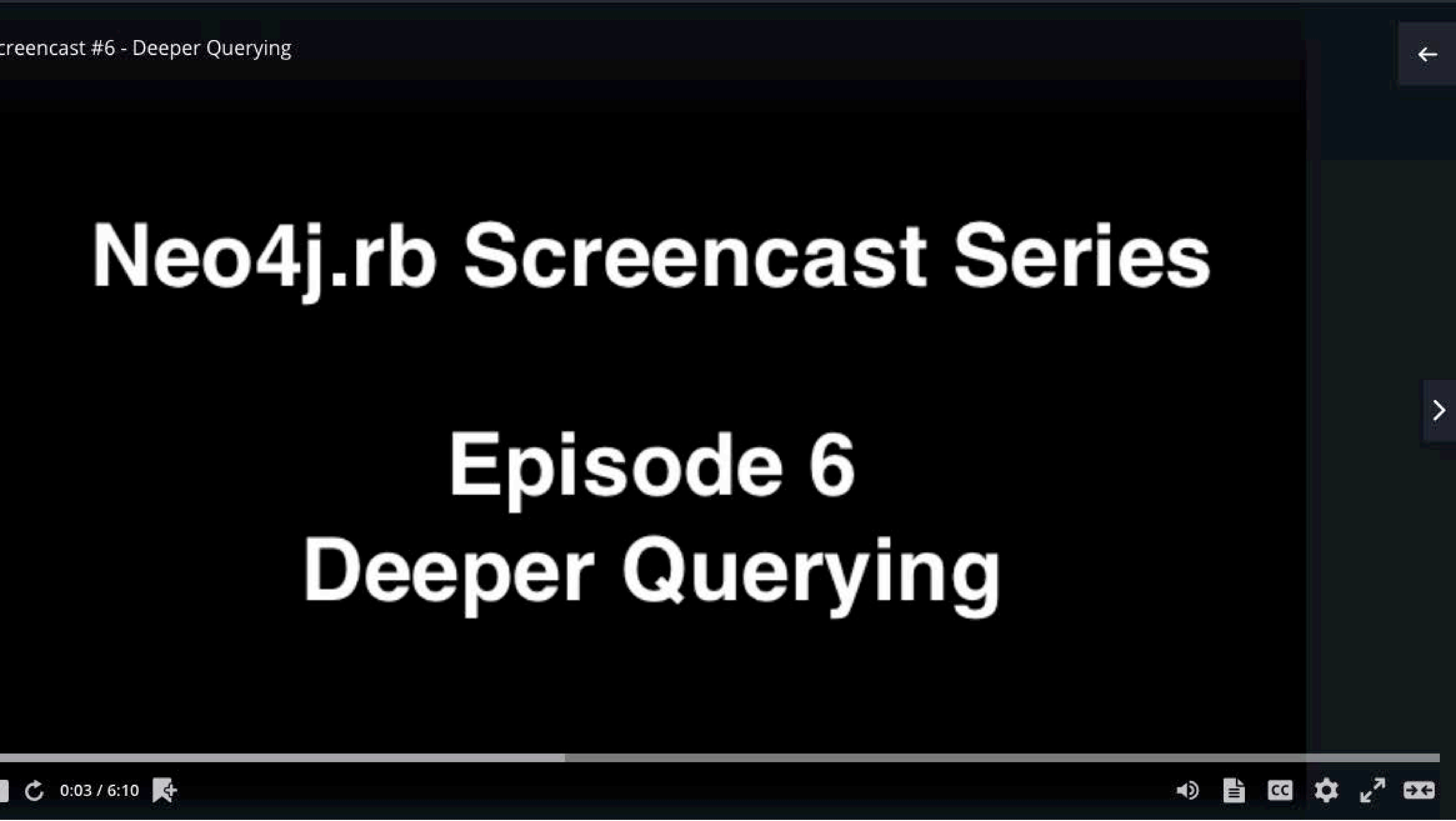
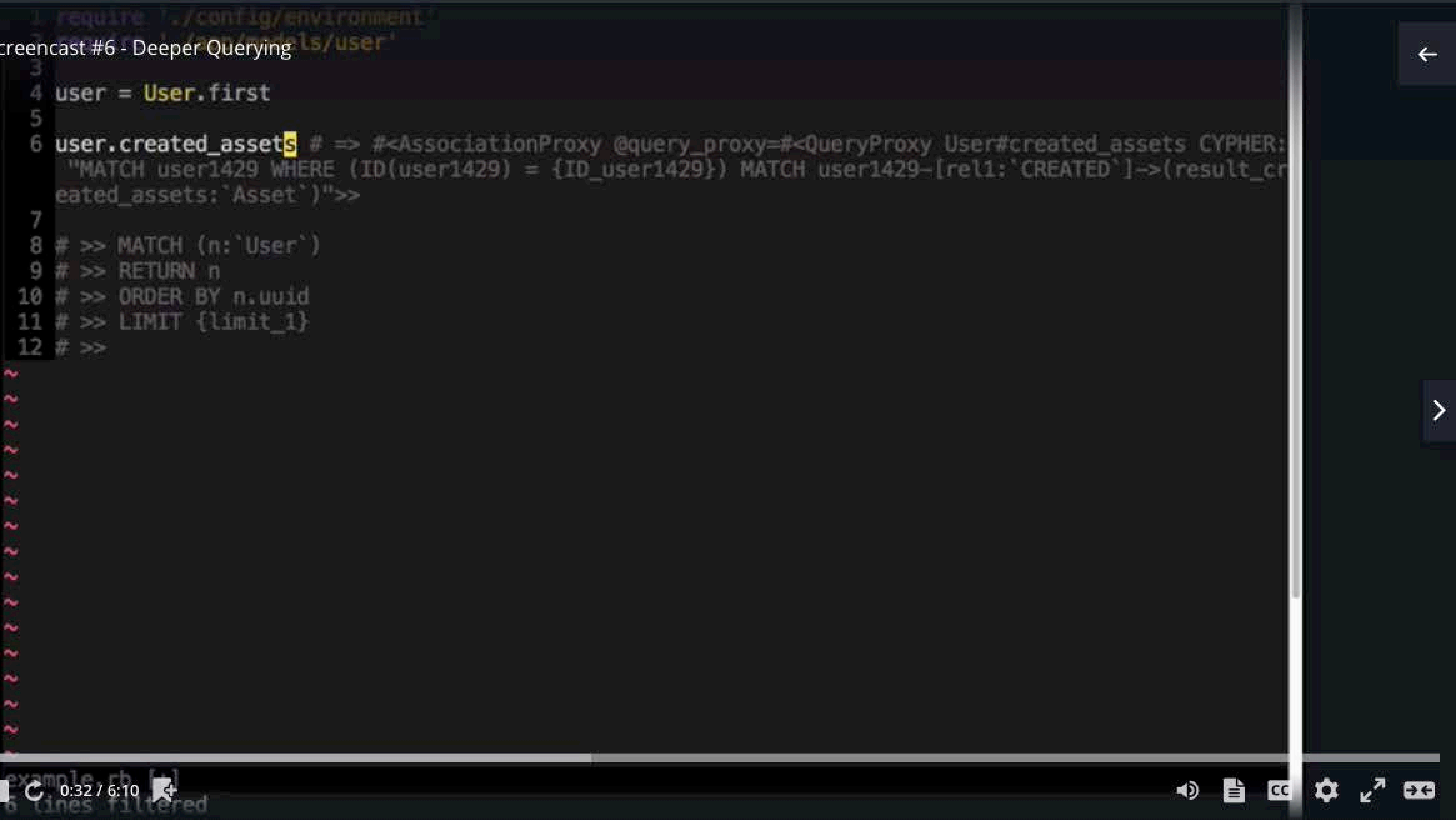


creencast #6 - Deeper Querying

Neo4j.rb Screencast Series

Episode 6
Deeper Querying



```
require './config/environment'
require './app/models/user'

user = User.first

user.created_assets # => #<AssociationProxy @query_proxy=#<QueryProxy User#created_assets CYPHER:
 "MATCH user1429 WHERE (ID(user1429) = {ID_user1429}) MATCH user1429-[rel1:`CREATED`]->(result_cr
eated_assets:`Asset`)">>

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
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example.rb [+]
6 lines filtered
```

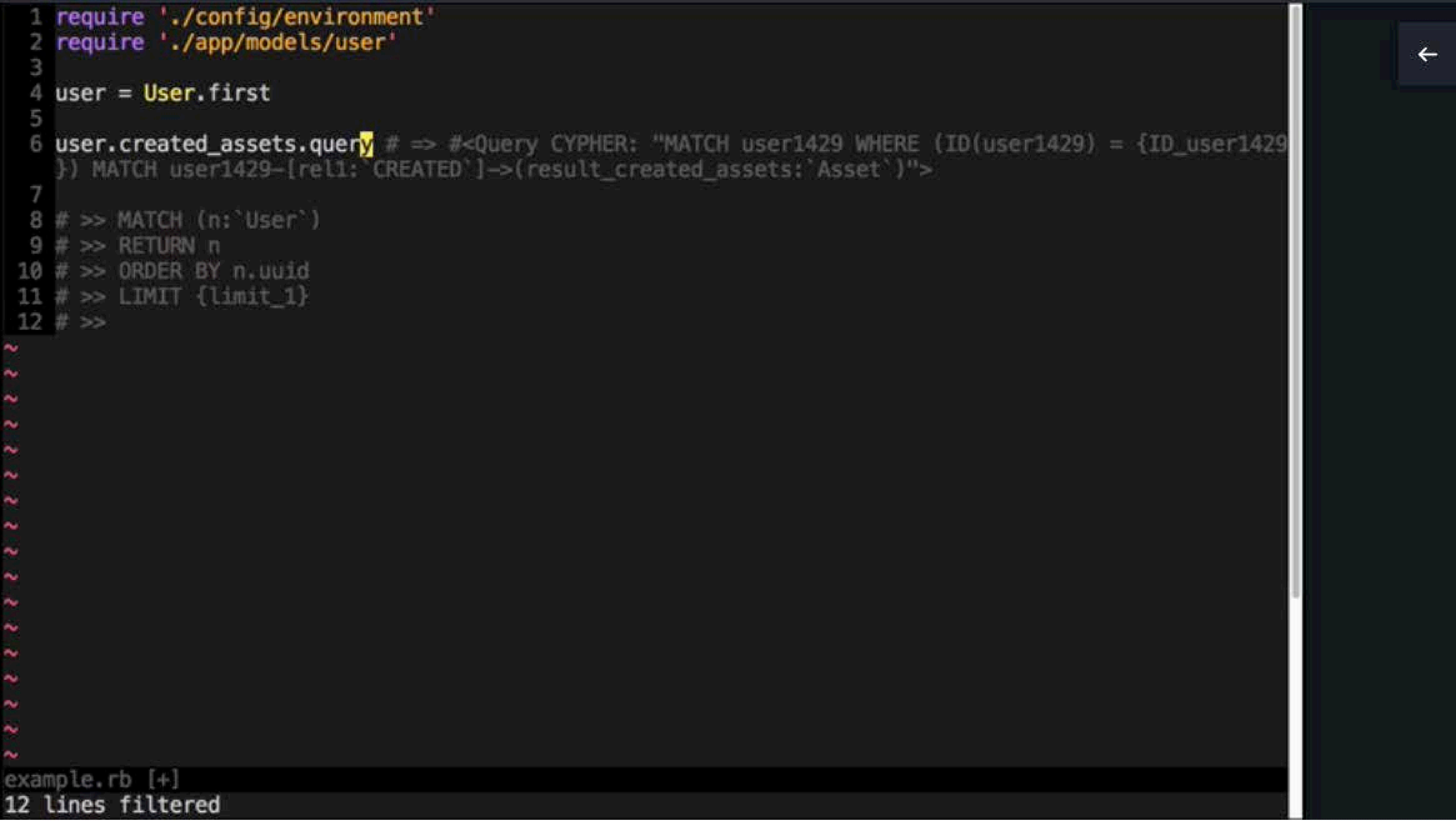

```
require './config/environment'
require './app/models/user'

user = User.first

user.created_assets.query # => #<Query CYPHER: "MATCH user1429 WHERE (ID(user1429) = {ID_user1429}) MATCH user1429-[rel1:`CREATED`]->(result_created_assets:`Asset`)">

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
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example.rb [+]
12 lines filtered
```
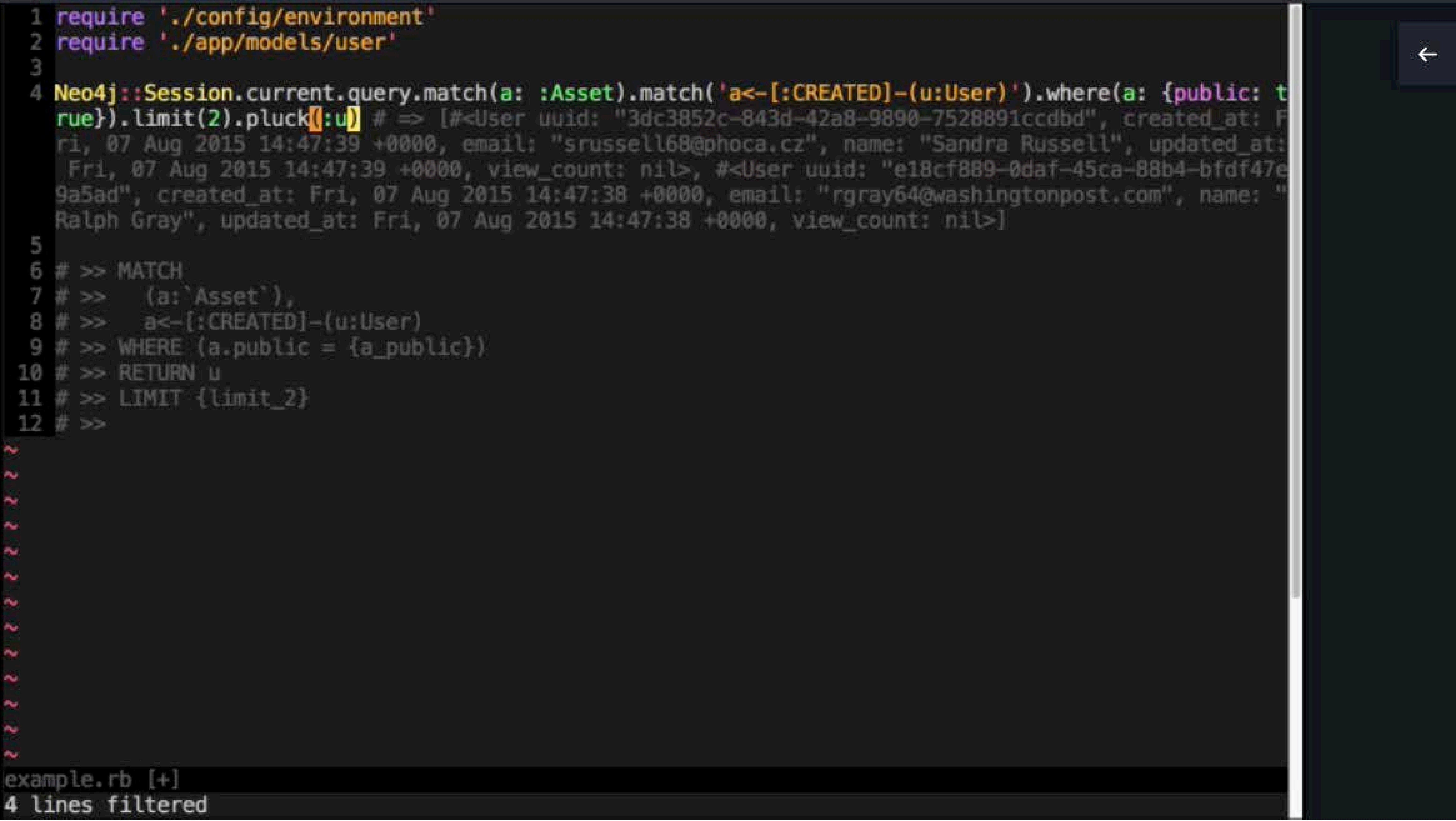
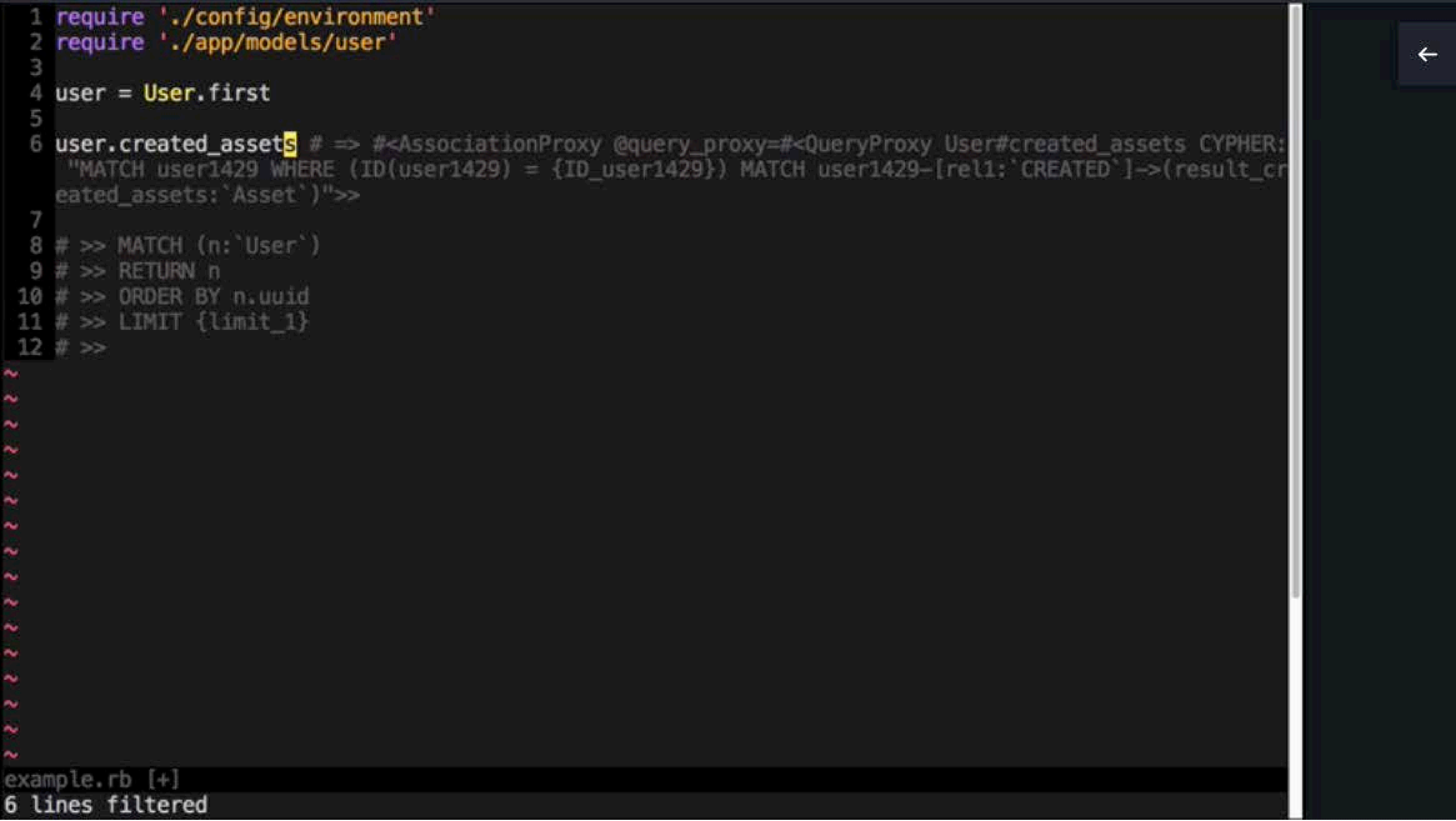
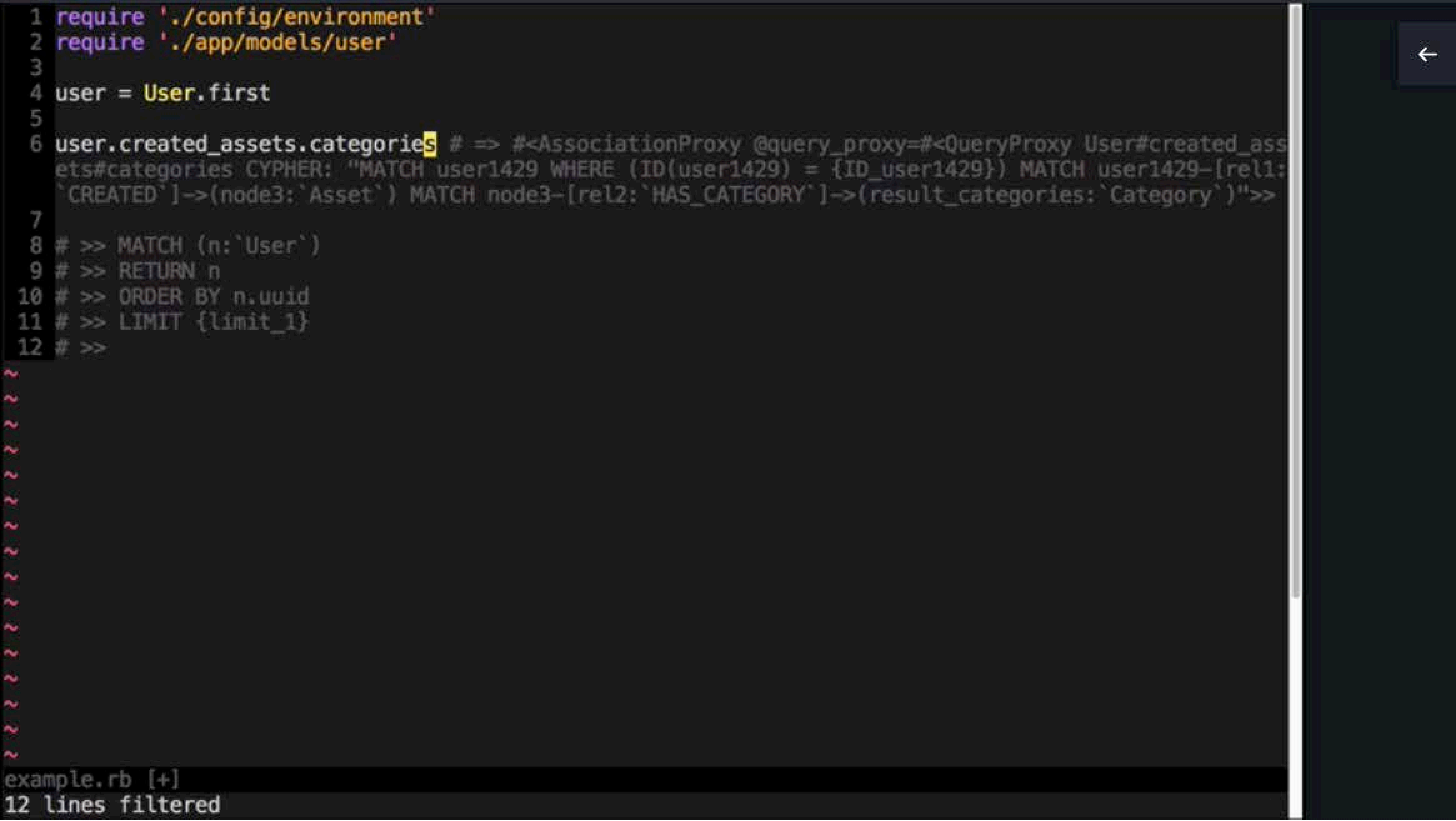



```
require './config/environment'
require './app/models/user'

Neo4j::Session.current.query.match(a: :Asset).match('a<-[:CREATED]-(u:User)').where(a: {public: true}).limit(2).pluck(:u) # => [#<User uuid: "3dc3852c-843d-42a8-9890-7528891ccdbd", created_at: Fri, 07 Aug 2015 14:47:39 +0000, email: "srussell68@phoca.cz", name: "Sandra Russell", updated_at: Fri, 07 Aug 2015 14:47:39 +0000, view_count: nil>, #<User uuid: "e18cf889-0daf-45ca-88b4-bfdf47e9a5ad", created_at: Fri, 07 Aug 2015 14:47:38 +0000, email: "rgray64@washingtonpost.com", name: "Ralph Gray", updated_at: Fri, 07 Aug 2015 14:47:38 +0000, view_count: nil>]

# >> MATCH
# >>   (a:`Asset`),
# >>   a<-[:CREATED]-(u:User)
# >> WHERE (a.public = {a_public})
# >> RETURN u
# >> LIMIT {limit_2}
# >>
```

```
example.rb [+]
4 lines filtered
```



```
require './config/environment'
require './app/models/user'

user = User.first

user.created_assets # => #<AssociationProxy @query_proxy=#<QueryProxy User#created_assets CYPHER: "MATCH user1429 WHERE (ID(user1429) = {ID_user1429}) MATCH user1429-[rel1:`CREATED`]->(result_created_assets:`Asset`)">>

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
~
example.rb [+]
6 lines filtered
```



```
require './config/environment'
require './app/models/user'

user = User.first

user.created_assets.categories # => #<AssociationProxy @query_proxy=#<QueryProxy User#created_assets#categories CYPHER: "MATCH user1429 WHERE (ID(user1429) = {ID_user1429}) MATCH user1429-[rel1:`CREATED`]->(node3:`Asset`) MATCH node3-[rel2:`HAS_CATEGORY`]->(result_categories:`Category`)">>

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
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example.rb [+]
12 lines filtered
```
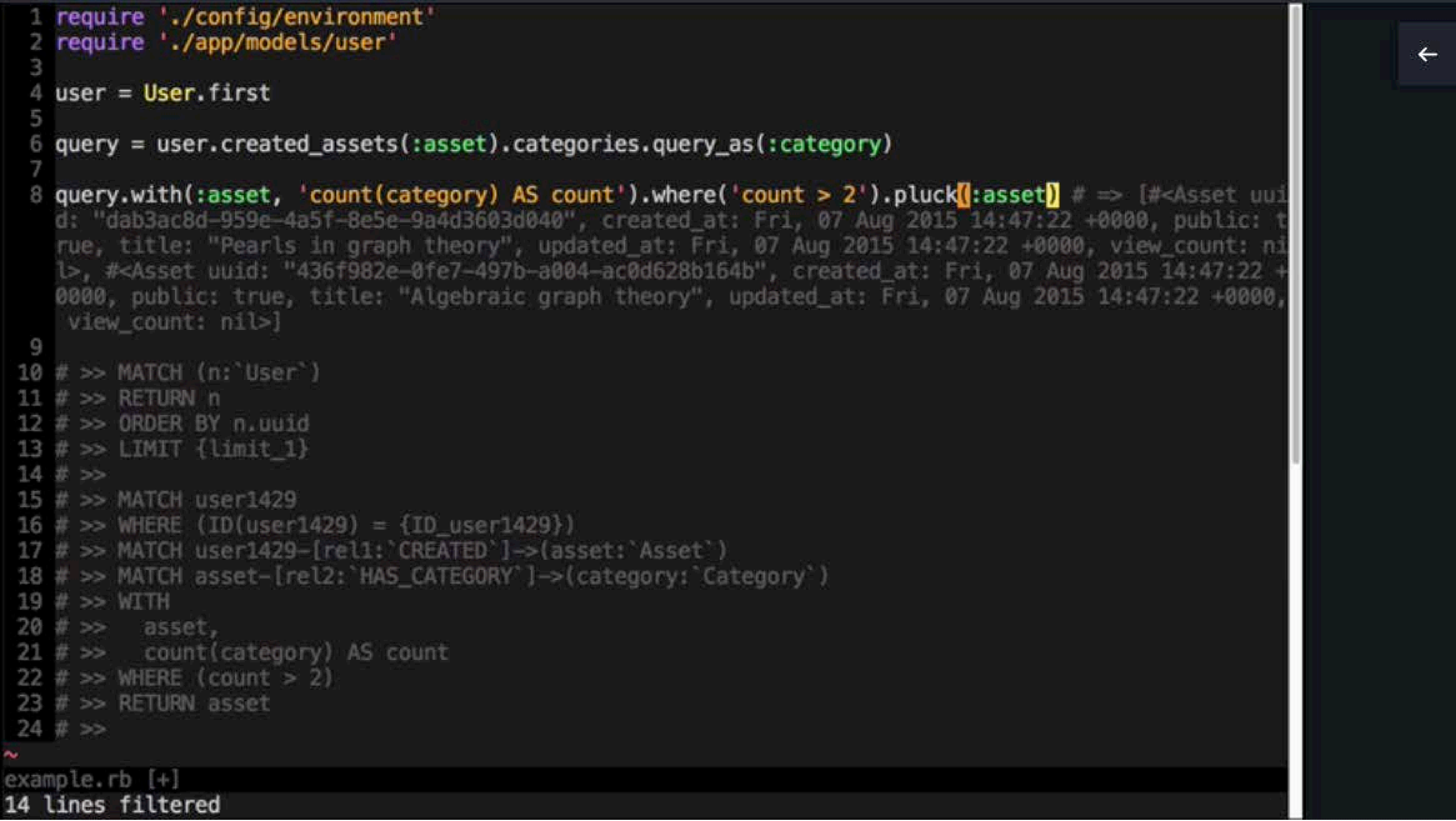
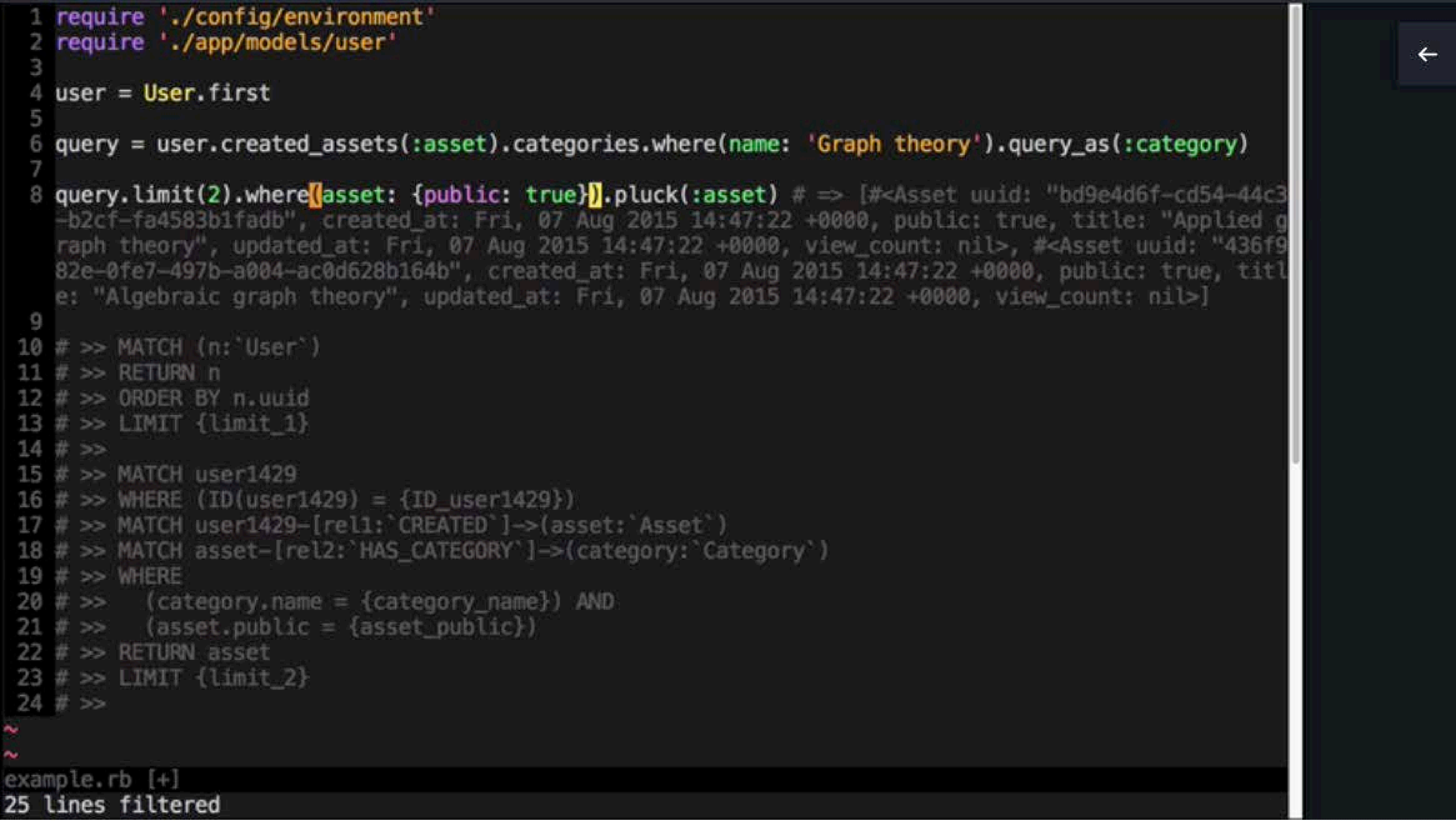
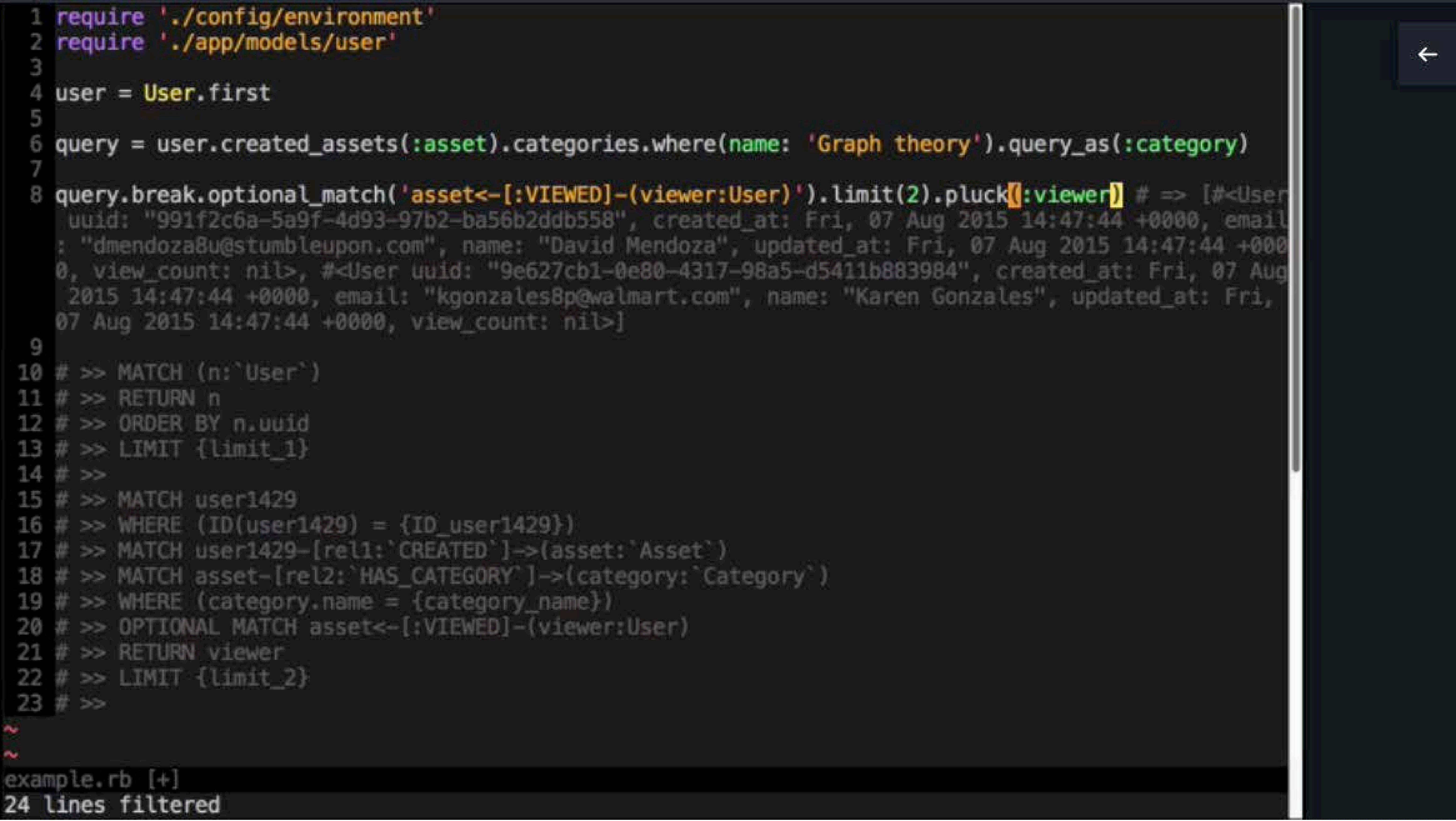



