Edit Distance Worksheet

The purpose of this exercise is to get you comfortable with the notation used in the edit distance problem and with the recursive formulation.

Given source string s = kasparov and target string t = karpov. Note that the length of s (denoted $|s|$) is 8 and $|t|$ = 6.

1. What does the function call string_compare(s, t, 2, 2) return? (Hint: you should be able to answer this by visually inspecting the two strings.)

در دو حرف اول برابر است "ka" در هر دو ⟵ ٥ ⟵ برابر است.

2. Suppose that function string_compare returns the following values for three different combinations of i and j:

i	j	output
8	5	4
7	6	4
7	5	3

Use this to determine the output of string_compare(s, t, 8, 6).

$$S[\wedge] = t[٩] \Rightarrow string\text{-}compare(S, t, \wedge, ٩) = string\text{-}compare(S, t, v, ٥) = ٣$$

			ل	a	9	o
	٥	١	٢	٣	١٤	
٥٨	١	١	١	٢	٢	
9	٢	٢	٢	١	٢	
٥	٣	٣	٣	٢	١	
9	١٤	٤	٤	٣	٢	

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