

BI / read / 25

query	BI / read / 25				
title	Weighted paths				
pattern	<div><div>For each consecutive Person nodes on this path, calculate their weight. Also calculate these for reverse cases with personA and personB swapped.</div><div><div><div>person1: Person</div><div>id = \$person1Id</div></div><div>knows*</div><div><div>person2: Person</div><div>id = \$person2Id</div></div></div></div> <div><div>1. Replies on Posts</div><div><div><div>personA: Person</div><div>hasCreator</div><div>Post</div><div>weight += 1.0 * count</div></div><div><div>personB: Person</div><div>hasCreator</div><div>Comment</div><div>replyOf</div><div>Forum</div><div>hasContainer</div><div>\$start <= creationDate & creationDate <= \$end</div></div></div></div> <div><div>2. Replies on Comments</div><div><div><div>personA: Person</div><div>hasCreator</div><div>Comment</div><div>weight += 0.5 * count</div></div><div><div>personB: Person</div><div>hasCreator</div><div>Comment</div><div>replyOf</div><div>Forum</div><div>hasContainer</div><div>\$start <= creationDate & creationDate <= \$end</div></div></div></div>				
desc.	<p>Given two <i>Persons</i>, find all (unweighted) shortest paths between these two <i>Persons</i>, in the sub-graph induced by the <i>knows</i> relationship.</p> <p>Then, for each path calculate a weight. The nodes in the path are <i>Persons</i>, and the weight of a path is the sum of weights between every pair of consecutive <i>Person</i> nodes in the path.</p> <p>The weight for a pair of <i>Persons</i> is calculated such that</p> <ul style="list-style-type: none">every reply (by one of the <i>Persons</i>) to a <i>Post</i> (by the other <i>Person</i>) contributes 1.0, andevery reply (by one of the <i>Persons</i>) to a <i>Comment</i> (by the other <i>Person</i>) contributes 0.5. <p>Only consider <i>Messages</i> that were created in a <i>Forum</i> that was created within the timeframe [startDate, endDate].</p> <p>Return all the paths with shortest length, and their weights.</p>				
params	1	person1Id	64-bit Integer		
	2	person2Id	64-bit Integer		
	3	startDate	Date		
	4	endDate	Date		
result	1	person.id	64-bit Integer[]	R	Identifiers representing an ordered sequence of the <i>Persons</i> in the path weight
sort	1	weight	↓	The order of paths with the same weight is unspecified	
CPs	1.2, 2.1, 2.2, 2.4, 3.3, 5.1, 5.3, 7.2, 7.3				