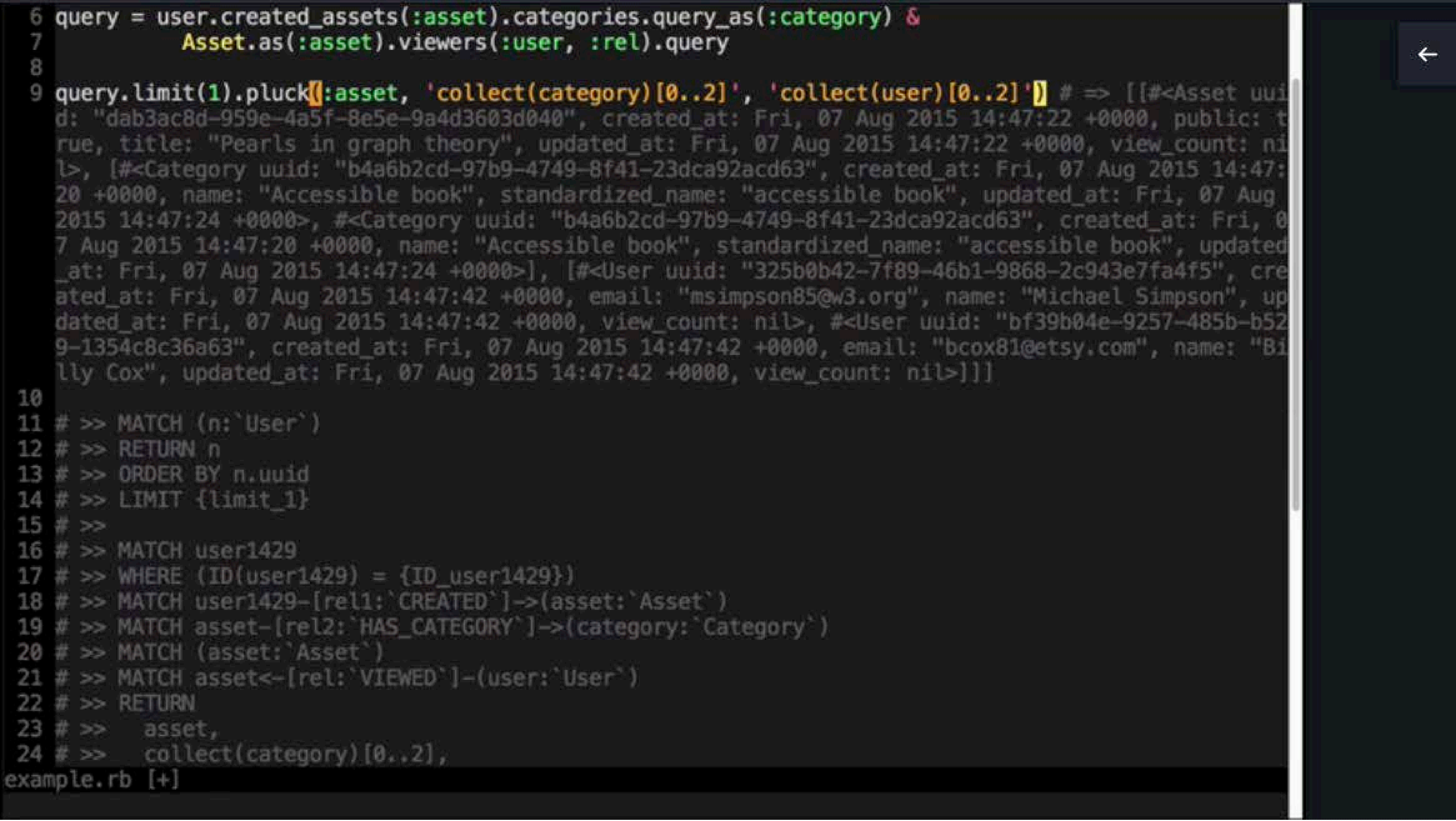
```
require './config/environment'
require './app/models/user'

user = User.first

query = user.created_assets(:asset).categories.query_as(:category)

query.with(:asset, 'count(category) AS count').where('count > 2').pluck(:asset) # => [#<Asset uui
d: "dab3ac8d-959e-4a5f-8e5e-9a4d3603d040", created_at: Fri, 07 Aug 2015 14:47:22 +0000, public: t
rue, title: "Pearls in graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000, view_count: ni
l>, #<Asset uuid: "436f982e-0fe7-497b-a004-ac0d628b164b", created_at: Fri, 07 Aug 2015 14:47:22 +
0000, public: true, title: "Algebraic graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000,
 view_count: nil>]

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
# >> MATCH user1429
# >> WHERE (ID(user1429) = {ID_user1429})
# >> MATCH user1429-[rel1:`CREATED`]->(asset:`Asset`)
# >> MATCH asset-[rel2:`HAS_CATEGORY`]->(category:`Category`)
# >> WITH
# >>   asset,
# >>   count(category) AS count
# >> WHERE (count > 2)
# >> RETURN asset
# >>
~
example.rb [+]
14 lines filtered
```



```
require './config/environment'
require './app/models/user'

user = User.first

query = user.created_assets(:asset).categories.where(name: 'Graph theory').query_as(:category)

query.limit(2).where(asset: {public: true}).pluck(:asset) # => [#<Asset uuid: "bd9e4d6f-cd54-44c3-b2cf-fa4583b1fadb", created_at: Fri, 07 Aug 2015 14:47:22 +0000, public: true, title: "Applied graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000, view_count: nil>, #<Asset uuid: "436f982e-0fe7-497b-a004-ac0d628b164b", created_at: Fri, 07 Aug 2015 14:47:22 +0000, public: true, title: "Algebraic graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000, view_count: nil>]

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
# >> MATCH user1429
# >> WHERE (ID(user1429) = {ID_user1429})
# >> MATCH user1429-[rel1:`CREATED`]->(asset:`Asset`)
# >> MATCH asset-[rel2:`HAS_CATEGORY`]->(category:`Category`)
# >> WHERE
# >>   (category.name = {category_name}) AND
# >>   (asset.public = {asset_public})
# >> RETURN asset
# >> LIMIT {limit_2}
# >>
~
~
example.rb [+]
25 lines filtered
```

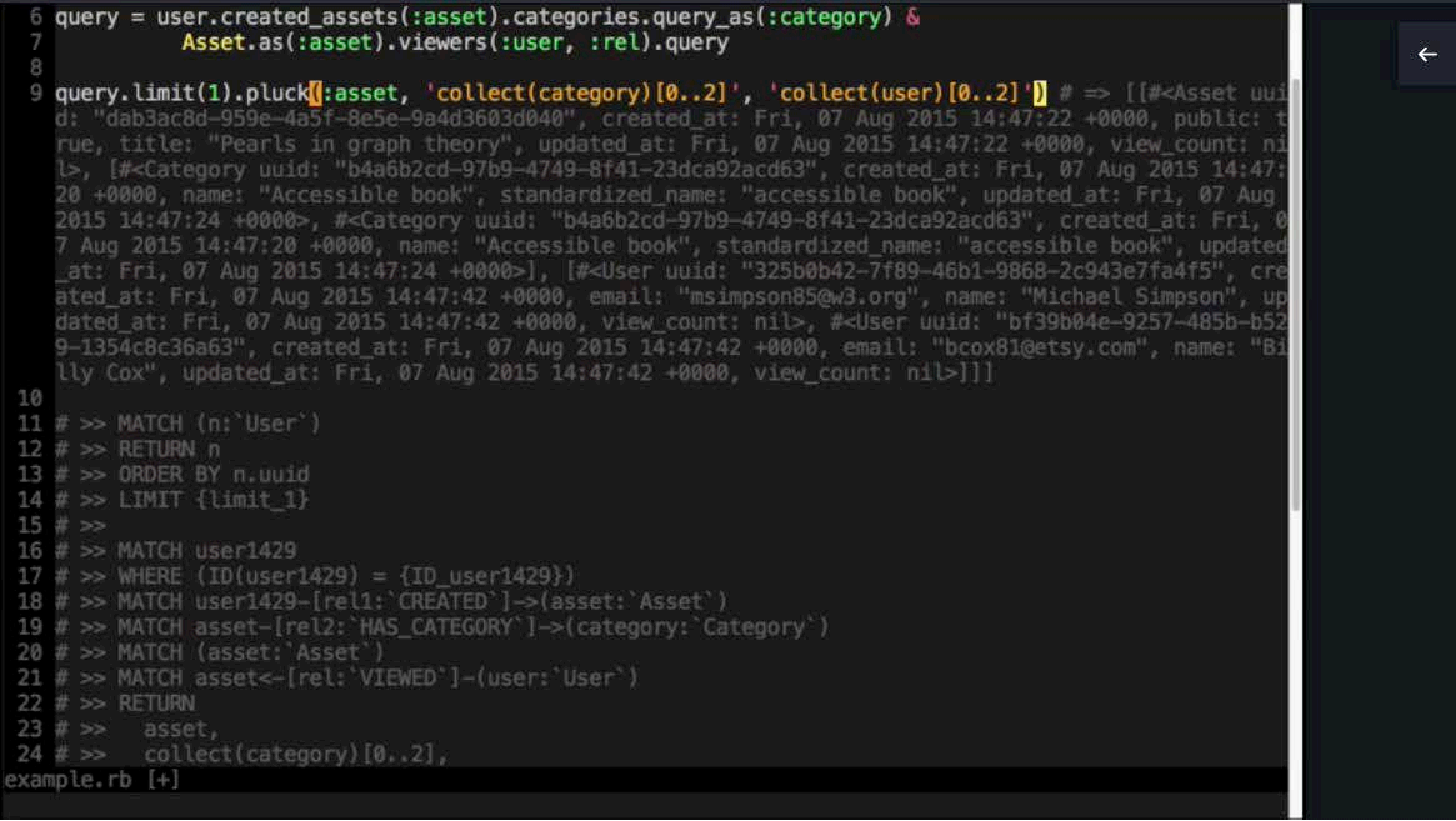


```
require './config/environment'
require './app/models/user'

user = User.first

query = user.created_assets(:asset).categories.where(name: 'Graph theory').query_as(:category)

query.break.optional_match('asset<-[:VIEWED]-(viewer:User)').limit(2).pluck(:viewer) # => [#<User
 uuid: "991f2c6a-5a9f-4d93-97b2-ba56b2ddb558", created_at: Fri, 07 Aug 2015 14:47:44 +0000, email
: "dmendoza8u@stumbleupon.com", name: "David Mendoza", updated_at: Fri, 07 Aug 2015 14:47:44 +000
0, view_count: nil>, #<User uuid: "9e627cb1-0e80-4317-98a5-d5411b883984", created_at: Fri, 07 Aug
 2015 14:47:44 +0000, email: "kgonzales8p@walmart.com", name: "Karen Gonzales", updated_at: Fri,
07 Aug 2015 14:47:44 +0000, view_count: nil>]

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
