

1. Use the provided Cypher script to create the graph database

- ♣ You could use any names for your project and the graph database
- ♣ Copy the ENTIRE Cypher code in the script and paste it in ne4j\$ prompt

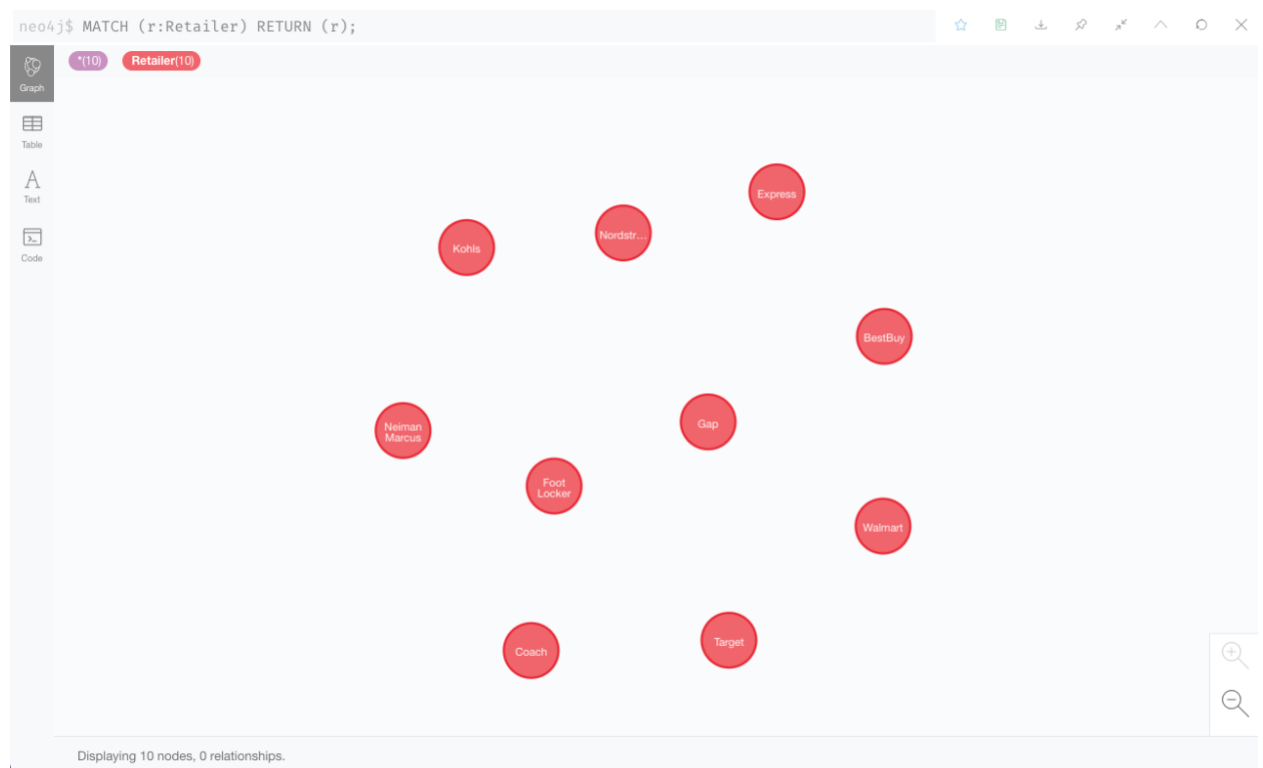
and then click the play button on the right.

