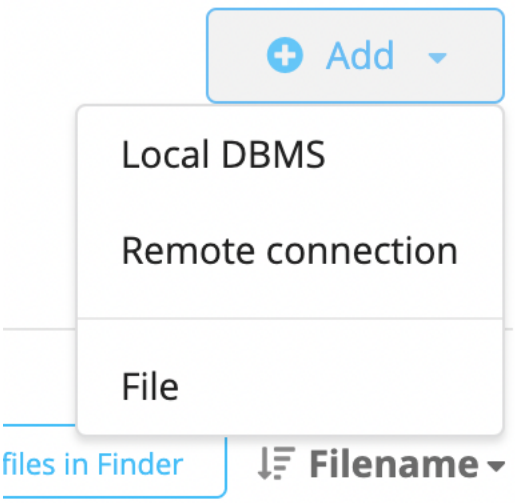
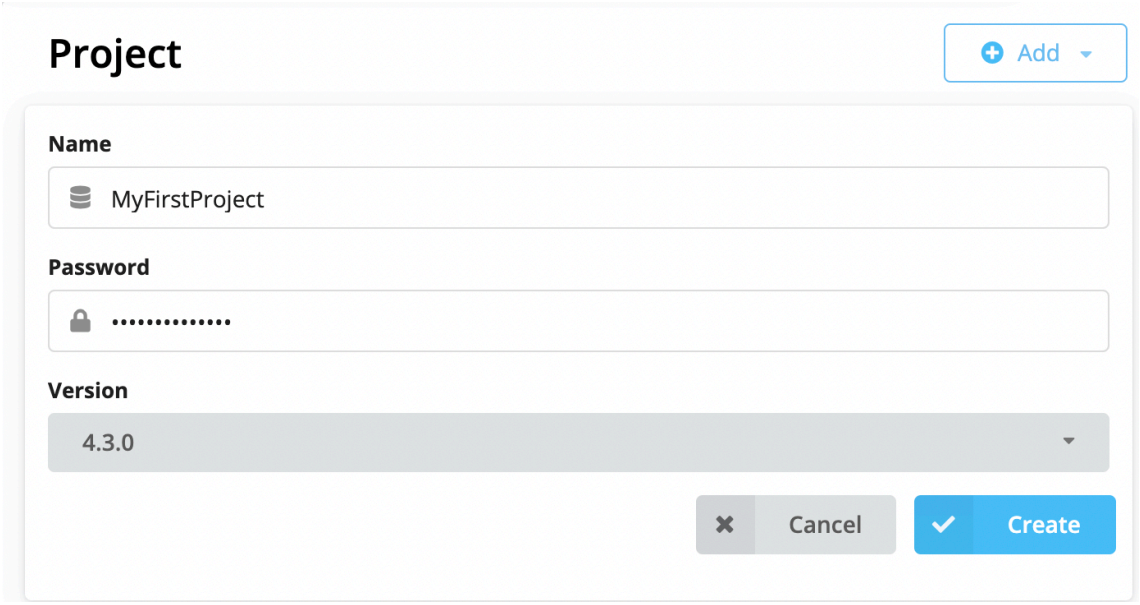
Tutorial 8b
Introduction to Neo4j -Solution

