

SI671 - HW3 Peer-assessed Exam Question

- **Question (Multiple Choices):**

Note that in *Levenshtein Edit Distance*, we define a single-character edit with 3 different operations: insertions, deletions and substitutions. Sometimes a substitution can be replaced with a deletion and insertion. So we now define a new Edit Distance with only two operations: insertions, deletions. Can you find out which of the following has the shortest distance with our newly defined Edit Distance to the target word "change"?

- A: challenge
- B: challenging
- C: challenger
- D: changing

- **Answer: A**

- **Explanation:**

For A, it requires 3 deletions.

For B, it requires 6 deletions and 1 insertion.

For C, it requires 4 deletions.

For D, it requires 3 deletions and 1 insertion.

So A "challenge" has the shortest distance to target word "change" in our newly defined Edit Distance.