DONE

2. Execute the following Cypher code to get the list of retailers:

```
MATCH (r:Retailer)
```

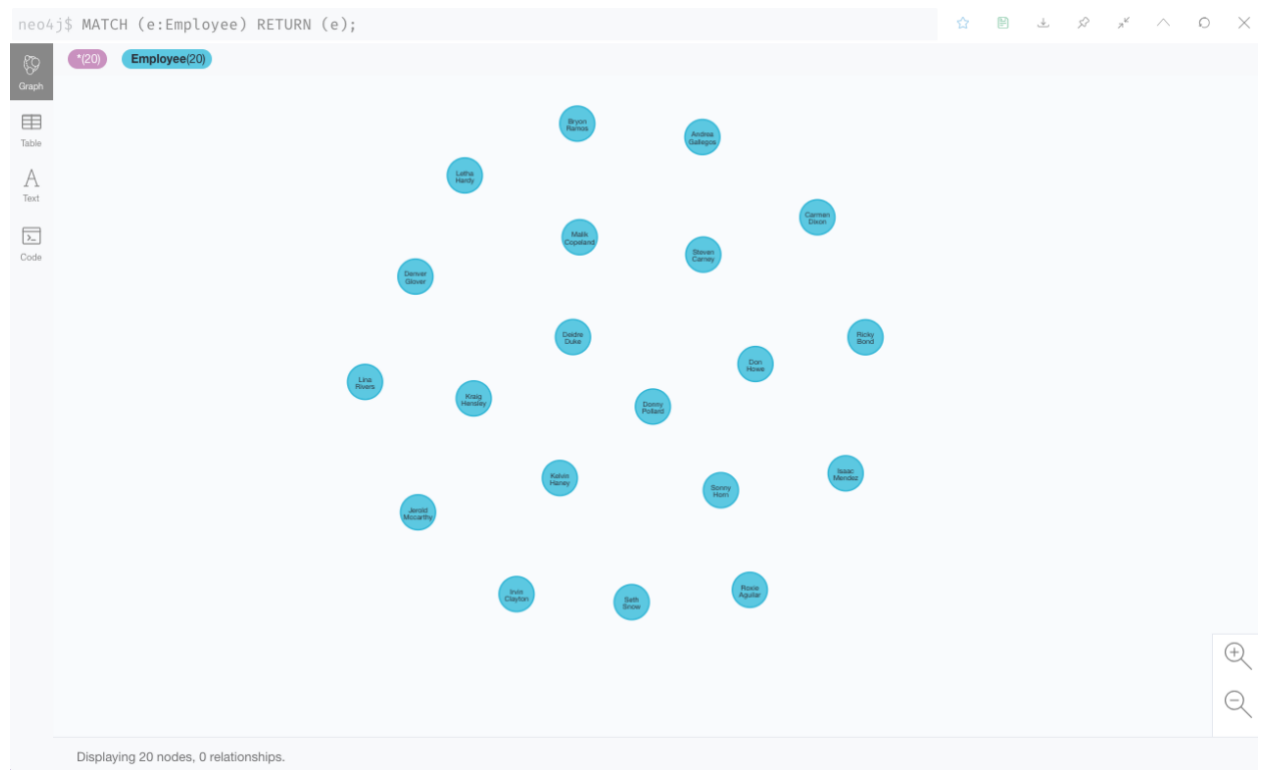
```
RETURN (r);
```



3. Execute the following Cypher code to get the list of employees:

```
MATCH (e:Employee)
```

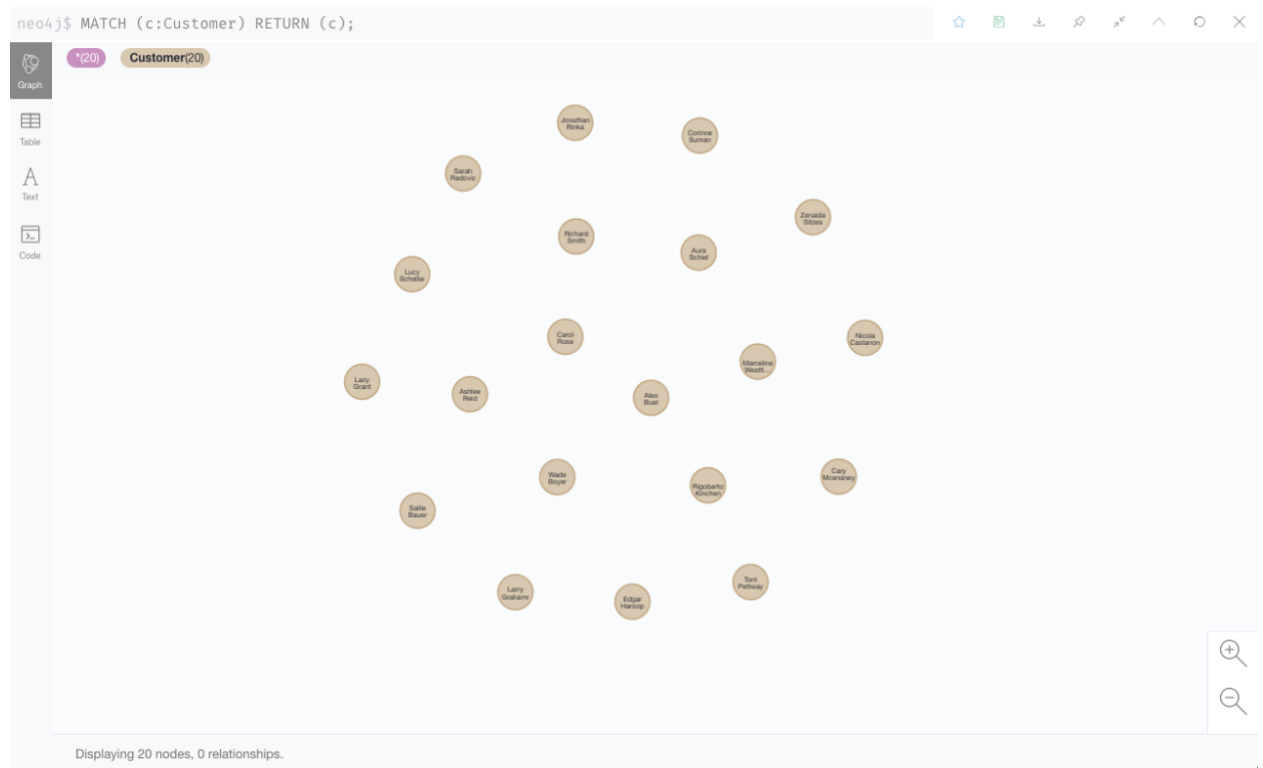
```
RETURN (e);
```



4. Execute the following Cypher code to get the list of customers:

```
MATCH (c:Customer)
```

```
RETURN (c);
```



5. Execute the following Cypher code to get the list of all Disputed transactions

```
MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer) WHERE transaction.status = "Disputed"
```

```
RETURN customer.name AS `Customer Name`, retailer.name AS `Retailer Name`, transaction.amount AS `Transaction Amount`, transaction.date AS `Transaction date`
```

```
ORDER BY `Transaction date` DESC
```

neo4j5 MATCH (customer:Customer)-[transaction:SHOPPED\_AT]->(retailer) WHERE transaction.status = "Disputed" RETURN customer.name AS 'Customer Name', retailer.name AS 'Retailer Name', transaction.amount AS 'Transaction Amount', transaction.date AS 'Transaction date'

