NOTES ON LEVENSHTEIN DISTANCE

ERIC MARTIN

$\leftarrow$ Deletion (cost 1) of a letter x in first word: $\begin{smallmatrix} x \\ * \end{smallmatrix}$
$\downarrow$ Insertion (cost 1) of a letter x in second word: $\begin{smallmatrix} * \\ x \end{smallmatrix}$
$\swarrow$ Match (cost 0) of the same letter x in both words: $\begin{smallmatrix} x \\ x \end{smallmatrix}$
Substitution (cost 2) of a letter x in first word by a different letter y in second word: $\begin{smallmatrix} x \\ y \end{smallmatrix}$

d	7		6	←	7		6		5		4	←	5
	↓	↙			↓		↓		↓		↓	↙	↓
r	6	←	7		6		5		4		3	←	4
	↓	↙	↓		↓		↓		↓	↙			
a	5	←	6		5		4		3	←	4	←	5
	↓	↙	↓		↓		↓	↙					
p	4	←	5		4		3	←	4	←	5	←	6
	↓	↙	↓		↓	↙							
o	3	←	4		3	←	4	←	5	←	6	←	7
	↓	↙	↓		↓	↙	↓	↙	↓	↙	↓	↙	↓
e	2	←	3		2	←	3	←	4	←	5	←	6
	↓	↙	↓	↙									
l	1	←	2	←	3	←	4	←	5	←	6	←	7
	↓	↙	↓	↙	↓	↙	↓	↙	↓	↙	↓	↙	↓
·	0	←	1	←	2	←	3	←	4	←	5	←	6
	·		d		e		p		a		r		t

*	d	e	*	p	a	r	*	t		d	*	e	*	p	a	r	*	t		d	e	*	p	a	r	*	t
l	*	e	o	p	a	r	d	*		*	l	e	o	p	a	r	d	*		l	e	o	p	a	r	d	*
*	d	e	*	p	a	r	t	*		d	*	e	*	p	a	r	t	*		d	e	*	p	a	r	t	*
l	*	e	o	p	a	r	*	d		*	l	e	o	p	a	r	*	d		l	e	o	p	a	r	*	d
*	d	e	*	p	a	r	t			d	*	e	*	p	a	r	t			d	e	*	p	a	r	t	
l	*	e	o	p	a	r	d			*	l	e	o	p	a	r	d			l	e	o	p	a	r	d	

COMP9021 Principles of Programming

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