

Рабочая тетрадь №7

*База данных: **Neo4j***

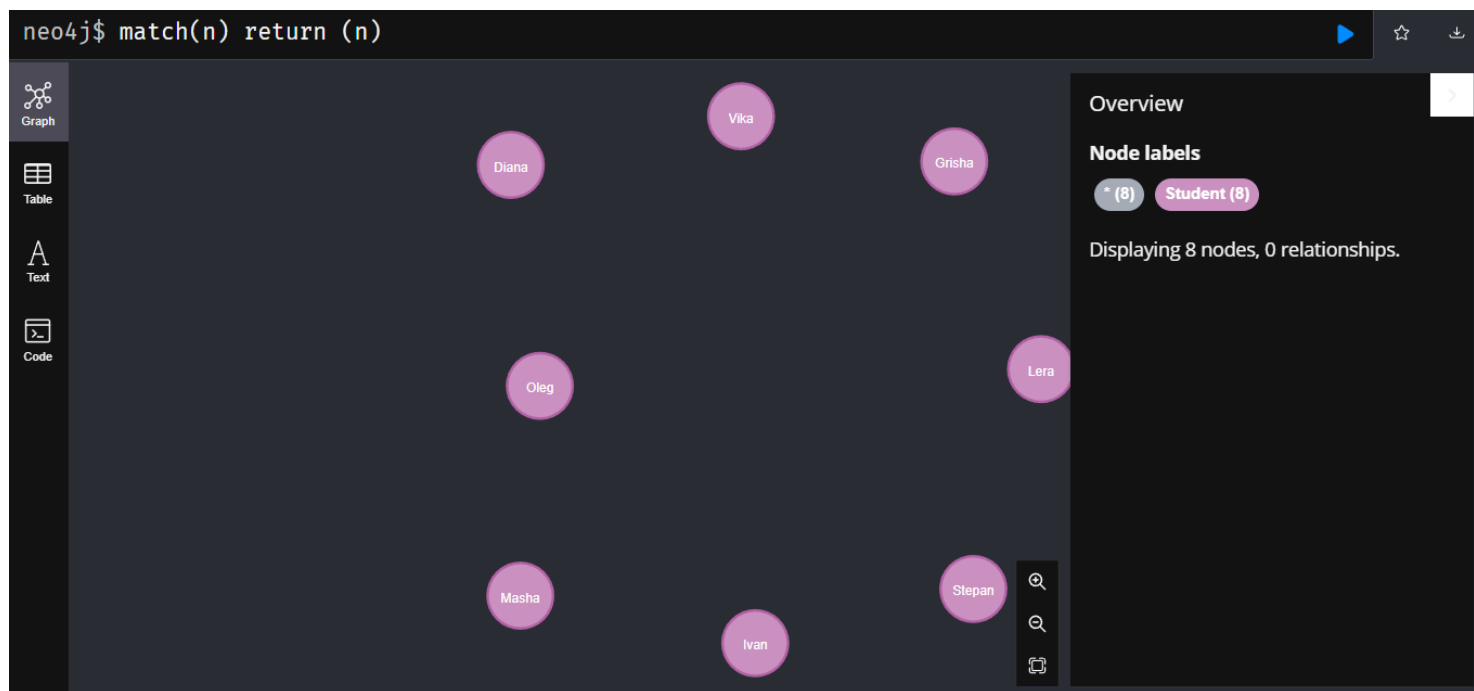
Рабочая тетрадь №7

Основные требования:

