

BI / read / 8

query	BI / read / 8															
title	Central person for a tag															
pattern	<div><p>For each person with a matching hasInterest and/or hasCreator edge, compute $\text{person.score} = (\text{if hasInterest edge exists then } 100 \text{ else } 0) + \text{count}(\text{message})$</p><pre>graph LR Tag[Tag] -- hasTag --> message[message: Message] person1[person: Person] -.-> hasInterest Tag person1 -.-> hasCreator message message -- count --> countOp[count] countOp --> Tag</pre></div> <div><p>Calculate the sum of the friends' scores: $\text{friendsScore} = \text{sum}(\text{friend.score})$</p><pre>graph LR person2[person: Person] -.-> knows friend[friend: Person]</pre></div>															
desc.	<p>Given a Tag, find all Persons that are interested in the Tag and/or have written a Message (Post or Comment) with a creationDate after a given date and that has a given Tag. For each Person, compute the score as the sum of the following two aspects:</p> <ul style="list-style-type: none">• 100, if the Person has this Tag as their interest, or 0 otherwise• number of Messages by this Person with the given Tag <p>Also, for each Person, compute the sum of the score of the Person’s friends (friendsScore).</p>															
params	<table><tr><td>1</td><td>tag</td><td>Long String</td><td>Tags with a similar amount of Messages are selected</td></tr><tr><td>2</td><td>date</td><td>Date</td><td>Dates from around the same day are selected. (TODO - how exactly? what distribution?)</td></tr></table>	1	tag	Long String	Tags with a similar amount of Messages are selected	2	date	Date	Dates from around the same day are selected. (TODO - how exactly? what distribution?)							
1	tag	Long String	Tags with a similar amount of Messages are selected													
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result	<table><tr><td>1</td><td>person.id</td><td>ID</td><td>R</td><td></td></tr><tr><td>2</td><td>score</td><td>32-bit Integer</td><td>A</td><td></td></tr><tr><td>3</td><td>friendsScore</td><td>32-bit Integer</td><td>A</td><td>The sum of the score of the person’s friends</td></tr></table>	1	person.id	ID	R		2	score	32-bit Integer	A		3	friendsScore	32-bit Integer	A	The sum of the score of the person’s friends
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2	score	32-bit Integer	A													
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sort	<table><tr><td>1</td><td>score + friendsScore</td><td>↓</td><td></td></tr><tr><td>2</td><td>person.id</td><td>↑</td><td></td></tr></table>	1	score + friendsScore	↓		2	person.id	↑								
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limit	100															
CPs	1.2, 2.1, 2.3, 3.2, 5.3, 8.2, 8.4, 8.5															
relevance	Similarly to BI 16, there are two major ways to compute this query: (1) creating an induced subgraph of the interested Persons and their friends and performing the scoring on this graph or (2) performing the scoring without creating an induced subgraph and scoring the friends of a Person on-the-fly. The first approach is more efficient as it avoids redundant computations, however, specifying it needs support for composable graph queries.															