2.

Edit Distance- The minimum edit distance between 2 strings is the minimum number of editing operations

-Insertion –Deletion –Substitution

Needed to transform one into the other

• by definition, the number of edit operations is non-negative.

• the number of edit operations is 0 iff A = B.

• For every edit operation, the inverse edit operation exists (and has the same cost). For every set of edit operations changing A into B, the set of inverse operations changes B into A (and has the same cost). In particular, this holds for the minimal set of edit operations with the cost ed(A, B), which shows that ed(B, A) ≤ ed(A, B). By symmetry, ed(A, B) ≤ ed(B, A), and thus ed(A, B) = ed(B, A).

• Suppose we change A into C in two stages by first changing A to B and then B to C. If we use the minimal set of edit operations in each stage, the total number of edits is ed(A, B) + ed(B, C). Thus ed(A, C) ≤ ed(A, B) + ed(B, C).