

Lab 3 Neo4J

```
$ CREATE (s1:Student {name: 'Alice', age: 21, studentId: 'S1001'}); CREATE (s2:Student {name: 'Bob', age: 22, studentId: 'S1002'}); CR...  
  
mydb$ CREATE (s1:Student {name: 'Alice', age: 21, studentId: 'S1001'})  
mydb$ CREATE (s2:Student {name: 'Bob', age: 22, studentId: 'S1002'})  
mydb$ CREATE (s3:Student {name: 'Charlie', age: 23, studentId: 'S1003'})
```

```
mydb$ create (p2:Professor {name:'Dr. Jonhson', department:'Mathematics'});
```

Table
Code

Added 1 label, created 1 node, set 2 properties, completed after 6 ms.

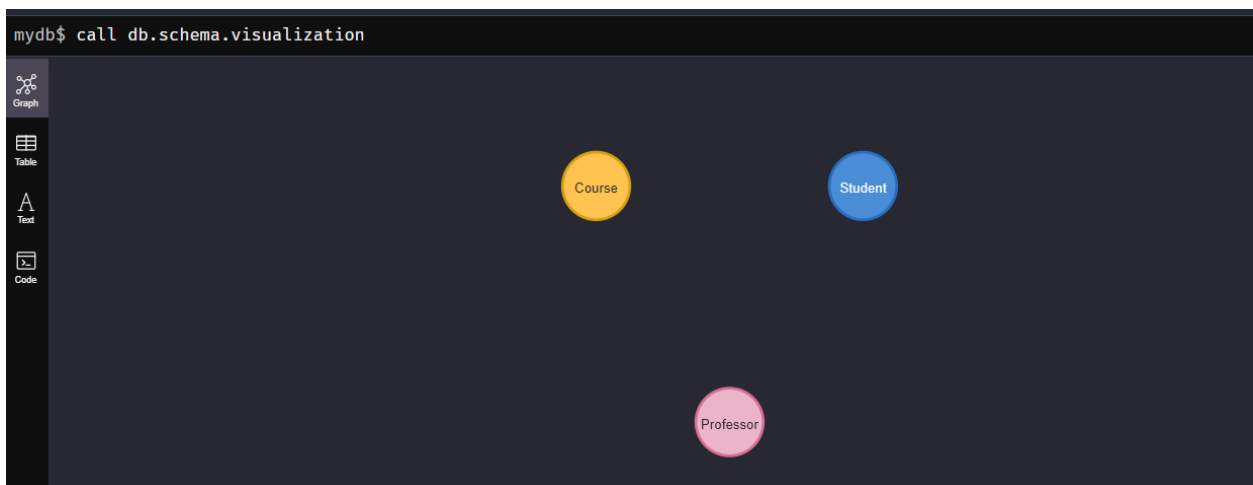
Added 1 label, created 1 node, set 2 properties, completed after 6 ms.

```
mydb$ create (p1:Professor {name:'Dr. Smith', department:'Computer Science'});
```

Table

Added 1 label, created 1 node, set 2 properties, completed after 16 ms.

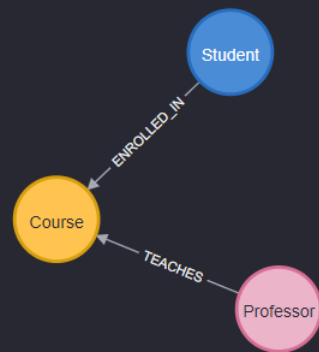
```
mydb$ CREATE (c1:Course {title: 'Introduction to Programming', courseCode: 'CS101'})  
mydb$ CREATE (c2:Course {title: 'Calculus I', courseCode: 'MATH101'})  
mydb$ CREATE (c3:Course {title: 'Data Structures', courseCode: 'CS102'})
```