# >> MATCH user1429
# >> WHERE (ID(user1429) = {ID_user1429})
# >> MATCH user1429-[rel1:`CREATED`]->(asset:`Asset`)
# >> MATCH asset-[rel2:`HAS_CATEGORY`]->(category:`Category`)
# >> WHERE (category.name = {category_name})
# >> OPTIONAL MATCH asset<-[:VIEWED]-(viewer:User)
# >> RETURN viewer
# >> LIMIT {limit_2}
# >>
~
~
example.rb [+]
24 lines filtered
```



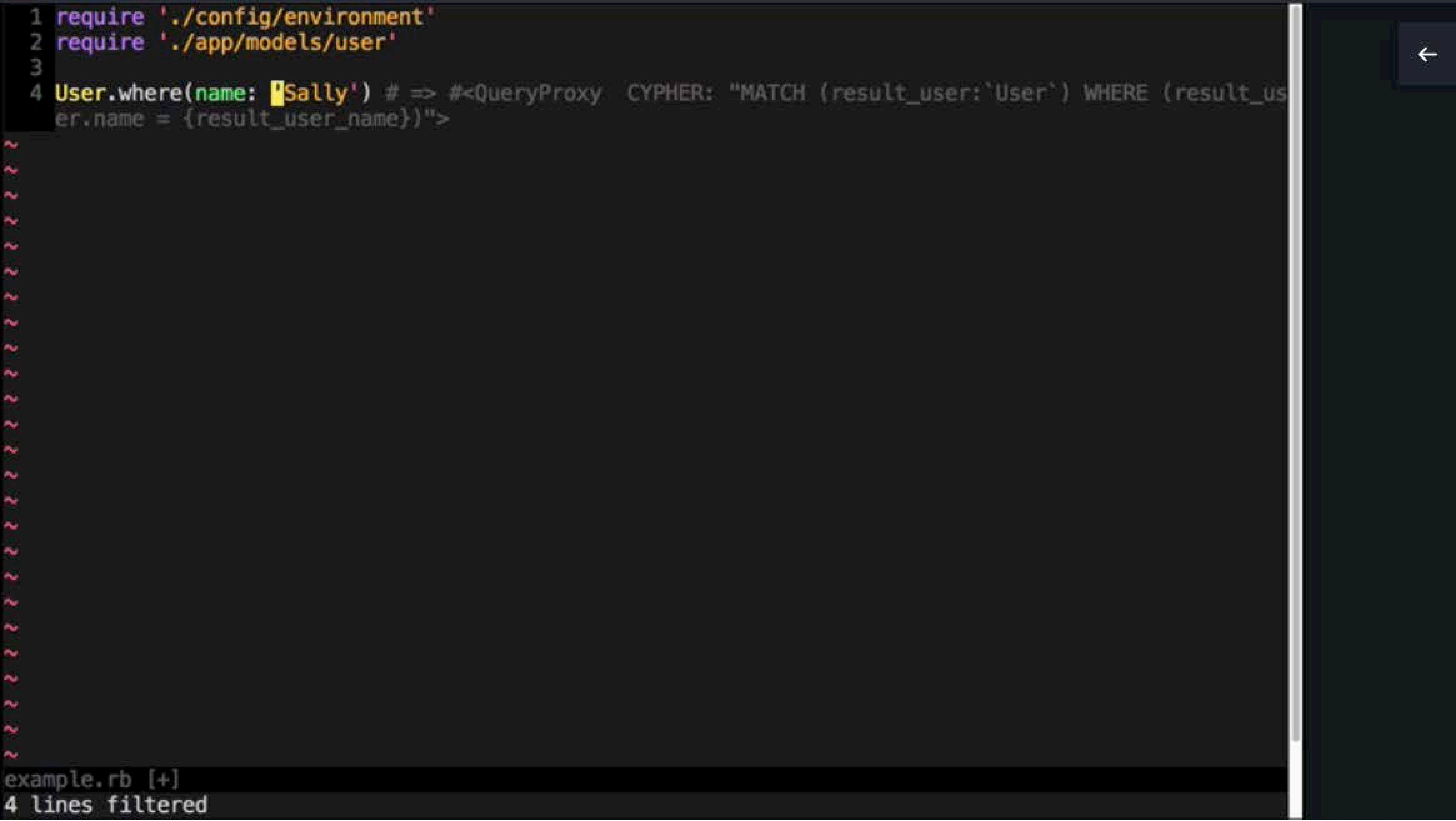
```ruby
query = user.created_assets(:asset).categories.query_as(:category) &
          Asset.as(:asset).viewers(:user, :rel).query

query.limit(1).pluck(:asset, 'collect(category)[0..2]', 'collect(user)[0..2]') # => [[#<Asset uui
d: "dab3ac8d-959e-4a5f-8e5e-9a4d3603d040", created_at: Fri, 07 Aug 2015 14:47:22 +0000, public: t
rue, title: "Pearls in graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000, view_count: ni
l>, [#<Category uuid: "b4a6b2cd-97b9-4749-8f41-23dca92acd63", created_at: Fri, 07 Aug 2015 14:47:
20 +0000, name: "Accessible book", standardized_name: "accessible book", updated_at: Fri, 07 Aug
2015 14:47:24 +0000>, #<Category uuid: "b4a6b2cd-97b9-4749-8f41-23dca92acd63", created_at: Fri, 0
7 Aug 2015 14:47:20 +0000, name: "Accessible book", standardized_name: "accessible book", updated
_at: Fri, 07 Aug 2015 14:47:24 +0000>], [#<User uuid: "325b0b42-7f89-46b1-9868-2c943e7fa4f5", cre
ated_at: Fri, 07 Aug 2015 14:47:42 +0000, email: "msimpson85@w3.org", name: "Michael Simpson", up
dated_at: Fri, 07 Aug 2015 14:47:42 +0000, view_count: nil>, #<User uuid: "bf39b04e-9257-485b-b52
