NOTES ON LEVENSHTEIN DISTANCE

ERIC MARTIN

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

d	7		6	\leftarrow	7		6		5		4	\leftarrow	5
	↓	/			\downarrow		\downarrow		\downarrow		\downarrow	1	\downarrow
r	6	\leftarrow	7		6		5		4		3		4
	↓	/	\downarrow		\downarrow		\downarrow		\downarrow	/			
a	5	\leftarrow	6		5		4		3	\leftarrow	4	\leftarrow	5
	↓	/	\downarrow		\downarrow		\downarrow	1					
p	4	\leftarrow	5		4		3	\leftarrow	4	\leftarrow	5	\leftarrow	6
	↓	/	\downarrow		\downarrow	/							
0	3	\leftarrow	4		3	\leftarrow	4	\leftarrow	5	\leftarrow	6	\leftarrow	7
	↓	/	\downarrow		\downarrow	/	\downarrow	/	\downarrow	/	\downarrow	~	\downarrow
e	2	\leftarrow	3		2	\leftarrow	3	\leftarrow	4	\leftarrow	5	\leftarrow	6
	↓	/	\downarrow	/									
1	1	\leftarrow	2	\leftarrow	3	\leftarrow	4	\leftarrow	5	\leftarrow	6	\leftarrow	7
	↓	/	\downarrow										
	0	\leftarrow	1	\leftarrow	2	\leftarrow	3	\leftarrow	4	\leftarrow	5	\leftarrow	6
			d		e		p		a		r		t

* 1			-					-		* d			_		* d	
	d *									t *					t *	
* 1								p p					p p			

COMP9021 Principles of Programming

 $Date \hbox{: Session 1, 2016}.$