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## How to aggregate result of Union in Cypher?



I am trying to figure out how to aggregate the result of Union in Cypher. The following example can be executed in [Cypher snippets live](#):

```
MATCH (n:Crew)-[r:KNOWS]->m
WHERE n.name='Neo'
RETURN n AS name,m
UNION
MATCH (n:Crew)-[r:KNOWS]->m
WHERE n.name='Morpheus'
RETURN n AS name,m
```

This query shows three rows as result because Neo knows one person and Morpheus two (note the directional link in the query). Let's say that we want to aggregate the known people. We can do something like this:

```
MATCH (n:Crew)-[r:KNOWS]->m
WHERE n.name='Neo'
RETURN n AS name,count(m) AS c
UNION
MATCH (n:Crew)-[r:KNOWS]->m
WHERE n.name='Morpheus'
RETURN n AS name,count(m) AS c
```

So far we are Ok. However, I don't know how to solve the problem if what we want to aggregate (the hidden Group By) is in both the first and second query. Since this doesn't happen in the previous case, let's assume for the sake of the explanation that we have the following queries:

```
MATCH (n:Label1)-[:label3]->(:label4)
RETURN n.name as name, n.age as value
```

and

```
MATCH (m:Label2)-[:label5]->(:label6)
RETURN m.surname as name, m.k as value
```

which return

```
John, 12
Sam, 17
```

and

```
John, 78
Tim, 12
```

Is it possible to do something like

```
(
MATCH (n:Label1)-[:label3]->(:label4)
RETURN n.name as name, n.age as value
UNION ALL
MATCH (m:Label2)-[:label5]->(:label6)
RETURN m.surname as name, m.k as value
)
RETURN name, sum(value)
```

to obtain the result below?

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John, 90  
Sam, 17  
Tim, 12

Obviously, I already tried such a query and it doesn't compile. Hence, I am wondering if there is something similar.

neo4j cypher

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asked Mar 30 at 11:55



Inti Gonzalez-Herrera  
60 ● 6

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1 Answer

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As of today you cannot do any aggregation on the combined result set of a `UNION`.

0

The only way is to trick around it by avoiding the `UNION` in favour of a more complex `WHERE`:



```
MATCH (n)-[r:label3|label5]->(m)
WHERE ((type(r)='label3') AND ("Label1" in labels(n)) AND ("label4" in labels(m))) OR
((type(r)='label5') AND ("Label2" in labels(n)) AND ("label6" in labels(m)))
RETURN n.name as name, sum(n.age)
```

share improve this answer

answered Mar 30 at 13:20



Stefan Armbruster  
23k ● 2 ● 28 ● 51

Ok, I see your point. However, your answer is not complete because in my example the two queries use different properties (e.g., age vs. k, name vs. surname). I think it should be Ok using a CASE, but I am not sure how to do it for the sum. – [Inti Gonzalez-Herrera](#) Mar 30 at 13:47

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