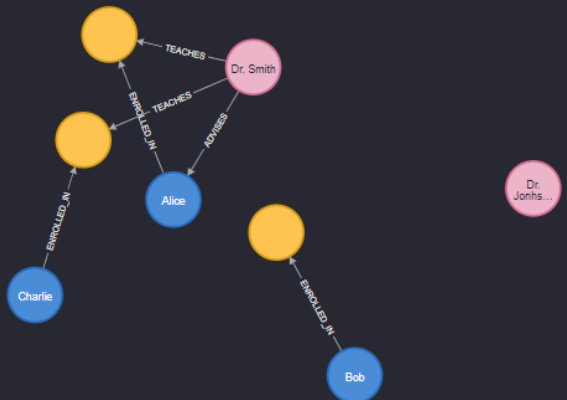
```
mydb$ MATCH (s:Student), (c:Course) WHERE s.name = 'Alice' AND c.title = 'Introduction to Programming' CREATE (s)-[:ENROLLED_IN]-(c) ✓
mydb$ MATCH (s:Student), (c:Course) WHERE s.name = 'Bob' AND c.title = 'Calculus I' CREATE (s)-[:ENROLLED_IN]→(c) ✓
mydb$ MATCH (s:Student), (c:Course) WHERE s.name = 'Charlie' AND c.title = 'Data Structures' CREATE (s)-[:ENROLLED_IN]→(c) ✓
```

```
mydb$ MATCH (p:Professor), (c:Course) WHERE p.name = 'Dr. Smith' AND c.title = 'Introduction to Programming' CREATE (p)-[:TEACHES]-(c) ✓
mydb$ MATCH (p:Professor), (c:Course) WHERE p.name = 'Dr. Johnson' AND c.title = 'Calculus I' CREATE (p)-[:TEACHES]→(c) ✓
mydb$ MATCH (p:Professor), (c:Course) WHERE p.name = 'Dr. Smith' AND c.title = 'Data Structures' CREATE (p)-[:TEACHES]→(c) ✓
```

```
mydb$ call db.schema.visualization
```



```
MATCH(n) RETURN n LIMIT 100
```



```
mydb$ MATCH (s:Student)-[:ENROLLED_IN]→(c:Course) RETURN s.name AS Student, COLLECT(c.title) AS Courses;
```

	Student	Courses
1	"Alice"	["Introduction to Programming"]
2	"Bob"	["Calculus I"]
3	"Charlie"	["Data Structures"]

```
mydb$ MATCH (p:Professor)-[:TEACHES]→(c:Course) WHERE p.name = 'Dr. Smith' RETURN p.name AS Professor, COLLECT(c.title) AS Courses;
```

	Professor	Courses
1	"Dr. Smith"	["Introduction to Programming", "Data Structures"]

```
mydb$ MATCH (s:Student)-[:ENROLLED_IN]→(c:Course)←[:TEACHES]-(p:Professor) RETURN s.name AS Student, COLLECT(p.name) AS Professors;
```

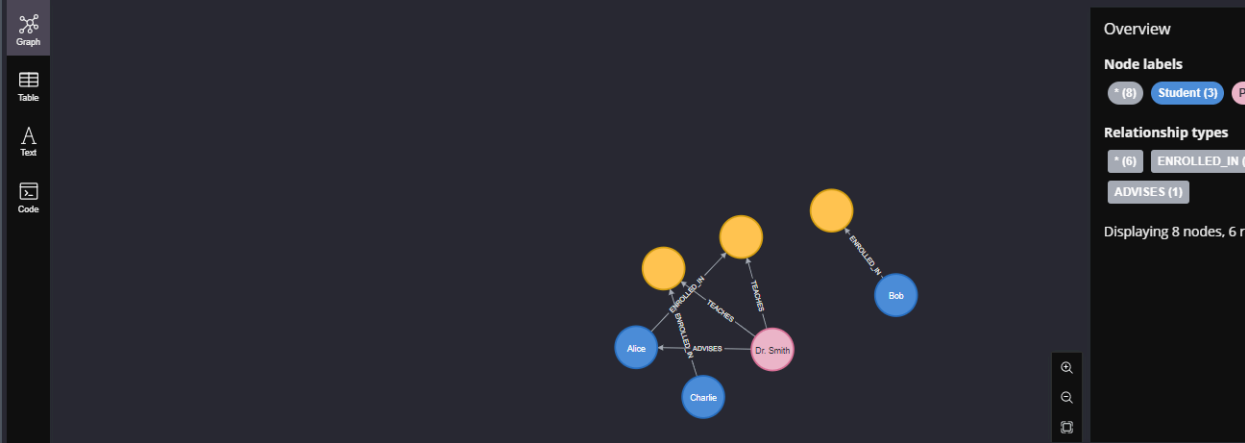
	Student	Professors
1	"Alice"	["Dr. Smith"]
2	"Charlie"	["Dr. Smith"]

Started streaming 2 records after 10 ms and completed after 11 ms.

```
mydb$ MATCH (p:Professor)-[:ADVISES]→(s:Student) RETURN p.name AS Professor, COLLECT(s.name) AS Students;
```

	Professor	Students
1	"Dr. Smith"	["Alice"]

```
mydb$ MATCH(n) RETURN n LIMIT 100
```



```
$ MATCH (p:Professor {name: 'Dr. Johnson'})-[r]→() DELETE r; MATCH (p:Professor {name: 'Dr. Johnson'}) DELETE p;
```

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```
mydb$ MATCH (p:Professor {name: 'Dr. Johnson'})-[r]→() DELETE r
```

```
mydb$ MATCH (p:Professor {name: 'Dr. Johnson'}) DELETE p
```