

BI / read / 15

- BI 1
- BI 2
- BI 3
- BI 4
- BI 5
- BI 6
- BI 7
- BI 8
- BI 9
- BI 10
- BI 11
- BI 12
- BI 13
- BI 14
- BI 15
- BI 16
- BI 17
- BI 18
- BI 19
- BI 20

query	BI / read / 15																		
title	Trusted connection paths through forums created in a given timeframe																		
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> <p>Example for finding a path between person1 and person2</p>																		
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 <math>-1.0</math>.</p>																		
params	<table border="1"> <tr> <td>1</td> <td><math>\\$person1Id</math></td> <td>ID</td> <td>(a) <math>\\$person1Id - \\$person2Id</math> pair with a distance of 4 hops (b) <math>\\$person1Id - \\$person2Id</math> pair with a distance of 2 hops</td> </tr> <tr> <td>2</td> <td><math>\\$person2Id</math></td> <td>ID</td> <td></td> </tr> <tr> <td>3</td> <td><math>\\$startDate</math></td> <td>Date</td> <td>(a) Small interval (approx. one week) (b) Big interval (approx. one month)</td> </tr> <tr> <td>4</td> <td><math>\\$endDate</math></td> <td>Date</td> <td></td> </tr> </table>	1	$\$person1Id$	ID	(a) $\$person1Id - \$person2Id$ pair with a distance of 4 hops (b) $\$person1Id - \$person2Id$ pair with a distance of 2 hops	2	$\$person2Id$	ID		3	$\$startDate$	Date	(a) Small interval (approx. one week) (b) Big interval (approx. one month)	4	$\$endDate$	Date			
1	$\$person1Id$	ID	(a) $\$person1Id - \$person2Id$ pair with a distance of 4 hops (b) $\$person1Id - \$person2Id$ pair with a distance of 2 hops																
2	$\$person2Id$	ID																	
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																		