

## BI / read / 14

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 / 14			
title	International dialog			
pattern	<div><div>For each pair of countries, calculate the cost as a sum of cases #1–4. Cases that have a match add to the final score with the specified value. Each case only counts once, multiple matches do not increase to the score.</div><div><div><div><div>Country</div><div><div>name = \$country1</div></div></div><div><div>city1: City</div><div><div>name</div></div></div><div><div>person1: Person</div><div><div>id</div></div></div><div><div>Country</div><div><div>name = \$country2</div></div></div><div><div>City</div><div></div></div><div><div>person2: Person</div><div><div>id</div></div></div><div><div>isPartOf</div><div></div></div><div><div>isLocatedIn</div><div></div></div><div><div>knows</div><div></div></div></div></div><div><div>Case 1: score += 4</div><div><div><div>person1: Person</div><div><div>hasCreator</div><div>Comment</div></div></div><div><div>person2: Person</div><div><div>hasCreator</div><div>Message</div></div></div><div><div>replyOf</div><div></div></div></div></div><div><div>Case 2: score += 1</div><div><div><div>person1: Person</div><div><div>hasCreator</div><div>Message</div></div></div><div><div>person2: Person</div><div><div>hasCreator</div><div>Comment</div></div></div><div><div>replyOf</div><div></div></div></div></div><div><div>Case 3: score += 10</div><div><div><div>person1: Person</div><div><div>likes</div><div>Message</div></div></div><div><div>person2: Person</div><div><div>hasCreator</div><div>Message</div></div></div></div></div><div><div>Case 4: score += 1</div><div><div><div>person1: Person</div><div><div>hasCreator</div><div>Message</div></div></div><div><div>person2: Person</div><div><div>likes</div><div>Message</div></div></div></div></div></div>			
description	<p>Consider all pairs of people (<i>person1</i>, <i>person2</i>) such that (1) they know each other, (2) one is located in a City of <i>\$country1</i>, and (3) the other is located in a City of <i>\$country2</i>. For each City of <i>\$country1</i>, return the highest scoring pair. If there are multiple top-scoring pairs in a city, return the pair with the lowest (<i>person1.id</i>, <i>person2.id</i>) using a lexicographical ordering.</p> <p>The score of a pair is defined as the sum of the subscores awarded for the following kinds of interaction. The initial value is <i>score</i> = 0.</p> <div><div>1. <i>person1</i> has created a reply Comment to at least one Message by <i>person2</i>: score += 4</div><div>2. <i>person1</i> has created at least one Message that <i>person2</i> has created a reply to: score += 1</div><div>3. <i>person1</i> liked at least one Message by <i>person2</i>: score += 10</div><div>4. <i>person1</i> has created at least one Message that was liked by <i>person2</i>: score += 1</div></div> <p>Consequently, the maximum score a pair can obtain is: 4 + 1 + 10 + 1 = 16.</p>			
params	<div><div>1</div><div>\$country1</div><div>Long String</div></div> <div><div>2</div><div>\$country2</div><div>Long String</div></div>	<div><div>(a) Correlated with parameter <i>country2</i>, i.e. the Countries are close and there are many Persons knowing each other</div><div>(b) Uncorrelated with parameter <i>country2</i>, i.e. the Countries are afar and there are few Persons knowing each other</div></div>		
result	<div><div>1</div><div>person1.id</div><div>ID</div></div> <div><div>2</div><div>person2.id</div><div>ID</div></div> <div><div>3</div><div>city1.name</div><div>Long String</div></div> <div><div>4</div><div>score</div><div>32-bit Integer</div></div>	<div><div>R</div></div> <div><div>R</div></div> <div><div>R</div></div> <div><div>C</div></div>		
sort	<div><div>1</div><div>score</div><div>↓</div></div> <div><div>2</div><div>person1.id</div><div>↑</div></div> <div><div>3</div><div>person2.id</div><div>↑</div></div>			
limit	100			
CPs	1.3, 1.4, 2.1, 3.1, 3.3, 5.1, 5.2, 5.3, 8.3, 8.4			