

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 $1 / (\text{interaction score} + 1)$, where interaction score is the sum of cases #1 and #2 for the Person endpoints of the edge (tried both ways).</p>			
BI 4					
BI 5					
BI 6					
BI 7		<p>Given two Persons with IDs $\\$person1Id$ and $\\$person2Id$, 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"> • Every direct reply (by one of the Persons) to a Post (by the other Person) is 1.0 point. • Every direct reply (by one of the Persons) to a Comment (by the other Person) is 0.5 points. 			
BI 8		<p>Only consider Messages that were created in a Forum that was created within the timeframe (interval) $[\\$startDate, \\$endDate]$. 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>			
BI 9		<p>The weight for the shortest path algorithm is determined as $\frac{1}{\text{interaction score} + 1}$.</p>			
BI 10		<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		params	1	$\$person1Id$	ID
BI 12			2	$\$person2Id$	ID
BI 13			3	$\$startDate$	Date
BI 14			4	$\$endDate$	Date
BI 15	result	1	weight	32-bit Float	C
BI 16	limit	n/a			
BI 17	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			