1. Open Neo4j Desktop.

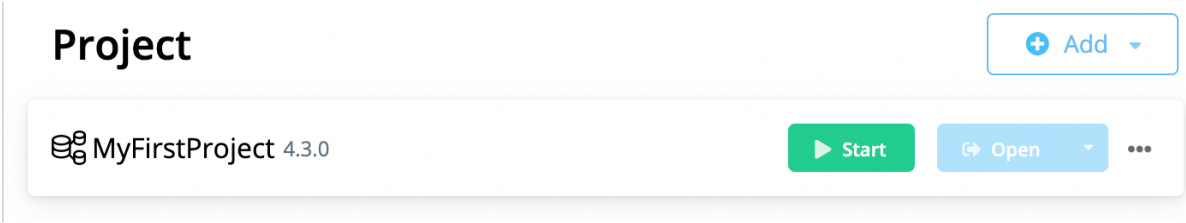
2. Click on **Add** button→ Local DBMS



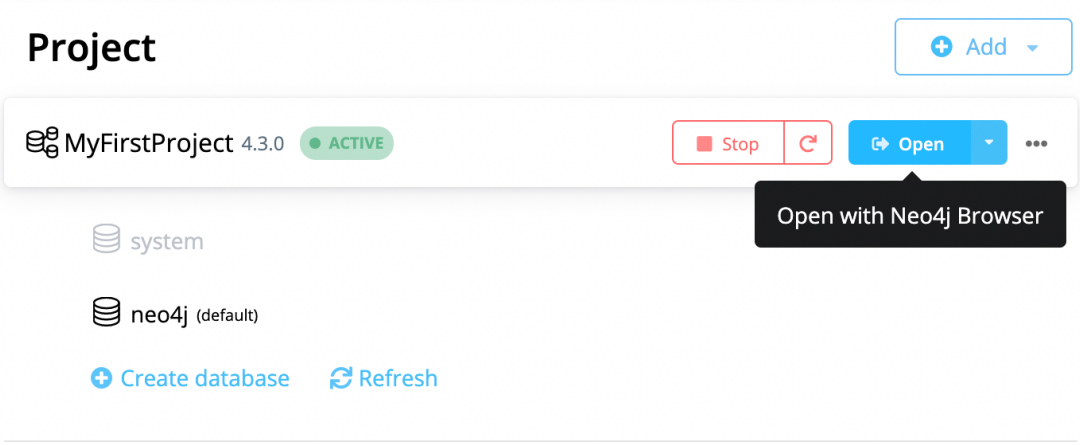
3. Name the newly created project to `MyFirstProject`. Choose 4.3.0, then select **Create**



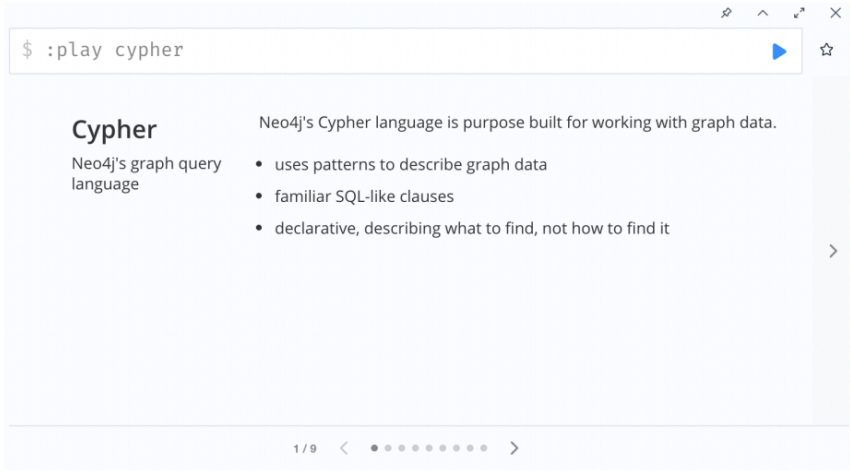
4. After your project has been created, click **Start**.