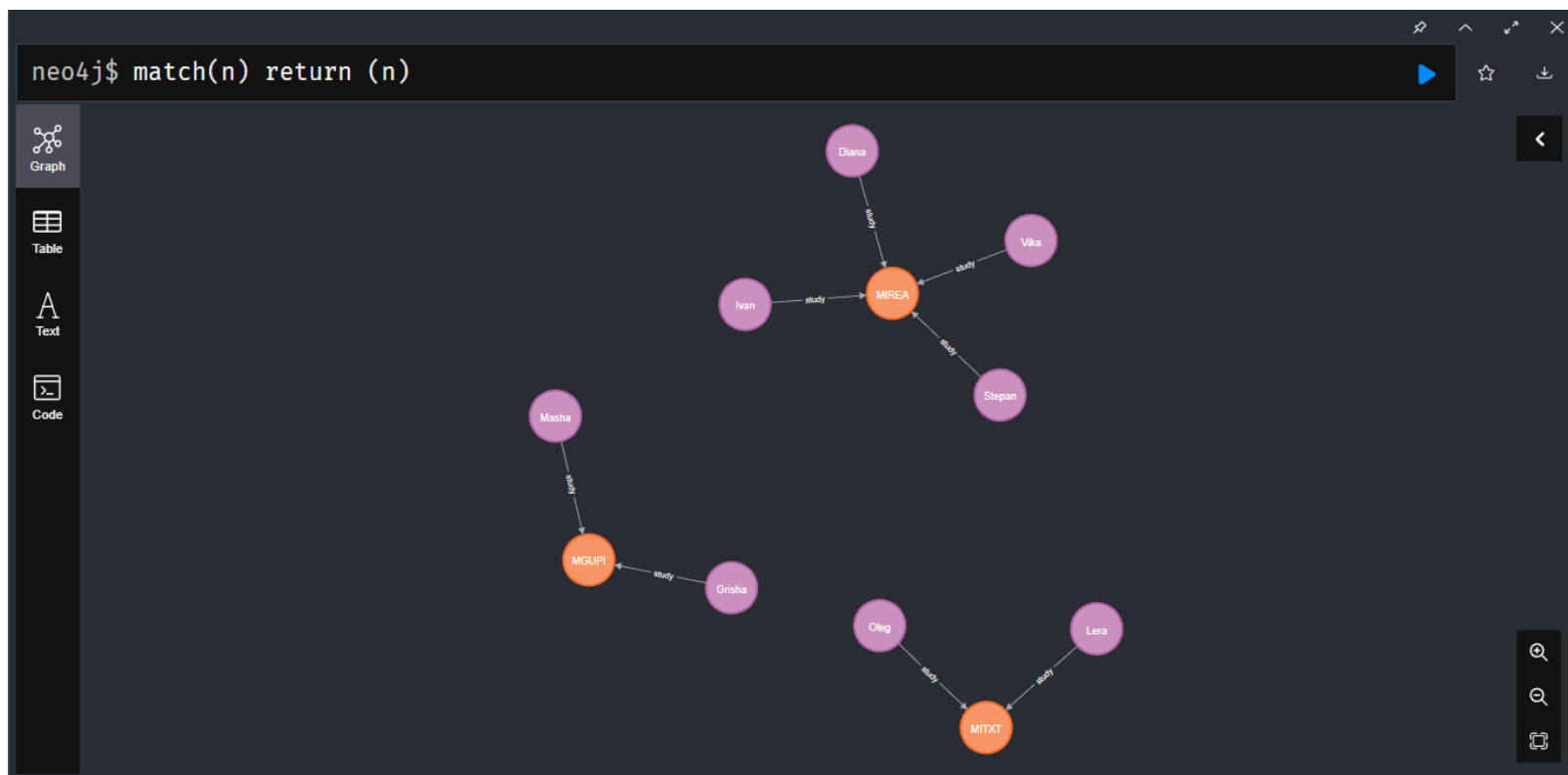
- *Выполнение команд производится в терминале или в графическом редакторе*
- *Результат работы команды предоставляется в виде скриншота*
- *Оформление ведется в удобном текстовом редакторе*

