

# CSE 411: ADVANCED PROGRAMMING TECHNIQUES

Fall 2016

## Programming Assignment 3: GUI Programming Assignment

### Initial Design and Feedback

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#### Initial Design

#### INITIAL DESIGN

Edit Distance GUI

First String

Second String

Cost Options:

Output Options:

Compute

Computer

cins

cdel

csub

1

2

1

1

2

1

1

2

1

Compute

Clear

☒ Edit Distance Matrix

☐ Backtrack Matrix

☒ Alignment

/\* Output Screen, Results will be displayed here \*/

String edit distance value : 3

Edit Distance Matrix:

		c	o	m	p	u	t	e	r
	0	1	2	3	4	5	6	7	8
c	2	0	1	2	3	4	5	6	7
o	4	2	0	1	2	3	4	5	6
m	6	4	2	0	1	2	3	4	5
p	8	6	4	2	0	1	2	3	4
a	10	8	6	4	2	1	2	3	4
r	12	10	8	6	4	3	2	3	3
e	14	12	10	8	6	5	4	2	3

## Feedback

1. Instead of cins, cdel and csub some other alternative names could be preferred so that the user can easily identify the possible cost options.
2. The GUI design looks good. All input controls are well organized, have clear labels and are easy to use. Since the output text area includes various matrices such as Edit Distance, Backtrack matrix and Alignment, the output will be pushed to the bottom of the GUI. Therefore, it is better to have appropriate labels and possibly bordering boxes so that they are easily distinguishable.
3. The design has been already better and seems like the design already has few enhancements as required.

## Final GUI Design

**Edit Distance GUI**

Source filename: testfile1.txt Compute

Target filename: testfile2.txt Clear

Cost Options:

Insertion: 1

Deletion: 1

Substitution: 1

Output Options:

☒ Edit Distance Matrix

☐ Backtrack Matrix

☐ Alignment

String edit distance value: 3

String edit distance value: 3

=====  
Edit Distance Matrix: =====

		c	o	m	p	u	t	e	r
	0	1	2	3	4	5	6	7	8
c	1	0	1	2	3	4	5	6	7
o	2	1	0	1	2	3	4	5	6
m	3	2	1	0	1	2	3	4	5
p	4	3	2	1	0	1	2	3	4
a	5	4	3	2	1	1	2	3	4
r	6	5	4	3	2	2	2	3	3
e	7	6	5	4	3	3	3	2	3