing variable sub.

		S	I	T	T	I	N	G
	0	1	2	3	4	5	6	7
K	1	1	2	3	4	5	6	7
I	2	2	1	2	3	4	5	6
T	3	3	2	1	2	3	4	5
T	4	4	3	2	1	2	3	4
E	5	5	4	3	2	2	3	4
N	6	6	5	4	3	3	2	3

edit distance : 3

insert / deletion : 1

substitution : 2