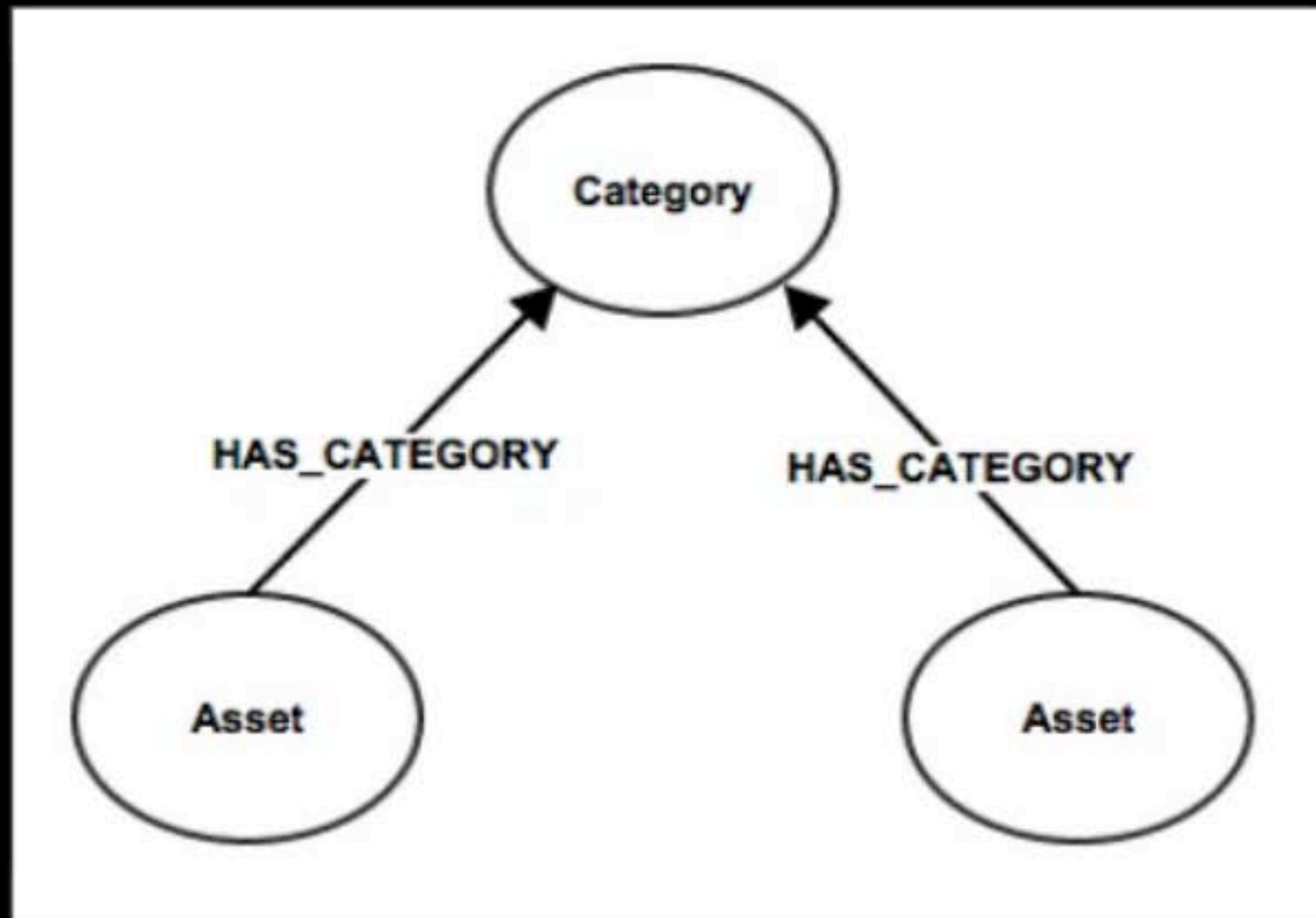


# Neo4j.rb Screencast Series

## Episode 3 Associations



```
1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7 end
8
9 class Category
10  include Neo4j::ActiveNode
11
12  property :name
13 end
14
```

~~~~~

```
NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 50% : 7: 1 < ! trailing[3]
```

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_one :out, :category, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.category = category
21 asset.category
22
23 # >> CYPHER 10ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"a67e48
65-ba8b-4826-ab38-eb2e6f211149", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 5ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"306b
3fb0-ac8f-4629-96df-2eb49b7a0497", :name=>"Graphs"}}