	Customer Name	Retailer Name	Transaction Amount	Transaction date
1	"Nicola Castanon"	"Coach"	"721"	"7/17/2020"
2	"Zenaida Sotzas"	"Express"	"1884"	"5/7/2020"
3	"Marceline Vestfield"	"Express"	"533"	"5/6/2020"
4	"Edgar Haroop"	"Neiman Marcus"	"1732"	"5/26/2020"
5	"Edgar Haroop"	"Kohl's"	"1021"	"5/23/2020"
6	"Lucy Scheler"	"BestBuy"	"424"	"5/20/2020"
7	"Larry Graham"	"Walmart"	"425"	"5/18/2020"
8	"Larry Graham"	"Neiman Marcus"	"475"	"5/18/2020"
9	"Richard Smith"	"Kohl's"	"875"	"5/15/2020"
10	"Rigoberto Kinchen"	"BestBuy"	"424"	"5/10/2020"
11	"Jonathan Rinka"	"Neiman Marcus"	"375"	"4/18/2020"
12	"Tam Pettway"	"Foot Locker"	"50"	"4/17/2020"
13	"Carol Rose"	"Express"	"721"	"4/15/2020"
14	"Edgar Haroop"	"Nordstrom"	"1415"	"4/1/2020"
15	"Rigoberto Kinchen"	"Express"	"721"	"4/1/2020"
16	"Edgar Haroop"	"Walmart"	"654"	"3/20/2020"
17	"Rigoberto Kinchen"	"Walmart"	"914"	"3/18/2020"
18	"Zenaida Sotzas"	"Walmart"	"1149"	"3/18/2020"