5. Once the project is Active, select Open

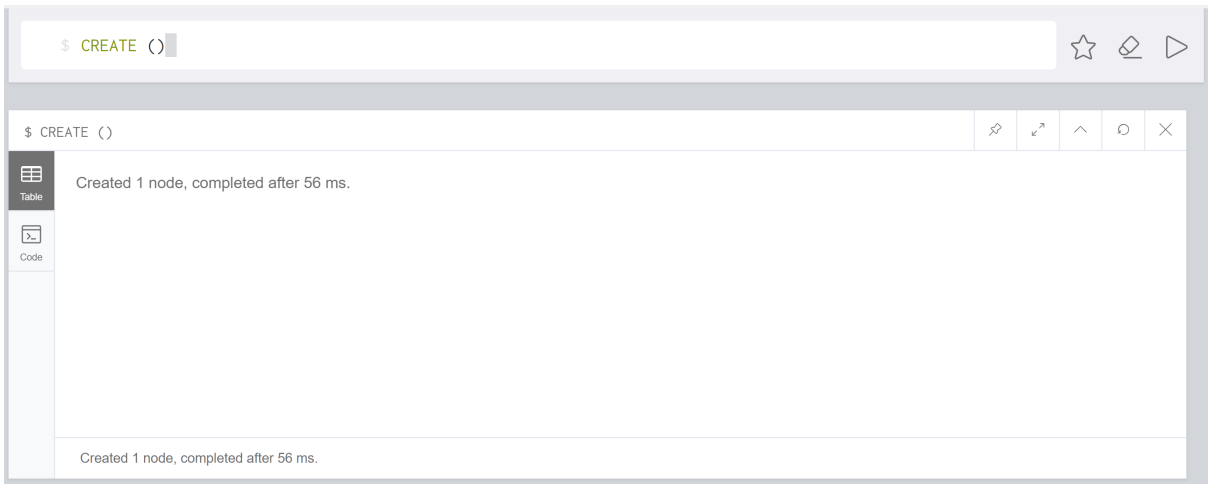


6. The browser will pop up. Type *:play cypher* , then click the play button



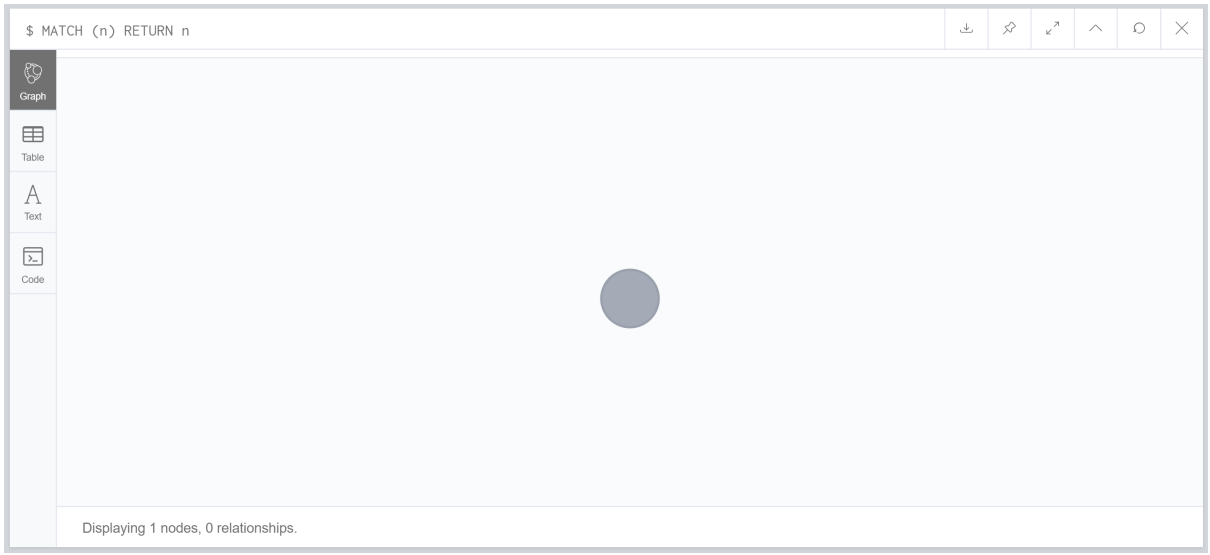
7. Type the following to create a new empty node:

```
CREATE ()
```