9-1354c8c36a63", created_at: Fri, 07 Aug 2015 14:47:42 +0000, email: "bcox81@etsy.com", name: "Bi
lly Cox", updated_at: Fri, 07 Aug 2015 14:47:42 +0000, view_count: nil>]]]

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
# >> MATCH user1429
# >> WHERE (ID(user1429) = {ID_user1429})
# >> MATCH user1429-[rel1:`CREATED`]->(asset:`Asset`)
# >> MATCH asset-[rel2:`HAS_CATEGORY`]->(category:`Category`)
# >> MATCH (asset:`Asset`)
# >> MATCH asset<-[rel:`VIEWED`]-(user:`User`)
# >> RETURN
# >>   asset,
# >>   collect(category)[0..2],
```

example.rb [+]



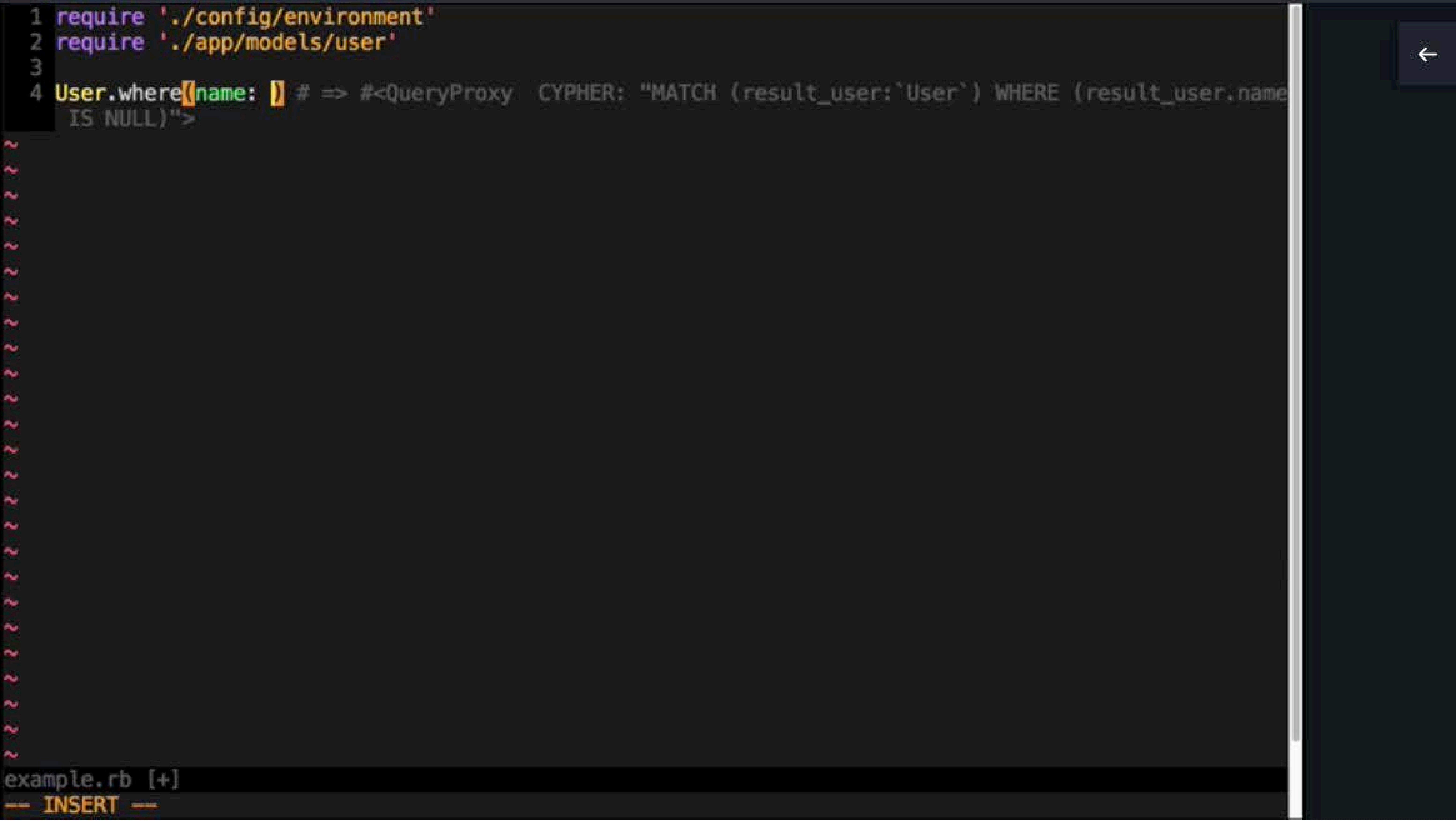
```
query = user.created_assets(:asset).categories.query_as(:category) &
          Asset.as(:asset).viewers(:user, :rel).query

query.limit(1).pluck(:asset, 'collect(category)[0..2]', 'collect(user)[0..2]') # => [[#<Asset uui
d: "dab3ac8d-959e-4a5f-8e5e-9a4d3603d040", created_at: Fri, 07 Aug 2015 14:47:22 +0000, public: t
rue, title: "Pearls in graph theory", updated_at: Fri, 07 Aug 2015 14:47:22 +0000, view_count: ni
l>, [#<Category uuid: "b4a6b2cd-97b9-4749-8f41-23dca92acd63", created_at: Fri, 07 Aug 2015 14:47:
20 +0000, name: "Accessible book", standardized_name: "accessible book", updated_at: Fri, 07 Aug
2015 14:47:24 +0000>, #<Category uuid: "b4a6b2cd-97b9-4749-8f41-23dca92acd63", created_at: Fri, 0
7 Aug 2015 14:47:20 +0000, name: "Accessible book", standardized_name: "accessible book", updated
_at: Fri, 07 Aug 2015 14:47:24 +0000>], [#<User uuid: "325b0b42-7f89-46b1-9868-2c943e7fa4f5", cre
