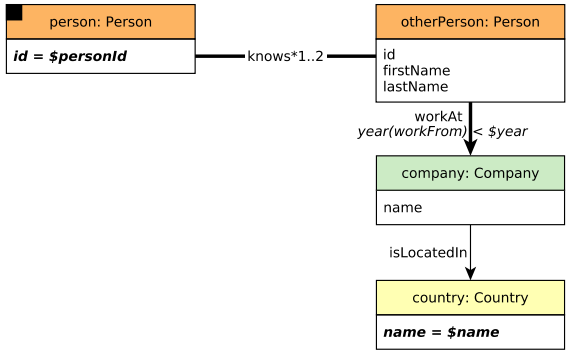


Interactive / complex / 11

IC 1	query	Interactive / complex / 11			
IC 2	title	Job referral			
IC 3	pattern	 <pre> graph TD person[person: Person] -- "knows*1..2" --> otherPerson[otherPerson: Person] otherPerson -- "workAt year(workFrom) < \$year" --> company[company: Company] company -- "isLocatedIn" --> country[country: Country] </pre>			
IC 4					
IC 5					
IC 6					
IC 7					
IC 8					
IC 9					
IC 10					
IC 11					
IC 12					
IC 13	desc.	Given a start Person, find that Person's friends and friends of friends (excluding start Person) who started working in some Company in a given Country, before a given date (year).			
IC 14	params	1	personId	ID	
		2	countryName	String	
		3	workFromYear	32-bit Integer	
	result	1	otherPerson.id	ID	R
		2	otherPerson.firstName	String	R
		3	otherPerson.lastName	String	R
		4	company.name	String	R
		5	workAt.workFrom	32-bit Integer	R
	sort	1	workAt.workFrom	↑	
		2	otherPerson.id	↑	
		3	company.name	↓	
	limit	10			
	CPs	1.3, 2.3, 2.4, 3.3, 4.2			
	relevance	This query looks for paths of length two or three, starting from a Person, moving to friends or friends of friends, and ending at a Company. In this query, there are selective joins and a top-k order by that can be exploited for optimizations.			