8. Type the following to search and retrieve the node you have recently created:

```
MATCH (n) RETURN n
```



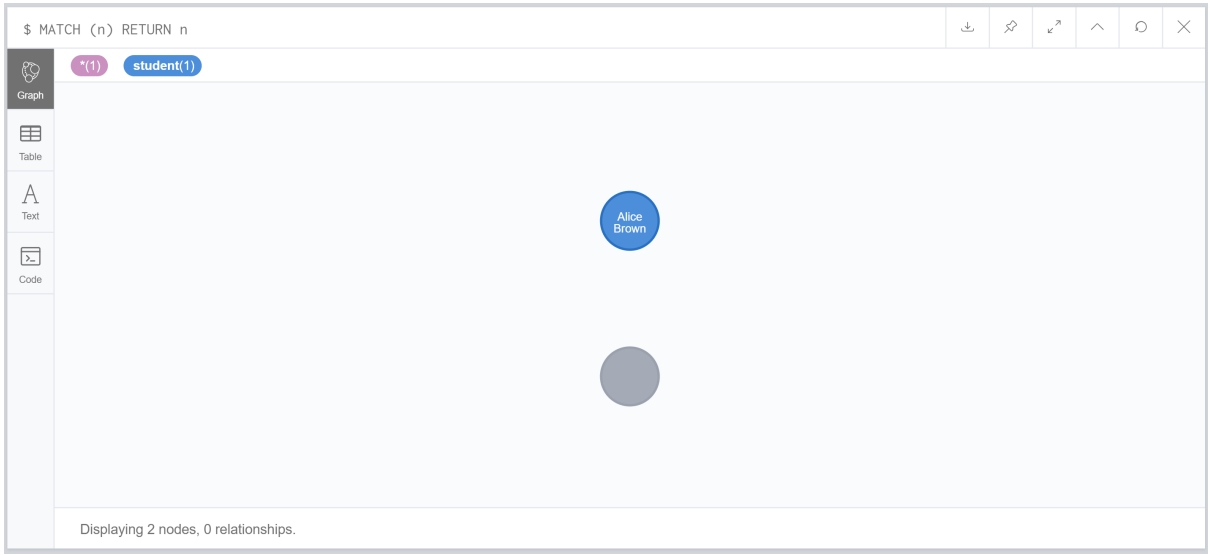
Observe the node and the menu on the left.

9. Create a new node as follow:

```
CREATE (Alice:Student{name: "Alice Brown", age:25})
```

10. Search and retrieve the node you have recently created:

```
MATCH (n) RETURN n
```



Observe the node and the menu on the left.

11. Create another node with the following details:

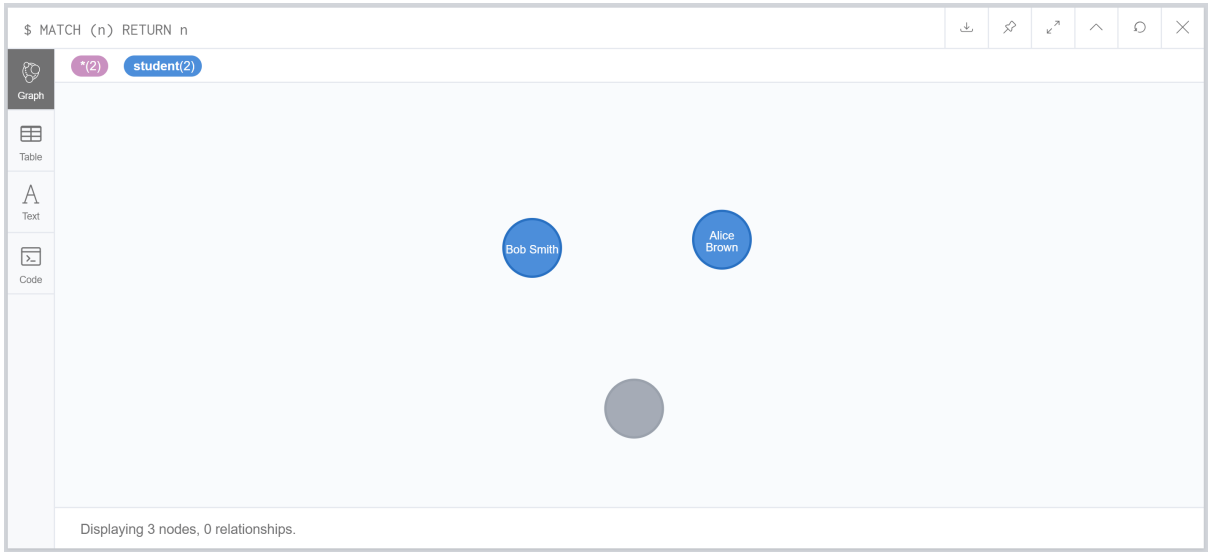
```
CREATE (Bob:Student{name: "Bob Smith", age:30})
```

12. Search and retrieve the node you have recently created:

```
MATCH (n) RETURN n
```

How many nodes do you have in your database?

