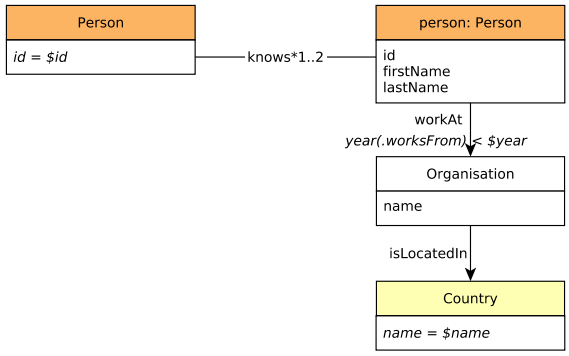
## Interactive / complex / 11

IC 1
IC 2
IC 3
IC 4
IC 5
IC 6
IC 7
IC 8
IC 9
IC 10
IC 11
IC 12
IC 13
IC 14

| | |
|---|---|
| query | Interactive / complex / 11 |
| title | Job referral |
| pattern |  |
| 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`). |

**params**

| | | | |
|---|---|---|---|
| 1 | `Person.id` | ID | `personId` |
| 2 | `Country.name` | String | `countryName` |
| 3 | `year` | 32-bit Integer | `workFromYear` |

**result**

| | | | | |
|---|---|---|---|---|
| 1 | `Person.id` | ID | R | `personId` |
| 2 | `Person.firstName` | String | R | `personFirstName` |
| 3 | `Person.lastName` | String | R | `personLastName` |
| 4 | `Person-workAt->Organisation.name` | String | R | `organizationName` |
| 5 | `Person-workAt->.worksFrom` | 32-bit Integer | R | `organizationWorkFromYear` |

**sort**

| | | | |
|---|---|---|---|
| 1 | `Person-workAt->.worksFrom` | ↑ | |
| 2 | `Person.id` | ↑ | |
| 3 | `Person-workAt->Organisation.name` | ↓ | |

| | |
|---|---|
| limit | 10 |
| CPs | 1.3, 2.3, 2.4, 3.3 |
| 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. |