ated_at: Fri, 07 Aug 2015 14:47:42 +0000, email: "msimpson85@w3.org", name: "Michael Simpson", up
dated_at: Fri, 07 Aug 2015 14:47:42 +0000, view_count: nil>, #<User uuid: "bf39b04e-9257-485b-b52
9-1354c8c36a63", created_at: Fri, 07 Aug 2015 14:47:42 +0000, email: "bcox81@etsy.com", name: "Bi
lly Cox", updated_at: Fri, 07 Aug 2015 14:47:42 +0000, view_count: nil>]]]

# >> MATCH (n:`User`)
# >> RETURN n
# >> ORDER BY n.uuid
# >> LIMIT {limit_1}
# >>
# >> MATCH user1429
# >> WHERE (ID(user1429) = {ID_user1429})
# >> MATCH user1429-[rel1:`CREATED`]->(asset:`Asset`)
# >> MATCH asset-[rel2:`HAS_CATEGORY`]->(category:`Category`)
# >> MATCH (asset:`Asset`)
# >> MATCH asset<-[rel:`VIEWED`]-(user:`User`)
# >> RETURN
# >>   asset,
# >>   collect(category)[0..2],
```

```
example.rb [+]
```



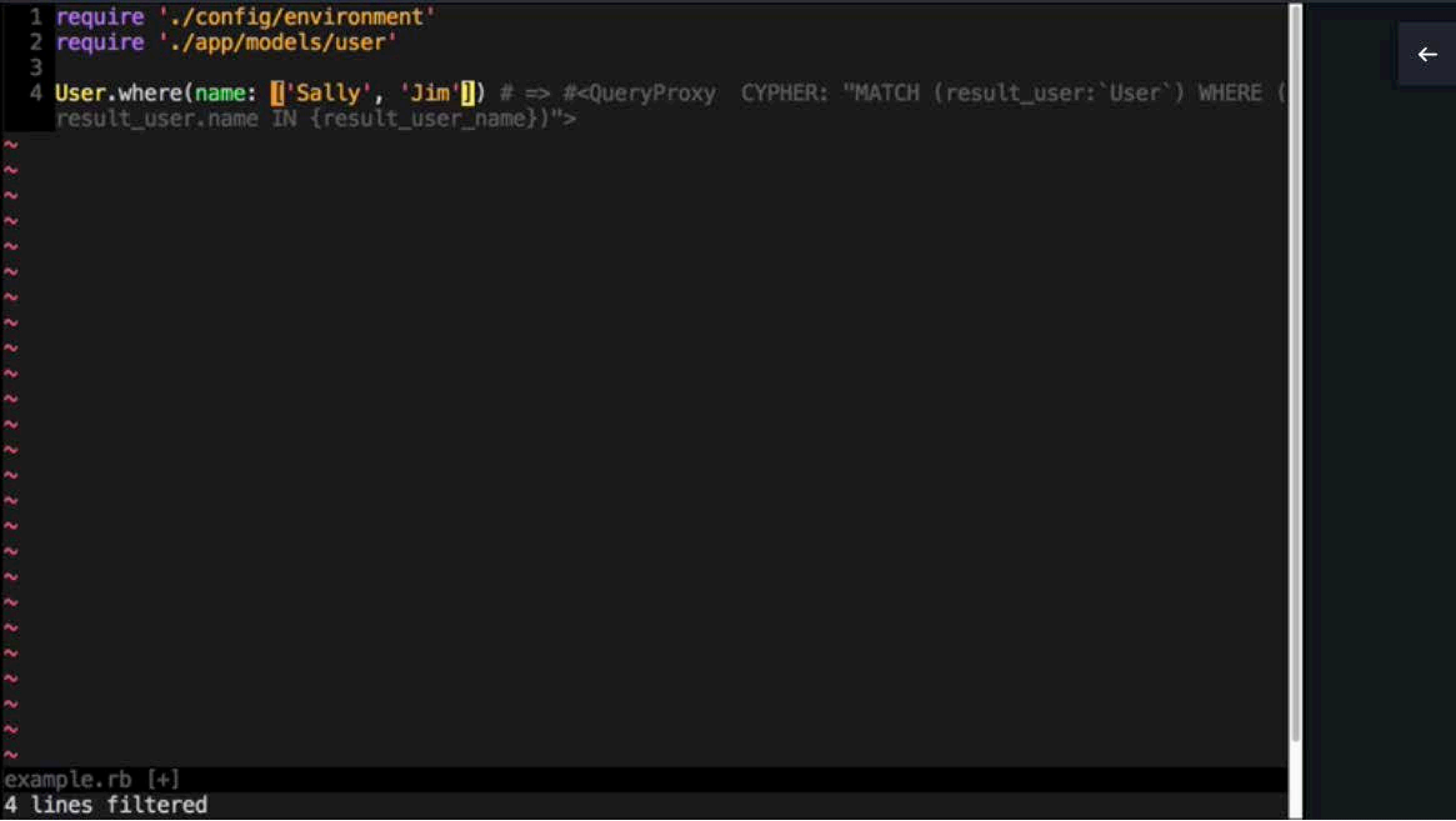
```ruby
require './config/environment'
require './app/models/user'

User.where(name: 'Sally') # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user.name = {result_user_name})">
```

```
example.rb [+]
4 lines filtered
```



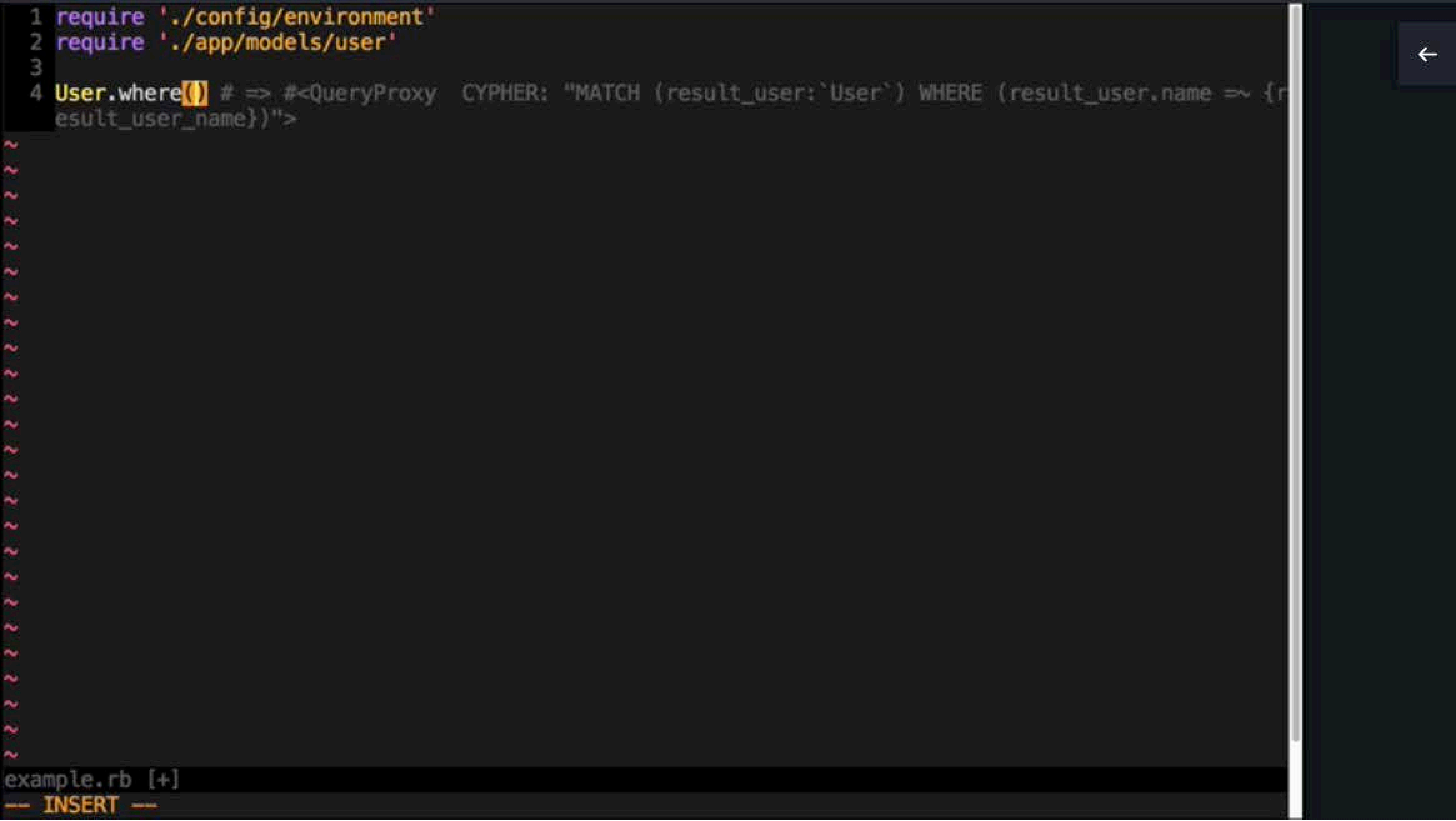
```ruby
require './config/environment'
require './app/models/user'

User.where(name: ) # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user.name IS NULL)">
```

```
example.rb [+]
-- INSERT --
```



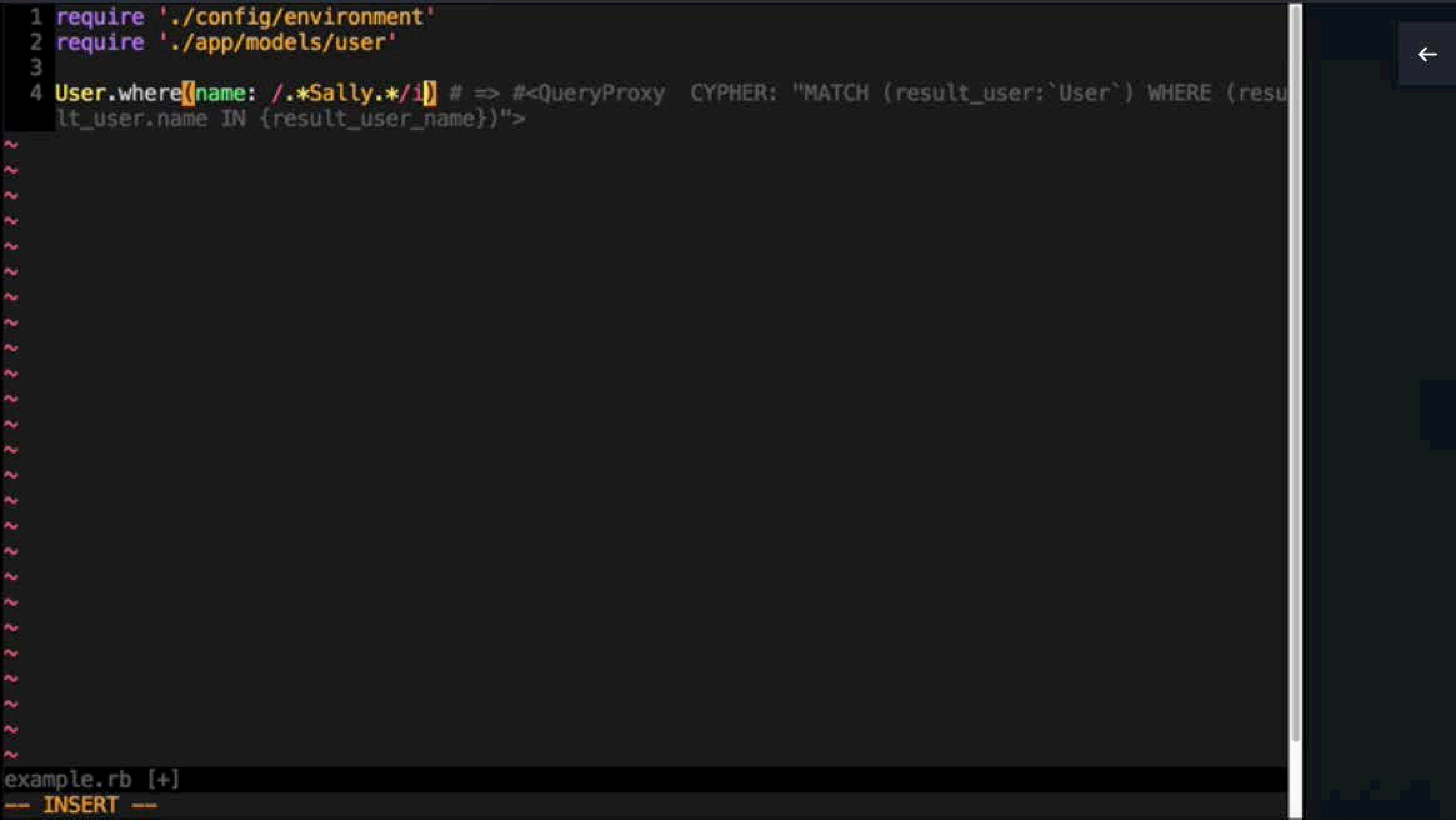
```ruby
require './config/environment'
require './app/models/user'

User.where(name: ['Sally', 'Jim']) # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user.name IN {result_user_name})">
```

```
