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Neo4j - cypher syntax to find relationships between nodes from two separate collections

asked 4 months ago

viewed 50 times

active 4 months ago



1



I have developed the following query to find all nodes that meet a certain query criteria. Specifically, all the disease codes that satisfy certain parameters. I have used UNION to accomplish this in the code:

```
//Find all diagnosis codes
MATCH p = (a:ObjectConcept{sctid:233604007}) <-[:ISA*]- (b:ObjectConcept),
      q = (c:ObjectConcept{sctid:58800005}) <-[:ISA*]- (d:ObjectConcept)
WHERE NOT (b)-->()--(c) AND NOT (b)-->()-->(d)
RETURN distinct b
UNION
MATCH p = (a:ObjectConcept{sctid:233604007}) <-[:ISA*]- (b:ObjectConcept),
      t = (e:ObjectConcept{sctid:65119002}) <-[:ISA*]- (f:ObjectConcept)
WHERE NOT (b)-->()-->(e) AND NOT (b)-->()-->(f)
RETURN distinct b
```

I would like to care the result from this query. That is the set (distinct b) and find all patients with any of these diseases.

```
Pseudo-code: Match s = (nodes in distinct b) <-[:HAS_DX]- (z:Patient)
RETURN distinct z
```

However, I do not know the Cypher syntax to carry the set of distinct nodes b into this subsequent query statement. I am using Neo4j v 2.1.7.

Thanks

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asked Mar 30 at 21:54

 [Scott Campbell](#)
16 ● 1

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1



Does this query work for you?


```
MATCH p = (a:ObjectConcept{sctid:233604007}) <-[:ISA*]- (b:ObjectConcept) <-[:HAS_DX]- (
      q = (c:ObjectConcept) <-[:ISA*]- (d:ObjectConcept)
WHERE (c.sctid = 58800005 OR c.sctid = 65119002) AND NOT (b)-->()-->(c) AND NOT (b)-->()-->(d)
RETURN DISTINCT z;
```

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answered Mar 30 at 23:03

 [cybersam](#)
9,941 ● 2 ● 7 ● 21

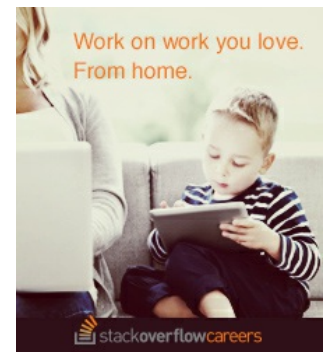
The logic of the query would work, but I see two issues. First, the search for paths q as written is traversing the entire model without the restrictions on c, and therefore, performing unnecessary calculations. Second, the path search p, while an intriguing design, will need to be somehow "reigned in" to limit calculations of nodes/edges not germane to the search. I will have to play with these concepts as I do see their merit.

Thanks. – [Scott Campbell](#) Mar 31 at 13:50 

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▲ 0 ▼ The following query was successful. It required matching all aspects of the desired output into each subquery such that the column headers were all the same. Less than 1 sec added to query time.

```
MATCH p = (a:ObjectConcept{sctid:233604007}) <-[:ISA*]- (b:ObjectConcept),
      q = (c:ObjectConcept{sctid:58800005}) <-[:ISA*]- (d:ObjectConcept)
WHERE NOT (b)-->()--(c) AND NOT (b)-->()-->(d)
with distinct b
MATCH (t:Patient)-[:HAS_DX]-> (b)
RETURN distinct t.patient_id,b.FSN
UNION
MATCH p = (a:ObjectConcept{sctid:233604007}) <-[:ISA*]- (b:ObjectConcept),
      t = (e:ObjectConcept{sctid:65119002}) <-[:ISA*]- (f:ObjectConcept)
WHERE NOT (b)-->()-->(e) AND NOT (b)-->()-->(f)
with distinct b
MATCH (t:Patient)-[:HAS_DX]-> (b)
RETURN distinct t.patient_id,b.FSN;
```

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answered Apr 2 at 19:27

 **Scott Campbell**
16 ● 1

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