```



```

7
8   has_one :out, :categorization, type: :HAS_CATEGORY, model_class: :Category
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.category = category
21 asset.category
22
23 # >> CYPHER 10ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{:uuid=>"a67e48
65-ba8b-4826-ab38-eb2e6f211149", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 5ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{:uuid=>"306b
3fb0-ac8f-4629-96df-2eb49b7a0497", :name=>"Graphs"}}
25 # >> Asset#category#category 29ms MATCH asset13, asset13-[rel1:`HAS_CATEGORY`]->(re
sult_category:`Category`) WHERE (ID(asset13) = {ID_asset13}) DELETE rel1 | { :ID_asse
t13=>13}
26 # >> CYPHER 3ms MATCH start, end WHERE (ID(start) = {ID_start}) AND (ID(end) = {ID_
end}) CREATE start-[rel1:`HAS_CATEGORY`]->end | { :ID_start=>13, :ID_end=>14}

```

@  
@

**NORMAL** > master <asset.rb[+] < ruby < utf-8[unix] < 66% : 18: 1 < ! trailing[3]  
/category

```

7
8   has_one :out, :categorization, type: :HAS_CATEGORY, model_class: :Category
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 categorization = Category.create(name: 'Graphs')
19
20 asset.categorization = categorization
21 asset.categorization # => #<Category uuid: "bd4d80b2-48d7-4b81-a788-34a39278b98b", name: "Graphs">
22
23 # >> CYPHER 5ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"d5468f5f-1a37-4ab2-85fb-695f6bf507e3", :title=>"Talking about Neo4j" }}
24 # >> CYPHER 7ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"bd4d80b2-48d7-4b81-a788-34a39278b98b", :name=>"Graphs" }}
25 # >> Asset#categorization#categorization 22ms MATCH asset19, asset19-[rel1:`HAS_CATEGORY`]->(result_categorization:`Category`) WHERE (ID(asset19) = {ID_asset19}) DELETE rel1 | { :ID_asset19=>19 }
26 # >> CYPHER 3ms MATCH start, end WHERE (ID(start) = {ID_start}) AND (ID(end) = {ID_end}) CREATE start-[rel1:`HAS_CATEGORY`]->end | { :ID_start=>19, :ID_end=>20 }

```



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categorization, type: :HAS_CATEGORY, model_class: :Category
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 categorization = Category.create(name: 'Graphs')
19
20 asset.categorization = categorization
21 asset.categorization # => #<Category uuid: "bd4d80b2-48d7-4b81-a788-34a39278b98b", n
ame: "Graphs">
22
23 # >> CYPHER 5ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"d5468f5
f-1a37-4ab2-85fb-695f6bf507e3", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 7ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"bd4d
80b2-48d7-4b81-a788-34a39278b98b", :name=>"Graphs"}}

```

NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 29% : 8: 12 < ! trailing[3]

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY, model_class: :Category
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 categorization = Category.create(name: 'Graphs')
19
20 asset.categorization = categorization
21 asset.categorization # => #<Category uuid: "bd4d80b2-48d7-4b81-a788-34a39278b98b", n
ame: "Graphs">
22
23 # >> CYPHER 5ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"d5468f5
f-1a37-4ab2-85fb-695f6bf507e3", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 7ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"bd4d
80b2-48d7-4b81-a788-34a39278b98b", :name=>"Graphs"}}

```

NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 29% : 8: 28 < ! trailing[3]  
 /mode



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories = [category]
21 asset.categories # => #<Category uuid: "bd4d80b2-48d7-4b81-a788-34a39278b98b", name:
    "Graphs">
22
23 # >> CYPHER 5ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"d5468f5
    f-1a37-4ab2-85fb-695f6bf507e3", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 7ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"bd4d
    80b2-48d7-4b81-a788-34a39278b98b", :name=>"Graphs"}}

```

```

NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 77% : 21: 16 < ! trailing[3]
: noh

```

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories = [category]
21 asset.categories.to_a # => [#<Category uuid: "fbd1edbd-6202-4c38-ba98-cb1e6e85e096",
    name: "Graphs">]
22
23 # >> CYPHER 5ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"dc84274
    f-56d5-420f-b1c6-d77e11c69804", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 3ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"fbd1
    edbd-6202-4c38-ba98-cb1e6e85e096", :name=>"Graphs"}}

```

**NORMAL** > master <asset.rb[+] < ruby < utf-8[unix] < 77% : 21: 21 < ! trailing[3]

26 lines filtered



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories = [category]
21 asset.categories.map(&:name) # => ["Graphs"]
22
23 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"9e2d0d4
4-2a31-4b67-8653-d022540c3771", :title=>"Talking about Neo4j" }}
24 # >> CYPHER 4ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"f529
d541-e4d4-4817-b094-23e864b4539b", :name=>"Graphs" }}

```



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories = [category]
21 asset.categories.each_rel.map[&:neo_id] # => [9]
22
23 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"e64033c
1-ec22-459a-9464-b4aefffffce19", :title=>"Talking about Neo4j" }}
24 # >> CYPHER 4ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"57a9
95bd-ca7b-4449-ba27-32194d6cb195", :name=>"Graphs" }}