example.rb [+]
4 lines filtered
```



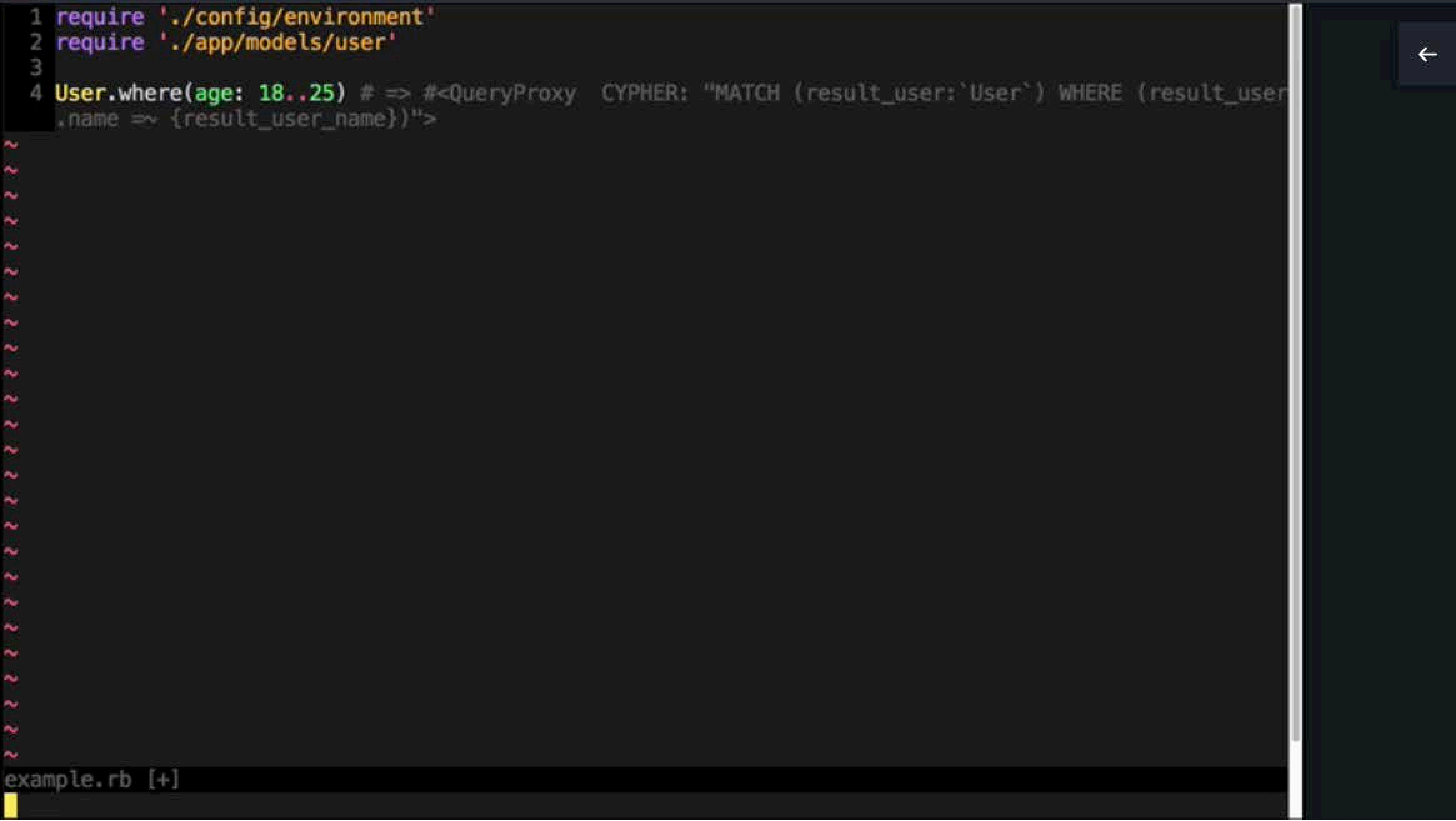
```
require './config/environment'
require './app/models/user'

User.where() # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user.name =~ {result_user_name})">
```

```
example.rb [+]
-- INSERT --
```



```ruby
require './config/environment'
require './app/models/user'

User.where(name: /.*Sally.*/i) # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user.name IN {result_user_name})">
```

```
example.rb [+]
-- INSERT --
```



```
require './config/environment'
require './app/models/user'

User.where(age: 18..25) # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (result_user
.name =~ {result_user_name})">
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example.rb [+]
```
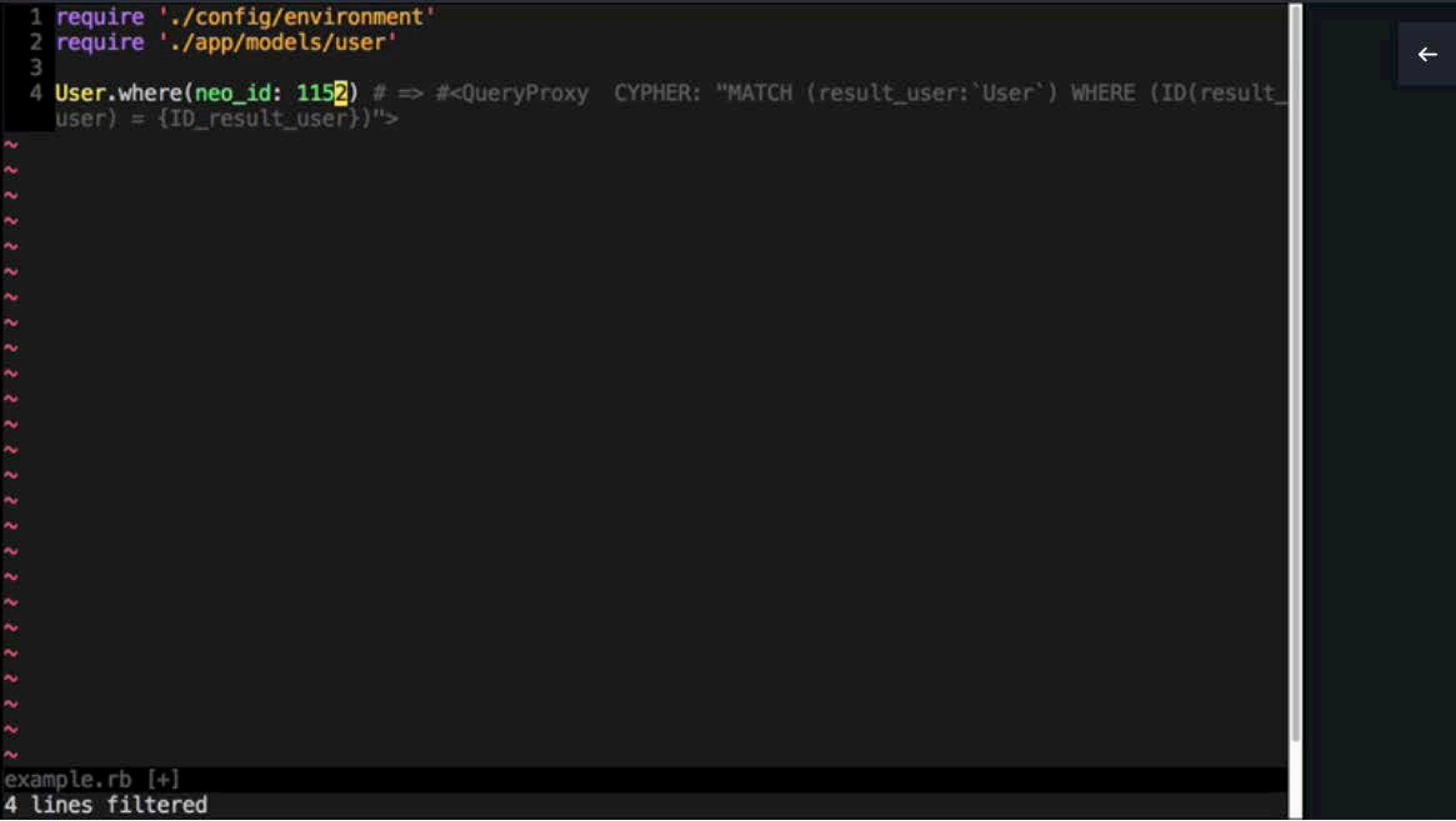
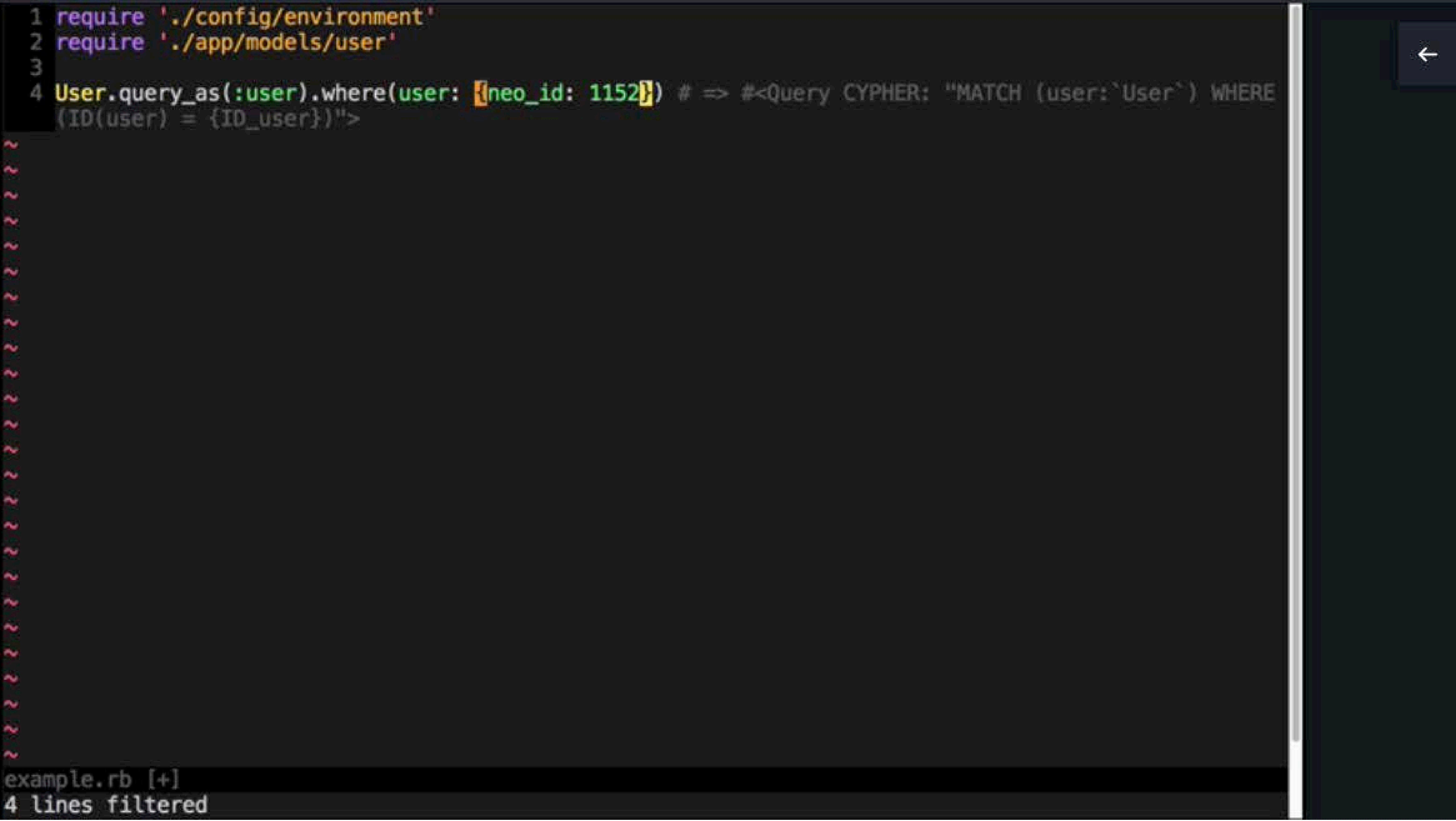



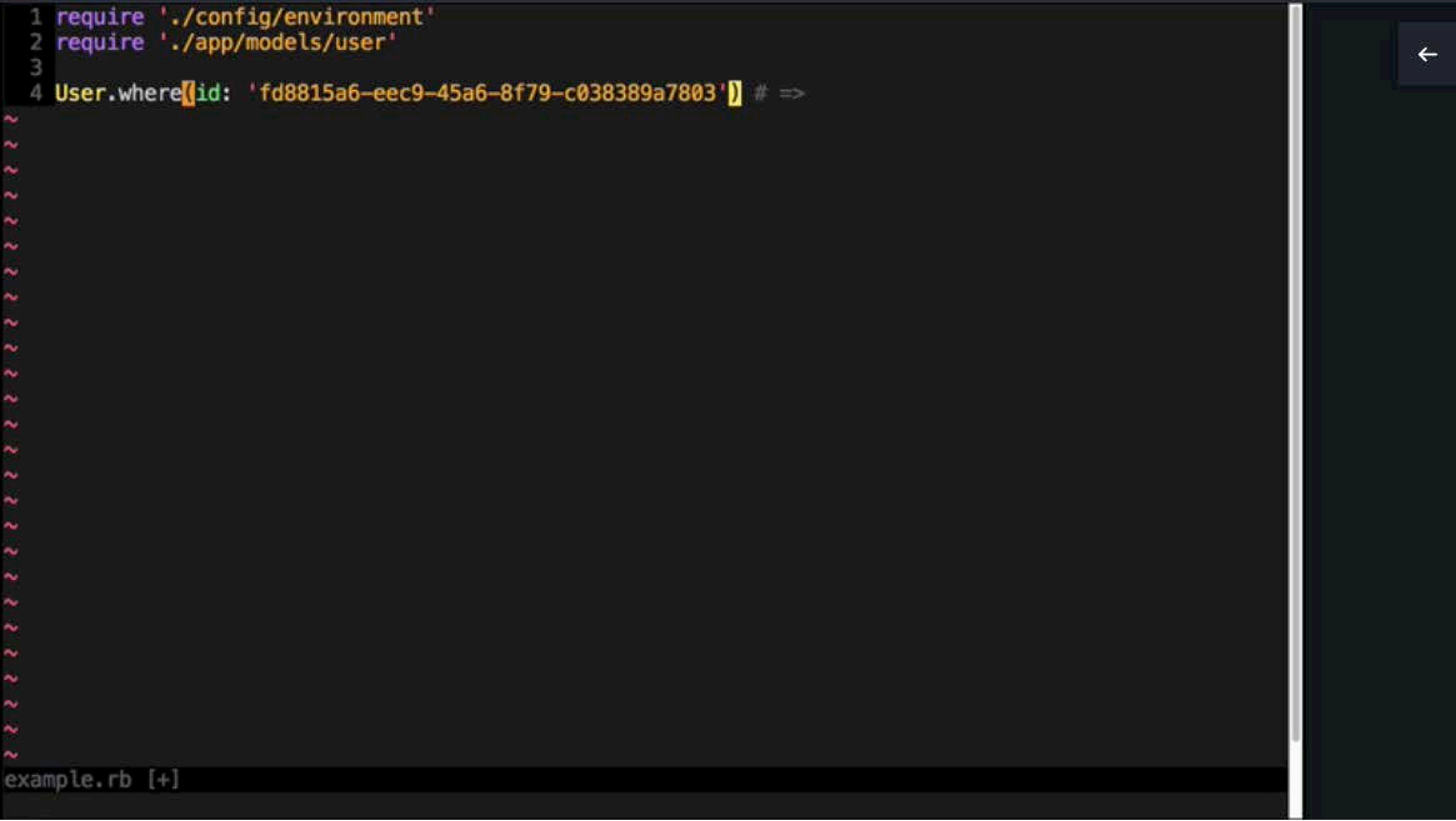
```ruby
require './config/environment'
require './app/models/user'

User.where(neo_id: 1152) # => #<QueryProxy  CYPHER: "MATCH (result_user:`User`) WHERE (ID(result_user) = {ID_result_user})">
```

```
example.rb [+]
4 lines filtered
```



```ruby
require './config/environment'
require './app/models/user'

User.query_as(:user).where(user: {neo_id: 1152}) # => #<Query CYPHER: "MATCH (user:`User`) WHERE (ID(user) = {ID_user})">
```

```
example.rb [+]
4 lines filtered
```



```ruby
require './config/environment'
require './app/models/user'

User.where(id: 'fd8815a6-eec9-45a6-8f79-c038389a7803') # =>
```