Started streaming 33 records after 25 ms and completed after 59 ms.

neo4j5 MATCH (customer:Customer)-[transaction:SHOPPED\_AT]->(retailer) WHERE transaction.status = "Disputed" RETURN customer.name AS 'Customer Name', retailer.name AS 'Retailer Name', transaction.amount AS 'Transaction Amount', transaction.date AS 'Transaction date'

	Customer Name	Retailer Name	Transaction Amount	Transaction date
19	"Rigoberto Kinchen"	"Express"	"721"	"4/1/2020"
20	"Edgar Haroop"	"Walmart"	"654"	"3/20/2020"
21	"Rigoberto Kinchen"	"Walmart"	"914"	"3/18/2020"
22	"Zenaida Sotzas"	"Walmart"	"1149"	"3/18/2020"
23	"Richard Smith"	"Coach"	"1145"	"3/18/2020"
24	"Ashlee Field"	"Walmart"	"1149"	"3/18/2020"
25	"Sarah Radovic"	"Nordstrom"	"315"	"3/15/2020"
26	"Aara Schel"	"Neiman Marcus"	"930"	"3/13/2020"
27	"Cary McManney"	"Kohl's"	"465"	"2/28/2020"
28	"Edgar Haroop"	"Walmart"	"1845"	"2/25/2020"
29	"Rigoberto Kinchen"	"Nordstrom"	"1025"	"2/25/2020"
30	"Corinne Suman"	"Nordstrom"	"815"	"2/25/2020"
31	"Lucy Grant"	"Nordstrom"	"1050"	"2/25/2020"
32	"Jonathan Rinka"	"Kohl's"	"1345"	"2/18/2020"
33	"Zenaida Sotzas"	"BestBuy"	"378"	"2/18/2020"
34	"Sallie Bauer"	"Foot Locker"	"378"	"2/18/2020"
35	"Tam Pettway"	"Target"	"605"	"1/27/2020"
36	"Jonathan Rinka"	"Walmart"	"945"	"1/27/2020"

Started streaming 33 records after 25 ms and completed after 59 ms.

6. Write the Cypher code to get the number of disputed transactions for every retailer

```
MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer) WHERE
transaction.status = "Disputed"
```

```
RETURN COUNT(retailer.name) AS `DISPUTED TRANSACTIONS`, retailer.name AS `Retailer
Name`
```

```
ORDER BY `Retailer Name` DESC
```

```
neo4j$ MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer) WHERE transaction.status = "Disputed" RETURN COUNT(retailer.name) AS 'DISPUTED TRANSACTIONS', retailer.name AS 'Retailer Name' ORDER BY 'Retailer Name' DESC
```

	DISPUTED TRANSACTIONS	Retailer Name
7		"Walmart"
1		"Target"
6		"Kendallson"
4		"Neiman Marcus"
4		"Kohls"
2		"Foot Locker"
4		"Express"
2		"Coach"
3		"BestBuy"

- Write the Cypher code to get the number of disputed transactions and the list of customer names for these disputed transactions for every retailer

**MATCH (customer:Customer)-[transaction:SHOPPED\_AT]->(retailer) WHERE transaction.status = "Disputed"**

**RETURN retailer.name AS `Retailer Name`, count(retailer.name) AS `Retailer Count`,customer.name AS `Customer Name`**

**ORDER BY `Retailer Name`**

```
neo4j$ MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer) WHERE transaction.status = "Disputed" RETURN retailer.name AS 'Retailer Name', count(retailer.name) AS 'Retailer Count',customer.name AS 'Customer Name' ORDER BY 'Retailer Name'
```

