

## BI / read / 20

query	BI / read / 20				
title	Recruitment				
pattern	<div><div><div><div>company: Company</div><div>name = \$company</div></div><div>workAt</div><div><div>person1: Person</div><div>≠ person2</div></div><div><div>person2: Person</div><div>id = \$person2Id</div></div><div>shortest path on knows.weight</div></div><div><div>knows.weight: abs(saA.classYear - saB.classYear) + 1</div><div><div>personA: Person</div><div>saA: studyAt</div></div><div>knows</div><div><div>personB: Person</div><div>saB: studyAt</div></div><div>University</div></div></div>				
desc.	<p>Given a Company <code>company</code> and a Person <code>person2</code> (who is known to be working at another Company), find a different Person (<code>person1</code>) who works in <code>company</code> and is reachable by from <code>person2</code> through people who have studied together. On this path, we only consider edges between Persons who know each other and attended the same university and set the weight of the edge to the absolute difference between the year of enrolment plus 1 (<code>studyAt.classYear + 1</code>). We return the 20 shortest paths.</p> <p>If there are multiple Person <code>person1</code> nodes with the same shortest path, return all of them.</p>				
params	<div><div>1</div><div>company</div></div>	<div><div>Long String</div></div>	<div>Companies with a similar number of employees (former or current) are selected</div>		
	<div><div>2</div><div>person2Id</div></div>	<div><div>ID</div></div>			
result	<div><div>1</div><div>person1.id</div></div>	<div><div>ID</div></div>	<div><div>R</div></div>		
	<div><div>2</div><div>totalWeight</div></div>	<div><div>64-bit Integer</div></div>	<div><div>C</div></div>		
sort	<div><div>1</div><div>totalWeight</div></div>	<div><div>↑</div></div>			
	<div><div>2</div><div>person1.id</div></div>	<div><div>↑</div></div>			
limit	20				
CPs	3.3, 7.6, 7.7, 8.4, 8.6				
relevance	Implementations can either pre-compute edge weights or compute them on-the-fly. To find a weighted shortest path efficiently, implementations can use e.g. a bidirectional Dijkstra algorithm.				