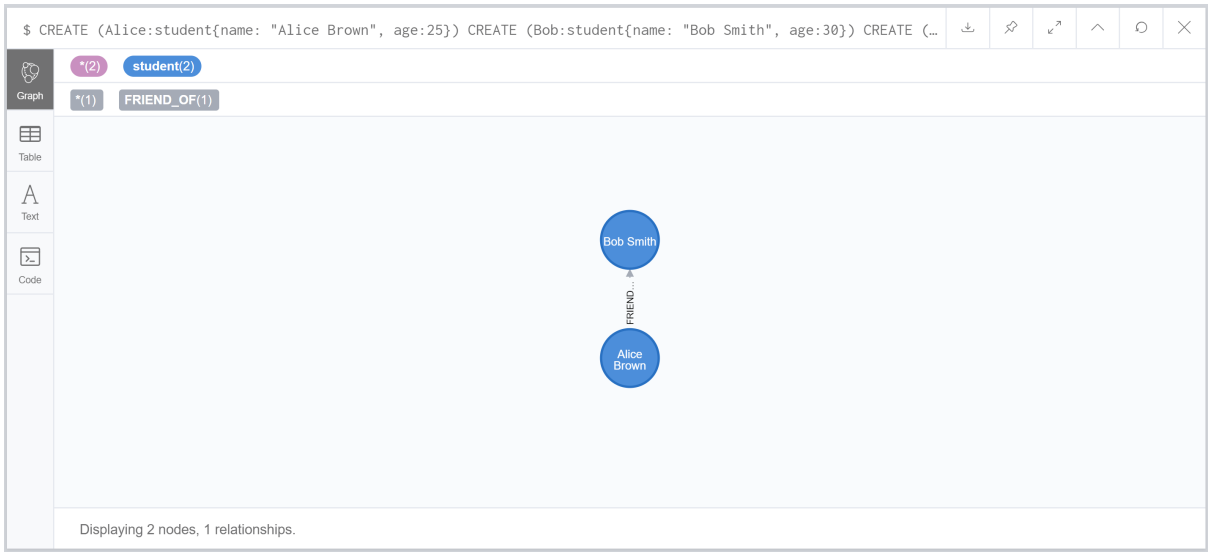
We have created 3 nodes: the empty one, a node for Alice, and another node for Bob.



13. Type the following to create a new relationship between two nodes:

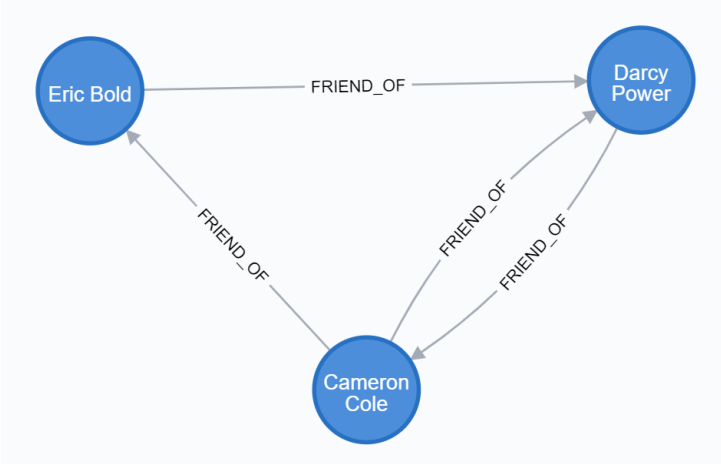
```
CREATE (Alice:Student{name: "Alice Brown", age:25})
CREATE (Bob:Student{name: "Bob Smith", age:30})
CREATE (Alice)-[:FRIEND_OF]->(Bob)
RETURN Alice, Bob
```

The above commands will return the following:



Observe the graph you recently produced.

14. As you have created your first graph with two nodes and a relationship, now try to create the following graph.



You are required to store the following information in each node.

