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## Complex Cypher query using aggregated functions and math operations



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I'm working with a Neo4j embedded database, using Java API and Cypher queries, using a model of nodes and relationships like this:

```
MATCH (t:Task)-[:ASSIGNED_TO]->(p:Person)
```

Now, the following fields o properties for each kind of node:

```
Task (id, estimated_time, closed, priority, evaluation, start_date, end_date)
Person(id, name)
```

Using this formula:

```
A = 3*count(B)+2*count(C)+count(D)
```

Where B are the tasks with priority 'High', C: 'Medium', and D: 'Low'. I want a query that calculate A factor for a person (this is using a WHERE clause specifying its id). Summarizing: Take the person's tasks, know which of them have a custom priority, and calculate A using the previous expression. Of course I have tried with some queries like this:

```
MATCH (p:Person{id: 178}) //with the person with id 178
WITH p
MATCH (t1:Task)-[:ASSIGNED_TO]->p
WHERE t1.priority = 'High'
WITH p, count(t1) as B
MATCH (t2:Task)-[:ASSIGNED_TO]->p
WHERE t2.priority = 'Medium'
WITH p, B, count(t2) as C
MATCH (t3:Task)-[:ASSIGNED_TO]->p
WHERE t3.priority = 'Low'
WITH p, B, C, count(t3) as D
RETURN p.id, (3*B+2*C+D)
```

And this return 0 rows, but if I try just with

```
MATCH (p:Person{id: 178})
WITH p
MATCH (t1:Task)-[:ASSIGNED_TO]->p
WHERE t1.priority = 'High'
WITH p, count(t1) as B
RETURN p.id, B
```

It returns correctly that has 21 tasks with High priority. Any ideas?

neo4j cypher formula

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asked Mar 30 at 0:21

Rigoberto Peña  
53 ● 5

1 Answer

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Has the Person with id 178 tasks with all types of priorities? If not, try this:

```
MATCH (p:Person{id: 178})
WITH p
OPTIONAL MATCH (t1:Task)-[:ASSIGNED_TO]->p
```

asked 4 months ago

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```
WHERE t1.priority = 'High' WITH p, count(t1) as B
OPTIONAL MATCH (t2:Task)-[:ASSIGNED_TO]->p
WHERE t2.priority = 'Medium'
WITH p, B, count(t2) as C
OPTIONAL MATCH (t3:Task)-[:ASSIGNED_TO]->p
WHERE t3.priority = 'Low'
WITH p,B,C,count(t3) as D
RETURN p.id, (3*B+2*C+D)
```

Other option: Try use `PROFILE` command for getting more information about your Cypher query execution. ([link](#))

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edited Mar 30 at 6:50

answered Mar 30 at 6:42

 **Richard Günzl**  
104 ● 5

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Why is parameterized Cypher query is taking longer time compared to unparameterized query when using a default planner

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