

Algorithmics	Student information	Date	Number of session
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Activity 1. Create a table with the times you get for the different sizes of the problem using LevenshteinDistanceTest.java. What is the complexity of the algorithm? Do the empirical results make sense?

Size of the problem	Time to solve
100	5
200	10
400	15
800	10
1600	9
3200	27
6400	107
12800	366

The complexity of the algorithm is $O(\text{length}(\text{str1}) * \text{length}(\text{str2}))$, but if both strings have the same length (like for these cases), the complexity is quadratic $O(n^2)$.

The empirical results do make sense (even if for some values such as 800 and 1600 it takes less for the highest size, but that may be because of the computers processor that was used), for most of the values the growth is clearly exponential (since strings of the same length where used).