- Рабочие тетради должны предоставляться на проверку в формате .pdf

Рабочая тетрадь №7



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```
1 MATCH (a:Student)
2 WITH a.name AS name, collect(a) AS students
3 UNWIND students AS a
4 UNWIND students AS b
5 WITH name, a, b
6 WHERE a < b
7 RETURN a, b LIMIT 50
```

(no changes, no records)

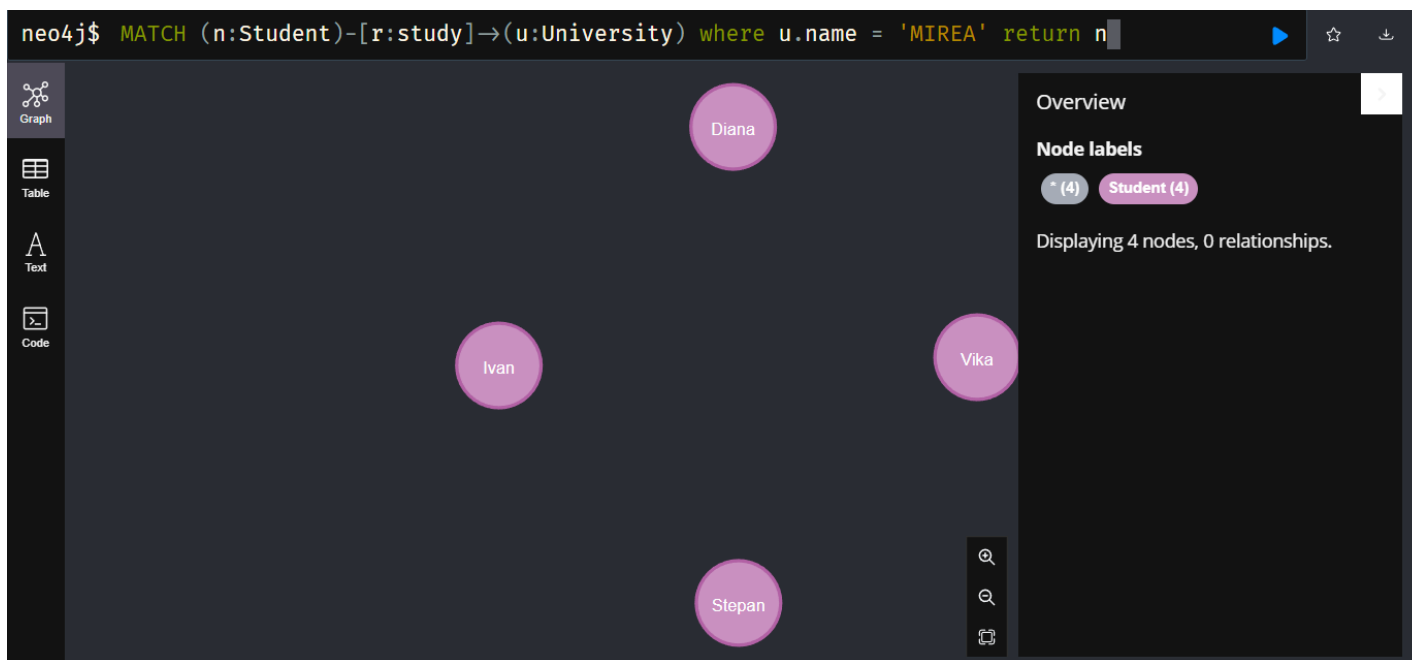
