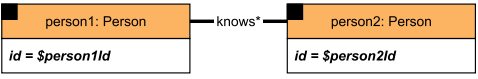
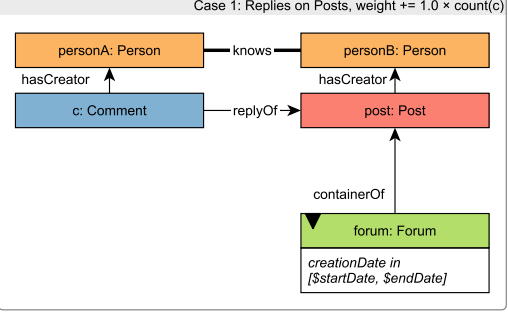
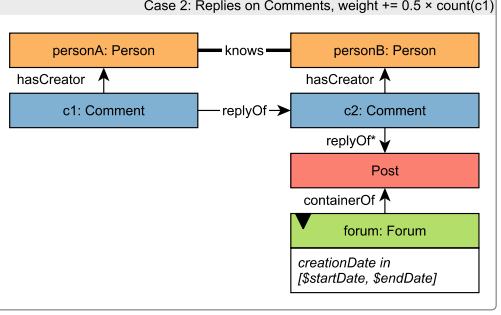
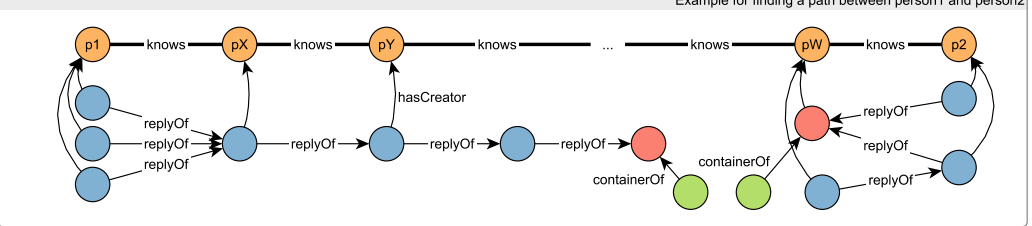


## BI / read / 15

BI 1	query	BI / read / 15			
BI 2	title	Trusted connection paths through forums created in a given timeframe			
BI 3	pattern	<p>Calculate the weight of the shortest path on knows edges between person1 and person2. Edge weights are determined as <math>1 / (\text{interaction score} + 1)</math>, where interaction score is the sum of cases #1 and #2 for the Person endpoints of the edge (tried both ways).</p> 			
BI 4		<p>Case 1: Replies on Posts, weight += <math>1.0 \times \text{count}(c)</math></p> 			
BI 5		<p>Case 2: Replies on Comments, weight += <math>0.5 \times \text{count}(c1)</math></p> 			
BI 6		<p>Example for finding a path between person1 and person2</p> 			
BI 7					
BI 8					
BI 9					
BI 10	description	<p>Given two Persons with IDs <math>\\$person1Id</math> and <math>\\$person2Id</math>, calculate the cost of the weighted shortest path between these two Persons, in the subgraph induced by the knows relationship. The interaction score of a knows edge is calculated based on the interactions of its Person endpoints:</p> <ul style="list-style-type: none"> <li>• Every direct reply (by one of the Persons) to a Post (by the other Person) is 1.0 point.</li> <li>• Every direct reply (by one of the Persons) to a Comment (by the other Person) is 0.5 points.</li> </ul> <p>Only consider Messages that were created in a Forum that was created within the timeframe (interval) <math>[\\$startDate, \\$endDate]</math>. Note that for Comments, the containing Forum is that of the Post that the comment (transitively) replies to. Also note that interactions are counted both ways.</p> <p>The weight for the shortest path algorithm is determined as <math>\frac{1}{\text{interaction score} + 1}</math>.</p> <p>The result of the query is a single number, the cost of the weighted shortest path. If no such path exists, the query should return -1.0.</p>			
BI 11					
BI 12					
BI 13					
BI 14					
BI 15					
BI 16					
BI 17					
BI 18	params	1	$\$person1Id$	ID	(a) $\$person1Id - \$person2Id$ pair with a distance of 4 hops (b) $\$person1Id - \$person2Id$ pair with a distance of 2 hops
BI 19		2	$\$person2Id$	ID	
BI 20		3	$\$startDate$	Date	(a) Small interval (approx. one week) (b) Big interval (approx. one month)
		4	$\$endDate$	Date	
	result	1	weight	32-bit Float	C
	limit	n/a			
	CPs	1.2, 2.1, 2.2, 2.4, 3.3, 5.1, 5.3, 7.2, 7.3, 7.6, 7.7, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6			