CMPE 493 Assignment 1 Report

First Scenario:

String1 = oslo

String2= snow

```
C:\Users\Algi\Desktop>python assignment1
Enter first string :oslo
Enter second string :snow

LEVENSTEIN INFO

Levenshtein Distance : 3

Levenshtein Matrix :

[[0 1 2 3 4]
 [1 1 2 2 3]
 [2 1 2 3 3]
 [3 2 2 3 4]
 [4 3 3 2 3]]

Levenshtein Operations :

[('cost: 1', 'op: delete', 'input: o', 'output: *'), ('cost: 0', 'op: copy', 'input: s', 'output: s'), ('cost: 1', 'op: replace', 'input: l', 'output: n'), ('cost: 0', 'op: copy', 'input: o', 'output: o'), ('cos
t: 1', 'op: insert', 'input: *', 'output: w')]

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DAMERAU LEVENSTEIN INFO

Damerau Levenshtein Distance : 3

Damerau Levenshtein Matrix :

[[0 1 2 3 4]
 [1 1 2 2 3]
 [2 1 2 3 3]
 [3 2 2 3 4]
 [4 3 3 2 3]]

Damerau Levenshtein Operations :

[('cost: 1', 'op: delete', 'input: o', 'output: *'), ('cost: 0', 'op: copy', 'input: s', 'output: s'), ('cost: 1', 'op: replace', 'input: l', 'output: n'), ('cost: 0', 'op: copy', 'input: o', 'output: o'), ('cos
t: 1', 'op: insert', 'input: *', 'output: w')]

C:\Users\Algi\Desktop>
```

Second Scenario:

String1: cat

String2: catcat

```
C:\Users\Algi\Desktop>python assignment1
Enter first string :cat
Enter second string :catcat

LEVENSTEIN INFO

Levenshtein Distance : 3

Levenshtein Matrix :

[[0 1 2 3 4 5 6]
 [1 0 1 2 3 4 5]
 [2 1 0 1 2 3 4]
 [3 2 1 0 1 2 3]]

Levenshtein Operations :

[('cost: 0', 'op: copy', 'input: c', 'output: c'), ('cost: 0', 'op: copy', 'input: a', 'output: a'), ('cost: 0', 'op: copy', 'input: t', 'output: t'), ('cost: 1', 'op: insert', 'input: *', 'output: c'), ('cost:
1', 'op: insert', 'input: *', 'output: a'), ('cost: 1', 'op: insert', 'input: *', 'output: t')]

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DAMERAU LEVENSTEIN INFO

Damerau Levenshtein Distance : 3

Damerau Levenshtein Matrix :

[[0 1 2 3 4 5 6]
 [1 0 1 2 3 4 5]
 [2 1 0 1 2 3 4]
 [3 2 1 0 1 2 3]]

Damerau Levenshtein Operations :

[('cost: 0', 'op: copy', 'input: c', 'output: c'), ('cost: 0', 'op: copy', 'input: a', 'output: a'), ('cost: 0', 'op: copy', 'input: t', 'output: t'), ('cost: 1', 'op: insert', 'input: *', 'output: c'), ('cost:
1', 'op: insert', 'input: *', 'output: a'), ('cost: 1', 'op: insert', 'input: *', 'output: t')]
```

Third Scenario:

String1: est

String2: set

```
C:\Users\Algi\Desktop>python assignment1
Enter first string :est
Enter second string :set

LEVENSTEIN INFO

Levenshtein Distance : 2

Levenshtein Matrix :

[[0 1 2 3]
 [1 1 1 2]
 [2 1 2 2]
 [3 2 2 2]]

Levenshtein Operations :

[('cost: 1', 'op: replace', 'input: e', 'output: s'), ('cost: 1', 'op: replace', 'input: s', 'output: e'), ('cost: 0', 'op: copy', 'input: t', 'output: t')]

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DAMERAU LEVENSTEIN INFO

Damerau Levenshtein Distance : 1

Damerau Levenshtein Matrix :

[[0 1 2 3]
 [1 1 1 2]
 [2 1 1 2]
 [3 2 2 1]]

Damerau Levenshtein Operations :

[('cost: 1', 'op: transpose', 'change between: e,s'), ('cost: 0', 'op: copy', 'input: t', 'output: t')]
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