Table

Code

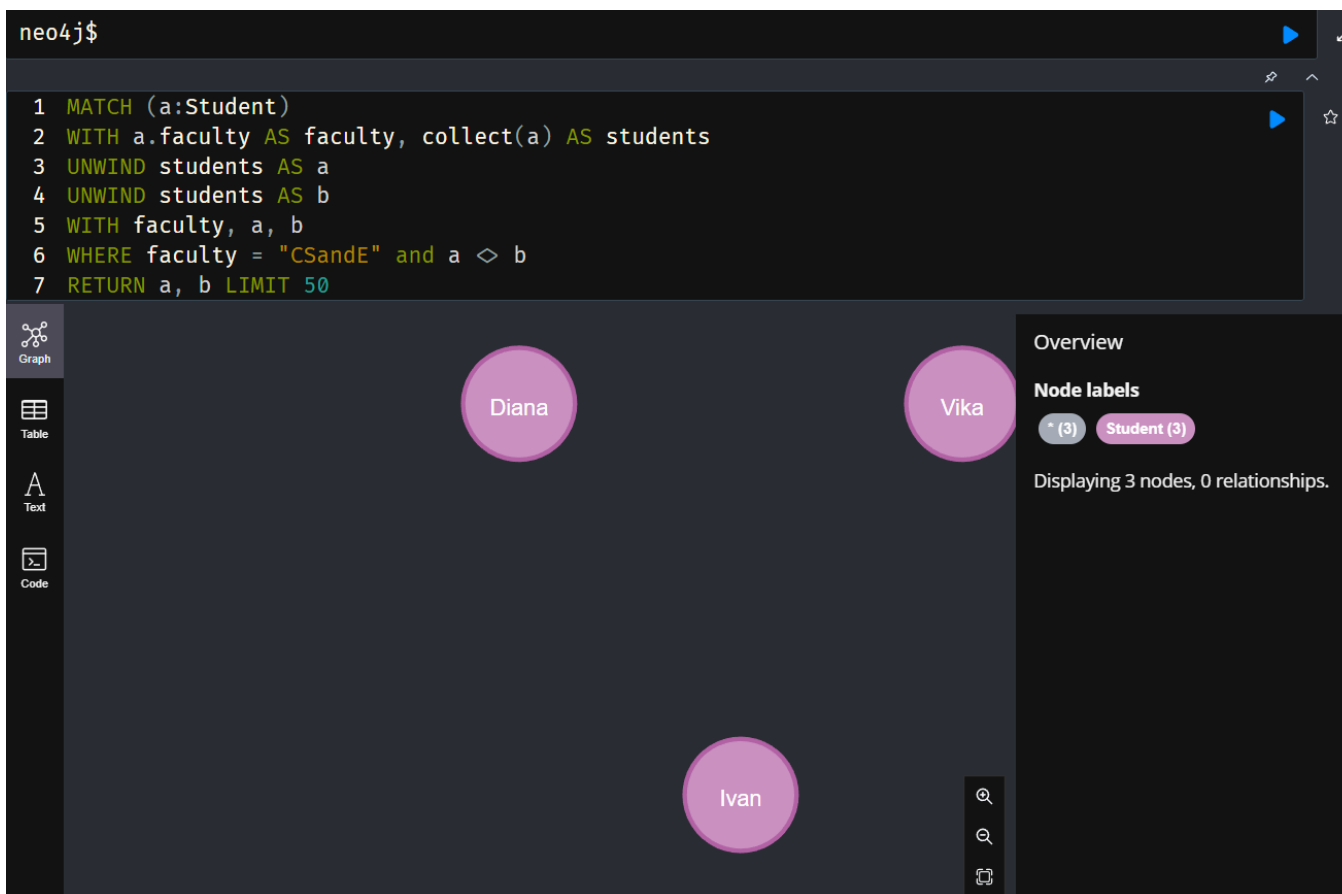
Completed after 1 ms.

Не создал тесок, поэтому вывило 0 записей

Рабочая тетрадь №7



В пример одного из вузов взял MIREA



The image shows a Neo4j interface with a Cypher query and its corresponding graph visualization. The query filters for students in the 'CSandE' faculty. The graph shows three nodes: Diana, Vika, and Ivan.