Cameron

```
{
  "name": "Cameron Cole",
  "age": 22
}
```

Darcy

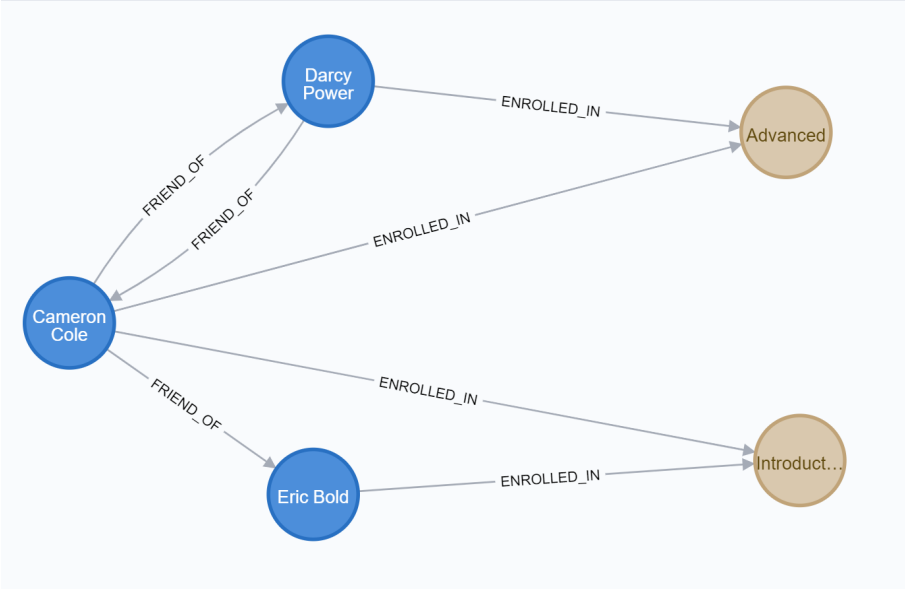
```
{
  "name": "Darcy Power",
  "age": 21
}
```

Eric

```
{
  "name": "Eric Bold",
  "age": 28
}
```

```
CREATE (Cameron:Student{name: "Cameron Cole", age:22})
CREATE (Darcy:Student{name: "Darcy Power", age:21})
CREATE (Eric:Student{name: "Eric Bold", age:28})
CREATE (Cameron)-[:FRIEND_OF]->(Darcy)
CREATE (Darcy)-[:FRIEND_OF]->(Cameron)
CREATE (Cameron)-[:FRIEND_OF]->(Eric)
CREATE (Eric)-[:FRIEND_OF]->(Darcy)
RETURN Cameron,Darcy,Eric
```

15. In the previous exercise, the nodes in the graph are from the same category (student). Now let's have a graph with different categories as shown below.



Recreate the graph from the previous question to reflect the above graph. You also need to store the following information in each node.

Cameron

```
{
  "name": "Cameron Cole",
  "age": 22
}
```

Darcy

```
{
  "name": "Darcy Power",
  "age": 21
}
```

Eric

```
{
  "name": "Eric Bold",
  "age": 28
}
```

FIT5137

```
{
  "name": "Advanced Database Technology",
  "code": "FIT5137"
}
```

FIT9132

```
{
  "name": "Introduction to Databases",
  "code": "FIT9132"
}
```

```
CREATE (Cameron:Student{name: "Cameron Cole", age:22})
CREATE (Darcy:Student{name: "Darcy Power", age:21})
CREATE (Eric:Student{name: "Eric Bold", age:28})
CREATE (FIT5137:Unit{code: "FIT5137", name:"Advanced Database Technology"})
CREATE (FIT9132:Unit{code: "FIT9132", name:"Introduction to Databases"})
CREATE (Cameron)-[:FRIEND_OF]->(Darcy)
CREATE (Darcy)-[:FRIEND_OF]->(Cameron)
CREATE (Cameron)-[:FRIEND_OF]->(Eric)
CREATE (Cameron)-[:ENROLLED_IN]->(FIT5137)
CREATE (Cameron)-[:ENROLLED_IN]->(FIT9132)
CREATE (Darcy)-[:ENROLLED_IN]->(FIT5137)
CREATE (Eric)-[:ENROLLED_IN]->(FIT9132)
RETURN Cameron,Darcy,Eric,FIT5137,FIT9132
```

The End