```

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories = [category]
21 asset.categories.each_with_rel.to_a # => [9]
22
23 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"e64033c
24     1-ec22-459a-9464-b4aeffffce19", :title=>"Talking about Neo4j" }}
25 # >> CYPHER 4ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"57a9
26     95bd-ca7b-4449-ba27-32194d6cb195", :name=>"Graphs" }}

```

@

**NORMAL** > master <asset.rb[+] < ruby < utf-8[unix] < 77% : 21: 35 < ! trailing[3]

udemy



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories << category
21 asset.categories.each_with_rel.to_a # => [[#<Category uuid: "2644e927-0cfe-4ed3-a4aa-6f279edb46d5", name: "Graphs">, CypherRelationship 10]]
22
23 # >> CYPHER 3ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"86415964-16d8-407a-baea-945370803017", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 4ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"2644e927-0cfe-4ed3-a4aa-6f279edb46d5", :name=>"Graphs"}}

```

NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 74% : 20: 28 < ! trailing[3]



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories.create(category, weight: 5)
21 asset.categories_# => [[#<Category uuid: "2644e927-0cfe-4ed3-a4aa-6f279edb46d5", name: "Graphs">, CypherRelationship 10]]
22
23 # >> CYPHER 3ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{ :uuid=>"86415964-16d8-407a-baea-945370803017", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 4ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{ :uuid=>"2644e927-0cfe-4ed3-a4aa-6f279edb46d5", :name=>"Graphs"}}

```

```

INSERT > master > <asset.rb[+] < ruby < utf-8[unix] < 77% : 21: 17 < ! trailing[3]
-- INSERT --

```

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15 end
16
17 asset = Asset.create(title: 'Talking about Neo4j')
18 category = Category.create(name: 'Graphs')
19
20 asset.categories.create(category, weight: 5)
21 asset.categories.each_rel.map[&:props] # => [{:weight=>5}]
22
23 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{:uuid=>"50a246c
0-c2c0-4557-bda1-e26bb54f5ac5", :title=>"Talking about Neo4j"}}
24 # >> CYPHER 6ms CREATE (n:`Category` {props}) RETURN ID(n) | { :props=>{:uuid=>"e121
b767-e960-4cdb-8ff1-97f75aa068e6", :name=>"Graphs"}}

```



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15
16   has_many :in, :assets, origin: :categories
17 end
18
19 asset = Asset.create(title: 'Talking about Neo4j')
20 category = Category.create(name: 'Graphs')
21
22 asset.categories.create(category, weight: 5)
23 asset.categories.each_rel.map(&:props) # => [{:weight=>5}]
24
25 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{:uuid=>"50a246c
    0-c2c0-4557-bda1-e26bb54f5ac5", :title=>"Talking about Neo4j"}}

```

@

NORMAL > master <asset.rb[+] < ruby < utf-8[unix] < 55% : 16: 44 < ! trailing[3]

udemy



```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9 end
10
11 class Category
12   include Neo4j::ActiveNode
13
14   property :name
15
16   has_many :in, :included_assets, origin: :categories, model_class: :Asset
17 end
18
19 asset = Asset.create(title: 'Talking about Neo4j')
20 category = Category.create(name: 'Graphs')
21
22 asset.categories.create(category, weight: 5)
23 asset.categories.each_rel.map(&:props) # => [{:weight=>5}]
24
25 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{:uuid=>"50a246c
    0-c2c0-4557-bda1-e26bb54f5ac5", :title=>"Talking about Neo4j"}}

```

@

**NORMAL** > master <asset.rb[+] < ruby < utf-8[unix] < 51% : 15: 1 < ! trailing[3]

udemy

```

1 require './config/environment'
2
3 class Asset
4   include Neo4j::ActiveNode
5
6   property :title
7
8   has_many :out, :categories, type: :HAS_CATEGORY
9   has_many :both, :see_also_assets, type: :OFTEN_VIEWED_WITH, model_class: :Asset
10 end
11
12 class Category
13   include Neo4j::ActiveNode
14
15   property :name
16
17   has_many :in, :included_assets, origin: :categories, model_class: :Asset
18 end
19
20 asset = Asset.create(title: 'Talking about Neo4j')
21 category = Category.create(name: 'Graphs')
22
23 asset.categories.create(category, weight: 5)
24 asset.categories.each_rel.map(&:props) # => [{:weight=>5}]
25
26 # >> CYPHER 4ms CREATE (n:`Asset` {props}) RETURN ID(n) | { :props=>{:uuid=>"50a246c
    0-c2c0-4557-bda1-e26bb54f5ac5", :title=>"Talking about Neo4j"}}

```

**NORMAL** > master <asset.rb[+] < ruby < utf-8[unix] < 30% : 9: 81 < ! trailing[3]