```
neo4j$  
1 MATCH (a:Student)  
2 WITH a.faculty AS faculty, collect(a) AS students  
3 UNWIND students AS a  
4 UNWIND students AS b  
5 WITH faculty, a, b  
6 WHERE faculty = "CSandE" and a <> b  
7 RETURN a, b LIMIT 50
```

Graph
Table
Text
Code

Diana

Vika

Ivan

Overview
Node labels
* (3) Student (3)
Displaying 3 nodes, 0 relationships.

Взял факультет CSandE


```
1 MATCH (a:Student)
2 WITH a.faculty AS faculty, collect(a) AS students
3 UNWIND students AS a
4 UNWIND students AS b
5 WITH faculty, a, b
6 WHERE a <> b
7 RETURN a, b LIMIT 50
```

представлены, все у кого есть хоть кто-то, даже из другого вуза, у кого одинаковый факультет

Masha

Stepan

Lera

Diana

Oleg

Vika

Ivan

Overview

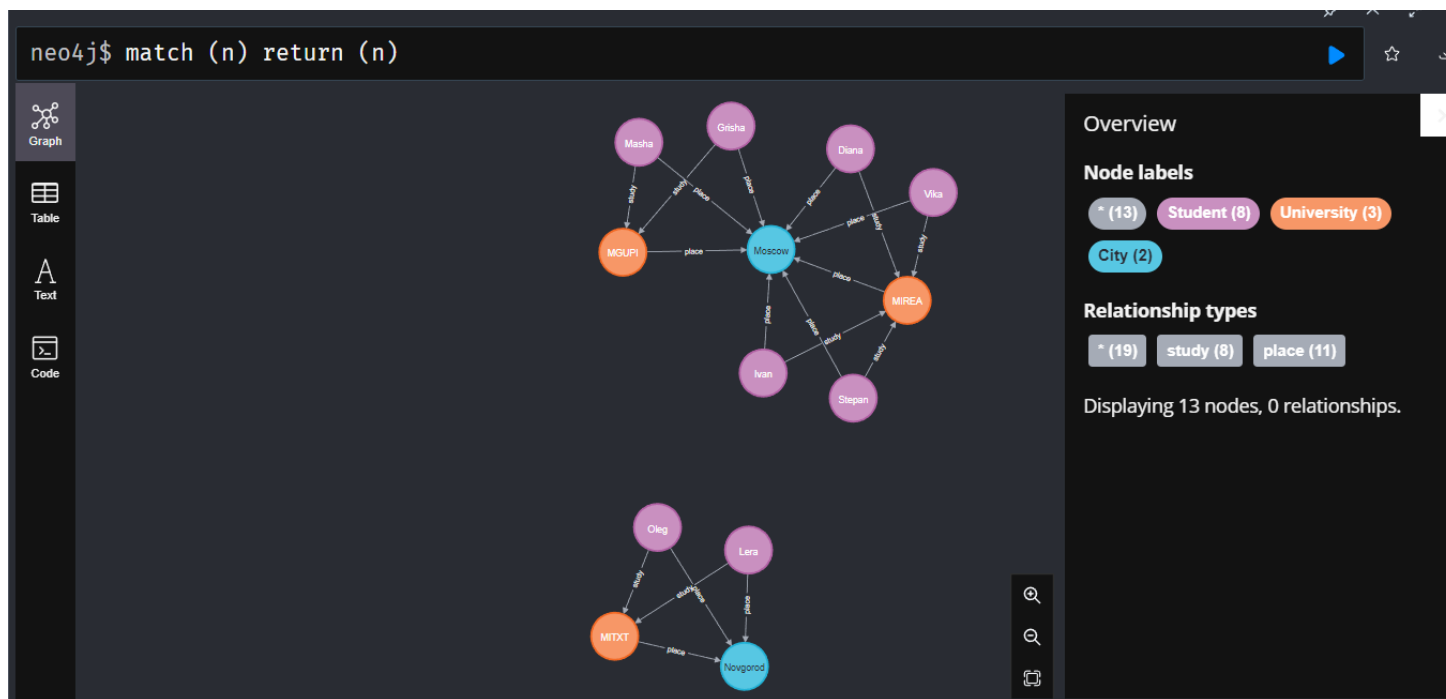
Node labels

* (7) Student (7)

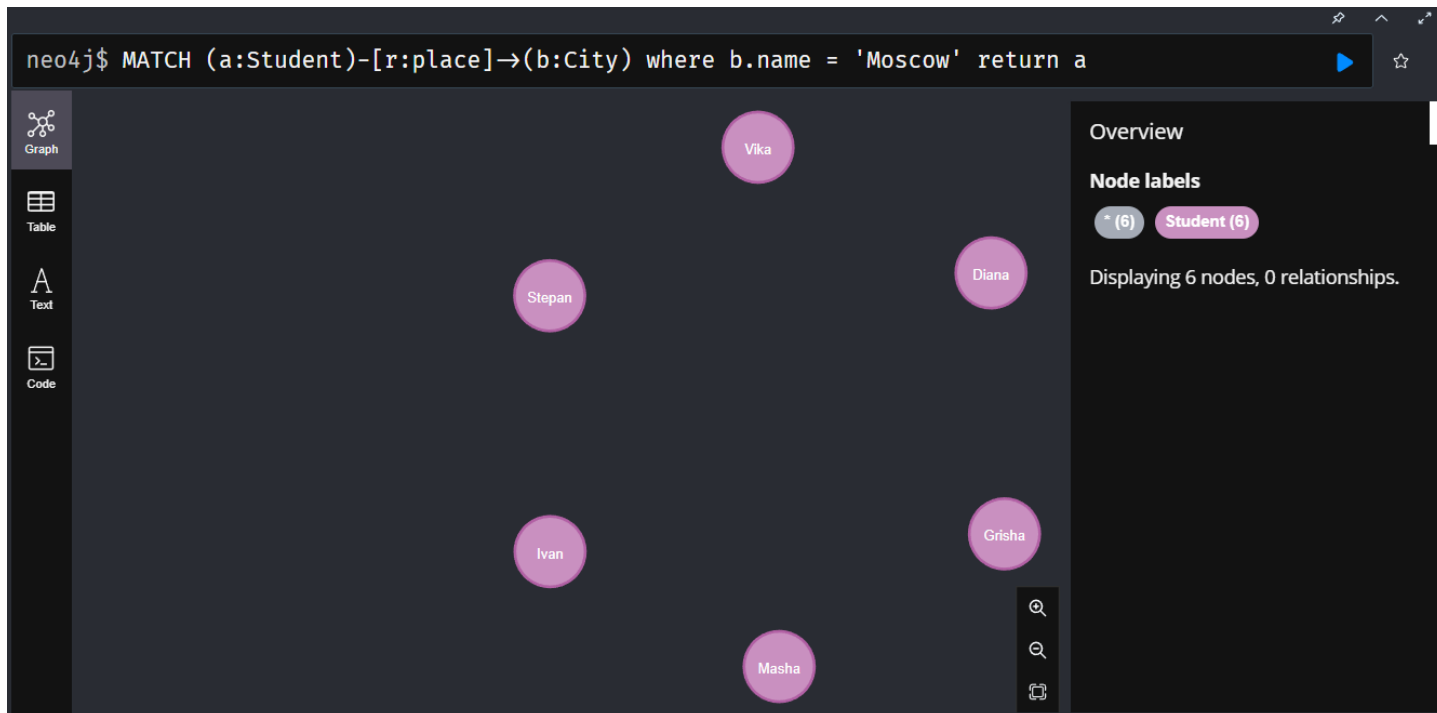
Displaying 7 nodes, 0 relationships.

Выводит, если есть пара с одинаковым факультетом, вне зависимости от вуза

Рабочая тетрадь №7

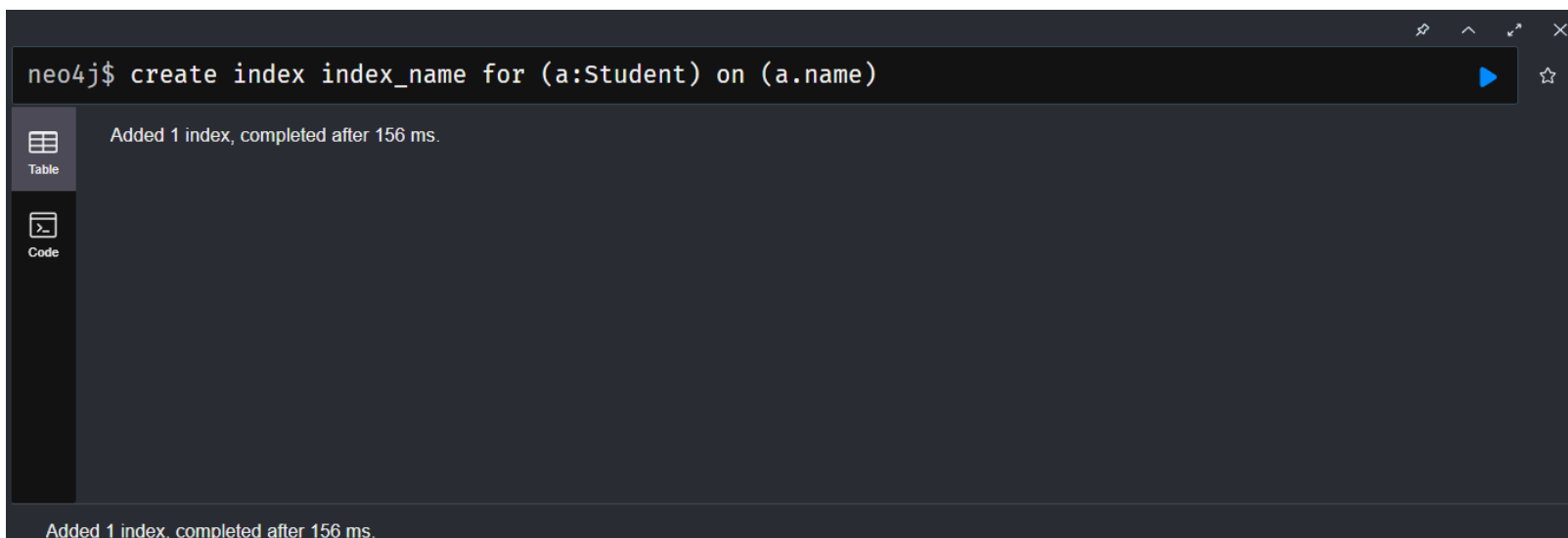


Рабочая тетрадь №7



The image shows the Neo4j Desktop interface. At the top, a Cypher query is entered in the command bar: `neo4j$ MATCH (a:Student)-[r:place]→(b:City) where b.name = 'Moscow' return a`. Below the query bar, the main workspace displays a graph visualization with six purple circular nodes labeled: Vika, Diana, Grisha, Masha, Ivan, and Stepan. No edges are visible between the nodes. On the left side, there is a sidebar with icons for Graph, Table, Text, and Code. On the right side, an 'Overview' panel is visible, showing 'Node labels' with a filter for 'Student (6)' and the text 'Displaying 6 nodes, 0 relationships.'

Рабочая тетрадь №7



The image shows a screenshot of the Neo4j Desktop application. At the top, a command bar contains the text `neo4j$ create index index_name for (a:Student) on (a.name)`. Below the command bar, a message states "Added 1 index, completed after 156 ms." The left sidebar features two icons: a table icon labeled "Table" and a code icon labeled "Code". The main workspace area is currently empty. At the bottom of the application, a status bar repeats the message "Added 1 index, completed after 156 ms."

