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Neo4j one-to-many fetch data

asked   **4 months ago**

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In my Spring Boot/Neo4j application I have a following entities:

```
@NodeEntity
public class User extends BaseEntity {

    private static final String HAS = "HAS";

    @GraphId
    private Long id;

    private String username;

    private String password;

    private String email;

    private String firstName;

    private String lastName;

    @RelatedTo(type = HAS, direction = Direction.OUTGOING)
    private Set<Role> roles = new HashSet<Role>();

....

}

@NodeEntity
public class Vote extends BaseEntity {

    private static final String VOTED_ON = "VOTED_ON";
```

Related

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```
    private final static String VOTED_FOR = "VOTED_FOR";
    private static final String CREATED_BY = "CREATED_BY";

    @GraphId
    private Long id;

    @RelatedTo(type = VOTED_FOR, direction = Direction.OUTGOING)
    private Decision decision;
```

and I have a following SDN repository method:

```
@Query("MATCH (d:Decision)<-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE i
List<Vote> getVotes(@Param("decisionId") Long decisionId, @Param("criterionId") Long
```

In the result I have a list of `Vote` .

On the client I'd like to display list of these votes with not only user(author) `Id` but and with author `username` also.

How to fetch based on the query above `Vote.author.username` and `Vote.author.id` and do not fetch all other information from `User` entity associated with `Vote` entity? Anyway, right now I only have `Vote.author.id` value.

EDITED:

following query

```
@Query("MATCH (d:Decision)<-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE i
List<Vote> getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId, @Par
```

doesn't work with a following exception:

```
org.springframework.dao.InvalidDataAccessApiUsageException: [Assertion failed] - ent
    at org.springframework.data.neo4j.support.ParameterCheck.notNull(ParameterCheck.
    at org.springframework.data.neo4j.support.Neo4jTemplate.projectTo(Neo4jTemplate.
    at org.springframework.data.neo4j.support.conversion.EntityResultConverter.doCon
    at org.springframework.data.neo4j.conversion.DefaultConverter.convert(DefaultCon
    at org.springframework.data.neo4j.support.conversion.EntityResultConverter.conve
    at org.springframework.data.neo4j.conversion.QueryResultBuilder$1.underlyingObje
```

`neo4j` `cypher` `spring-data-neo4j`

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edited Apr 2 at 14:37

asked Apr 2 at 11:33
alexanoid
1,008 ● 12 ● 28

> In SDN3 you cannot just create a map and have it pretend to be a NodeEntity, that's what @QueryResult annotated DTOs are for. See the docs. – Michael Hunger Apr 2 at 18:41

> I'd like to avoid having User as a member of Vote and at the same time as a separated entity in @QueryResult (Vote, User).. I think that this is redundant. – alexanoid Apr 2 at 18:48

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2 Answers

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Try this with a DTO (can also be an interface with getters):

1

```
@QueryResult
class VoteView {
    String id;
    Double weight;
    String description;
    String decisionId;
    String criterionId;
    String authorId;
    String authorName;
}

@Query("MATCH (d:Decision)<-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE i
List<VoteView> getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId,
```

share improve this answer

answered Apr 2 at 18:46
Michael Hunger
25.2k ● 2 ● 21 ● 41

> Thanks, works fine but with a following query(returns separated columns, not map) @Query("MATCH (d:Decision)<-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE id(d) = {decisionId} AND id(c) = {criterionId} WITH v, d, c MATCH v-[:CREATED_BY]->(u:User) RETURN v.id as voteId, d.id as decisionId, c.id as criterionId, v.weight as weight, v.description as description, u.id as authorId, u.username as authorName, v.createDate as createDate, v.updateDate as updateDate") List<AuthorVote>

getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId, @Param("criterionId") Long criterionId); – alexanoid Apr 2 at 19:33 ✎

add a comment

I can't help with the spring but does this cypher get you what you want?

0

```
MATCH (d:Decision)<-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion)
WHERE id(d) = {decisionId}
  AND id(c) = {criterionId}
WITH v
MATCH v-[:CREATED_BY]->(u:User)
RETURN {id: v.id
       , weight: v.weight
       , `author.id`: u.id
       , `author.username`: u.username
       ... } as v
```

share improve this answer

edited Apr 2 at 14:10

answered Apr 2 at 13:46
Dave Bennett
2,865 ● 2 ● 6 ● 26

Thanks, but it will return two separated entities - Vote and String. But I'm looking for a solution, how to populate v.author.username with u.username from your query and return only "v" – alexanoid Apr 2 at 14:06

i updated the answer and combined the properties into a single map... - not v though – Dave Bennett Apr 2 at 14:11

Nice idea ! But I can't get it working with a following exception: org.springframework.dao.InvalidDataAccessApiUsageException: [Assertion failed] - entity is required; it must not be null at org.springframework.data.neo4j.support.ParameterCheck.notNull(ParameterCheck.jav a:29) at org.springframework.data.neo4j.support.Neo4jTemplate.projectTo(Neo4jTemplate.jav a:240) at org.springframework.data.neo4j.support.conversion.EntityResultConverter.doConver t(EntityResultConverter.java:73) – alexanoid Apr 2 at 14:24 ✎

1 damn computers... so close...is one of the items null (i.e. returning a null value with a key in the map)? If that is the problem you could coalesce the result or add a case statement to eliminate that key alltogether – Dave Bennett Apr 2 at 14:31

I have updated my question body.. added full Vote class declaration, new query and error stacktrace – alexanoid Apr 2 at 14:41

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Your Answer

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