	Retailer Name	Retailer Count	Customer Name
1	"BestBuy"	1	"Rigoberto Kinchen "
2	"BestBuy"	1	"Zanada Stone "
3	"BestBuy"	1	"Lucy Scheller "
4	"Coach"	1	"Nicole Castanon "
5	"Coach"	1	"Richard Smith "
6	"Express"	1	"Rigoberto Kinchen "
7	"Express"	1	"Marceline Westfield "
8	"Express"	1	"Zanada Stone "
9	"Express"	1	"Carol Rose "
10	"Foot Locker"	1	"Toni Pettway "
11	"Foot Locker"	1	"Sally Bauer "
12	"Kohls"	1	"Edgar Hancock "
13	"Kohls"	1	"Cary Monahaney "
14	"Kohls"	1	"Jonathan Rinkus "
15	"Kohls"	1	"Richard Smith "
16	"Neiman Marcus"	1	"Edgar Hancock "
17	"Neiman Marcus"	1	"Aure Schel "
18	"Neiman Marcus"	1	"Jonathan Rinkus "

Started streaming 18 records after 2 ms and completed after 9 ms.

"Neman Marcus"	1	"Larry Graham"
"Nerdston"	1	"Edgar Haroop"
"Nerdston"	1	"Rigoberto Kinchen "
"Nerdston"	1	"Zenaida Sitzes "
"Nerdston"	1	"Corrine Suman "
"Nerdston"	1	"Sarah Radovic"
"Nerdston"	1	"Lacy Grant"
"Targe"	1	"Torri Pettway "
"Walman"	2	"Edgar Haroop"
"Walman"	1	"Rigoberto Kinchen "
"Walman"	1	"Zenaida Sitzes "
"Walman"	1	"Jonathan Rinka"
"Walman"	1	"Ashlee Reed"

Started streaming 32 records after 2 ms and completed after 9 ms.

8. Write the Cypher code to get the number of disputed transactions for every customer that has more than one disputed transaction

```
MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer) WHERE
transaction.status = "Disputed"
```

```
WITH count(customer.name) as `DISPUTED TRANSACTIONS`, customer.name as `Customer
Name`
```

```
WHERE `DISPUTED TRANSACTIONS`>1
```

```
RETURN `DISPUTED TRANSACTIONS`, `Customer Name`
```

neo4j\$ MATCH (customer:Customer)-[transaction:SHOPPED\_AT]->(retailer) WHERE transaction.status = "Disputed" W...

	DISPUTED TRANSACTIONS	Customer Name
1	5	"Edgar Haroop"
2	2	"Torri Pettway "
3	4	"Rigoberto Kinchen "
4	4	"Zenaida Sitzes "
5	3	"Jonathan Rinka"
6	2	"Richard Smith"
7	2	"Larry Graham"

Started streaming 7 records after 2 ms and completed after 23 ms.

9. Write the Cypher code to get the list of stores on LaSalle street that have disputed transactions and the number of disputed transactions for every store; the store list must be sorted by store name in ascending order.

```
MATCH (customer:Customer)-[transaction:SHOPPED_AT]->(retailer)
```

```
WHERE transaction.status = "Disputed" AND (retailer.street =~ '(?i).*LaSalle.*')
```

```
RETURN COUNT(retailer.name) AS `DISPUTED TRANSACTIONS`,retailer.name AS `Retailer Name`
```

```
ORDER BY `Retailer Name`
```

neo4j\$ MATCH (customer:Customer)-[transaction:SHOPPED\_AT]->(retailer) WHERE transaction.status = "Di...

	DISPUTED TRANSACTIONS	Retailer Name
1	4	"Neiman Marcus"
2	6	"Nordstrom"

Started streaming 2 records after 4 ms and completed after 9 ms.

10. Write the Cypher code to get the list of Employees who work in at least 2 stores where disputed transactions reported in these retailers.

```
MATCH (employee:Employee)-[works:WORKS_AT]->(retailer) WHERE retailer.name<>"Gap"
```

```
WITH count(works) as `Number of Stores Worked At`, employee.name as `Employee Name`
```

```
WHERE `Number of Stores Worked At`>=2
```

```
RETURN `Employee Name`
```

neo4j\$ MATCH (employee:Employee)-[works:WORKS\_AT]->(retailer) WHERE retailer.name<>"Gap" WITH count(...

	Employee Name
1	"Ricky Bond"
2	"Carmen Dixon"
3	"Bryon Ramos"
4	"Irvin Clayton"

Started streaming 4 records after 2 ms and completed after 7 ms.