```
neo4j$ create index index_name for (a:Student) on (a.name)
```

Added 1 index, completed after 156 ms.

Table

Code

Added 1 index, completed after 156 ms.

Рабочая тетрадь №7

```
neo4j$ create constraint unique_constraint_city for (c:City) require c.name is unique
```

Added 1 constraint, completed after 132 ms.

```
neo4j$ create constraint unique_constraint_university for(u:University) require u.name is unique
```

Added 1 constraint, completed after 151 ms.

Рабочая тетрадь №7

```
neo4j$ Match (n:Student)-[r:study]-(u:University) where n.year_study ≥ 4 delete r
```

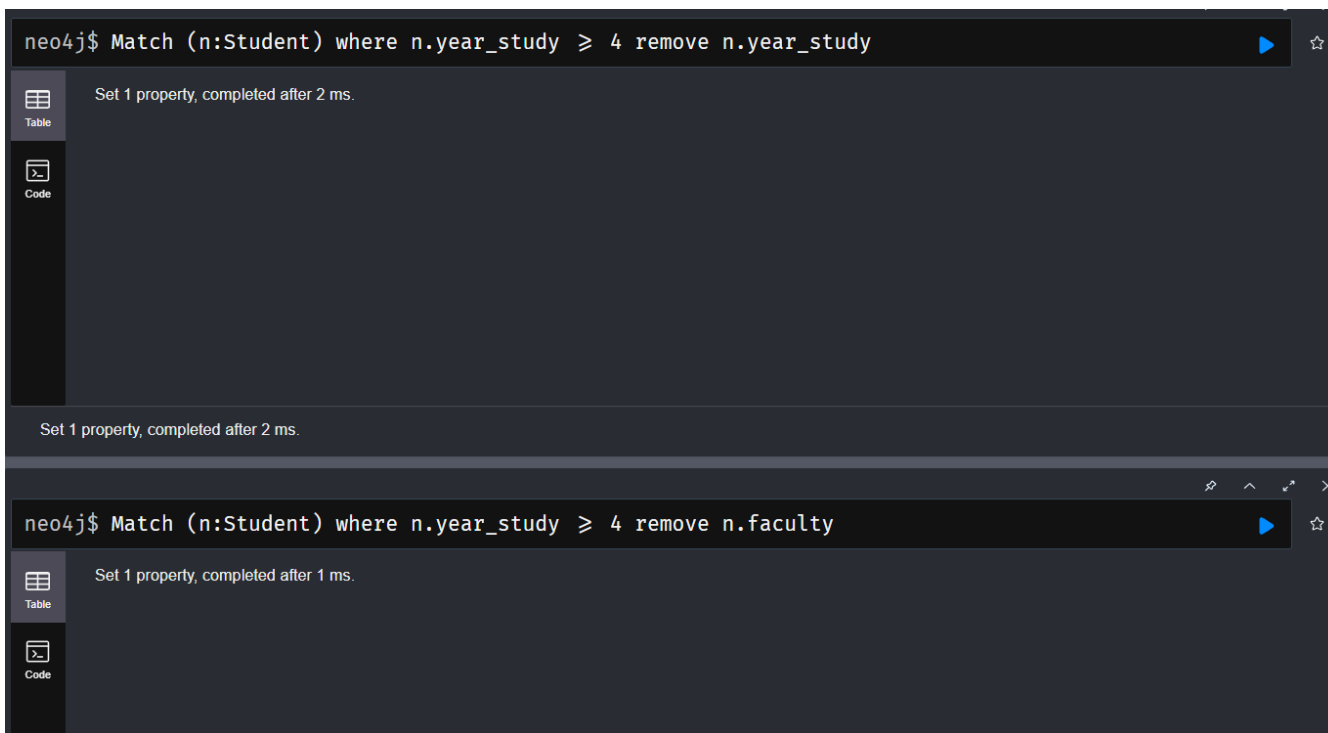
Deleted 1 relationship, completed after 1 ms.

Table

Code

Deleted 1 relationship, completed after 1 ms.

Рабочая тетрадь №7



The image displays two screenshots of the Neo4j console interface. Each screenshot shows a command prompt window with a Cypher query, a status bar indicating the execution result, and a sidebar with 'Table' and 'Code' views.

Top Screenshot:

```
neo4j$ Match (n:Student) where n.year_study ≥ 4 remove n.year_study
```

Set 1 property, completed after 2 ms.

Bottom Screenshot:

```
neo4j$ Match (n:Student) where n.year_study ≥ 4 remove n.faculty
```

Set 1 property, completed after 1 ms.

