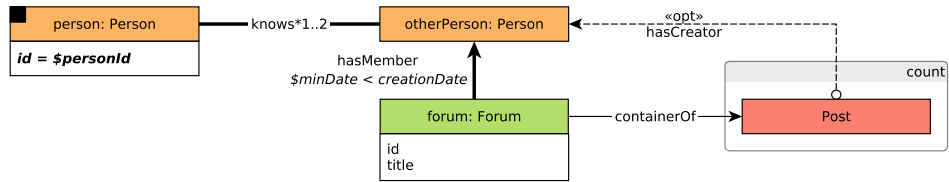


## Interactive / complex / 5

|           |   |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
|-----------|---|----------------|---|--|--|---|-------------|-------------|---|---|----------|-----------|----------------|---|--|
| query     | Interactive / complex / 5   |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| title     | New groups  |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| pattern   |  <pre>graph LR     P1[person: Person<br/>id = \$personId] -- knows*1..2 --&gt; P2[otherPerson: Person]     P2 -- hasMember<br/>\$minDate &lt; creationDate --&gt; F[forum: Forum<br/>id<br/>title]     F -- containerOf --&gt; Post[Post]     Post -- «opt» hasCreator --&gt; P2     subgraph count     Post     end</pre>  |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| desc.     | Given a start Person, find the Forums which that Person’s friends and friends of friends (excluding start Person) became Members of after a given date. For each Forum find the number of Posts that were created by any of these Persons. For each Forum and consider only those Persons which joined that particular Forum after the given date (minDate).  |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| params    | <table><tr><td>1</td><td>personId</td><td>ID</td><td></td></tr><tr><td>2</td><td>minDate</td><td>Date</td><td></td></tr></table>  |                |   |  |  | 1 | personId    | ID          |   | 2 | minDate  | Date      |                |   |  |
| 1         | personId  | ID             |   |  |  |   |             |             |   |   |          |           |                |   |  |
| 2         | minDate   | Date           |   |  |  |   |             |             |   |   |          |           |                |   |  |
| result    | <table><tr><td>1</td><td>forum.title</td><td>Long String</td><td>R</td><td></td></tr><tr><td>2</td><td>postCount</td><td>32-bit Integer</td><td>A</td><td>Number of Posts made in forum that were created by friends</td></tr></table>  |                |   |  |  | 1 | forum.title | Long String | R |   | 2        | postCount | 32-bit Integer | A | Number of Posts made in forum that were created by friends |
| 1         | forum.title   | Long String    | R |  |  |   |             |             |   |   |          |           |                |   |  |
| 2         | postCount   | 32-bit Integer | A | Number of Posts made in forum that were created by friends |  |   |             |             |   |   |          |           |                |   |  |
| sort      | <table><tr><td>1</td><td>postCount</td><td>↓</td><td></td></tr><tr><td>2</td><td>forum.id</td><td>↑</td><td></td></tr></table>  |                |   |  |  | 1 | postCount   | ↓           |   | 2 | forum.id | ↑         |                |   |  |
| 1         | postCount   | ↓              |   |  |  |   |             |             |   |   |          |           |                |   |  |
| 2         | forum.id  | ↑              |   |  |  |   |             |             |   |   |          |           |                |   |  |
| limit     | 20  |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| CPs       | 2.3, 3.3, 8.2, 8.5  |                |   |  |  |   |             |             |   |   |          |           |                |   |  |
| relevance | This query looks for paths of length two and three, starting from a given Person, moving to friends and friends of friends, and then getting the Forums they are members of. Besides testing the ability of the query optimizer to select the proper join operator, it rewards the usage of indexes, but their accesses will be presumably scattered due to the two/three-hop search space of the query, leading to unpredictable and scattered index accesses. Having efficient implementations of such indexes will be highly beneficial. |                |   |  |  |   |             |             |   |   |          |           |                |   |  |