

Neo4j Desktop Installation Instructions – MSDS 420




Step 1: Click on Download

<https://neo4j.com/download/>

Experience Neo4j on Your Desktop

Free. Get Started Today.

Download 

Includes Neo4j Enterprise 5.8.0 for Developers

[Learn more](#) | [System Requirements](#)

Download Desktop

Step 2: put in your information and click on

Step 3: Copy the activation key by either cut/paste or look for the 'copy to clipboard icon'

Thanks for downloading Neo4j Desktop

Your download should begin automatically in a few seconds. If it doesn't, Click one of the links : [Windows](#) • [OSX](#) • [Linux](#)

Recommended system requirements: MacOS 10.10 (Yosemite)+, Windows 8.1+ with Powershell 5.0+, Ubuntu 12.04+, Fedora 21, Debian 8.

Neo4j Desktop Activation Key

Use this key to activate your copy of Neo4j Desktop for use.



eYjhbGciOiJQUzI1NiIsInR5cCI6IkpXVCJ9.eYjlBWFpbCjEi4rQC4riiwibWl4cGFuZWZjcjE6iejE3ODE4ZjA.ZZGI1ZS0wYTNI MDU1OTQ3OWFkZS01M2UzNTZhLTfMYTQwMC0xNzgxoGYwNmRIOTlxNSisIm1p eHBHbmVsUHJvamVjdElkjoiNGJmYjI0MTRhYjk3M2M3NDFinMyWnjdizJA2ZDU1NzUILCJvcmeiOilu KilsInB1Yil6Im5lbzRqLmNvbSIsInJlZyI6iiAILCjZdWliOiJuZW80ai1kZXNrdG9wliwiZXhwIjoXNJQ2ODY yNjk2LCl2ZXIIoiIlwiaXNziJoibmVvNGouY29tliwibmJmIjoXNjE1Mzl2Njk2LCJpYXQiOjE2MTUzMjY2 OTYsImp0aSI6ImxZMMwyTOxSaifJ. Wu2zs3DL-PP36EZ2tG7zRUtS09hxfQ1gSWft_gD5eABE11Qlhus LBAJWQyvLWkxoT3vpTIQINpiRVvkXybSarhgxiuil8s7eQGmkLFIQ98QofsL2waFVyo5I4XeR5jkxFmr Zu9GRoV6CbqiuabG4gyX6tiXxy4hMatMb8ukdsX62-RzBHycf64Atbl7EvLnYS-E3kKKVH07Yjx_cOziD EVFYLeDTgGVZOojEqJLONuweKonScRirfewDdMEaQQKffyyxjccr-slbzQKLb4hZczYTo_-wj26BFUpSO



Installation Video Installation Video Installation Video



Installation Video



Installation Guide

Step 4: watch the installation video if you want additional help; also, this link is very good: <https://neo4j.com/developer/neo4j-desktop/>

Step 5: click on the downloaded file to run installation.

Step 6: Finish install. When prompted if you want to run the software, answer 'Yes'.

Step 7: Software registration – paste the Software key provided and click on the green Activate button

Software registration

Neo4j Desktop is always free. Registration lets us know who has accepted this gift of graphs.

Register yourself with the following contact information.

Name *

Email *

Organization *

[Read about our privacy policy.](#)

Register later

Already registered? Add your software key here to activate this installation.

Software key *

OR

```
NE7fXVRBTHB00V0T0X7-0immoEHE0B0CV  
agfJXYPsIVif26zWTgyDtn-  
UDvbUN7Ekl9_eq8hyfGNRz2hOvMeDttgVbb  
ZLA7j7FqbHzKKj6nZsQEaOjecUKjImwSAYBF  
CY9imnr7PKrbUEnlE4WVee4Yau8mD0rcsDo  
Qn0Gf2OdtlQBBa7Y5JSKtgDikubI_lgkKs93z  
bJvXiwCI-AgnlabpXbqMz-  
7VI96k6uoizQXGLMHuneb9Ev7MyZaoO4UQ  
LrnFCktdwTgHReQjFx35p7r2aJo1ERKpmmu  
RT7RO54WYxL4nwlxiKLW|
```

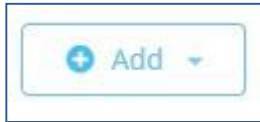
Activate

Step 7A: if Neo4j offers an upgrade (I know you just installed a new version and you would think it is the newest), then do the upgrade.

Step 8:  click on Projects and then click on +New (don't click on the down arrow, just the New)



Step 9: change Project name to Assign 8



Step 10: click on Add to add a Local DBMS

Step 11: you can leave the name to Graph DBMS, but you need to set a password and make sure it is something you will remember. I will set mine to 'test'. NOTE that newer versions may require a password with more than 8 characters.

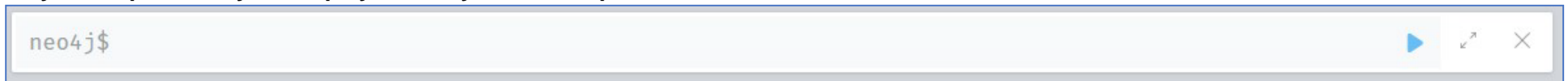


Step 12: click on button

Step 13: Hover over your Graph DBMS and you will see a Start button show up; click on the Start button. This will take about 30seconds, but once it is Active, you need to click on the blue Open



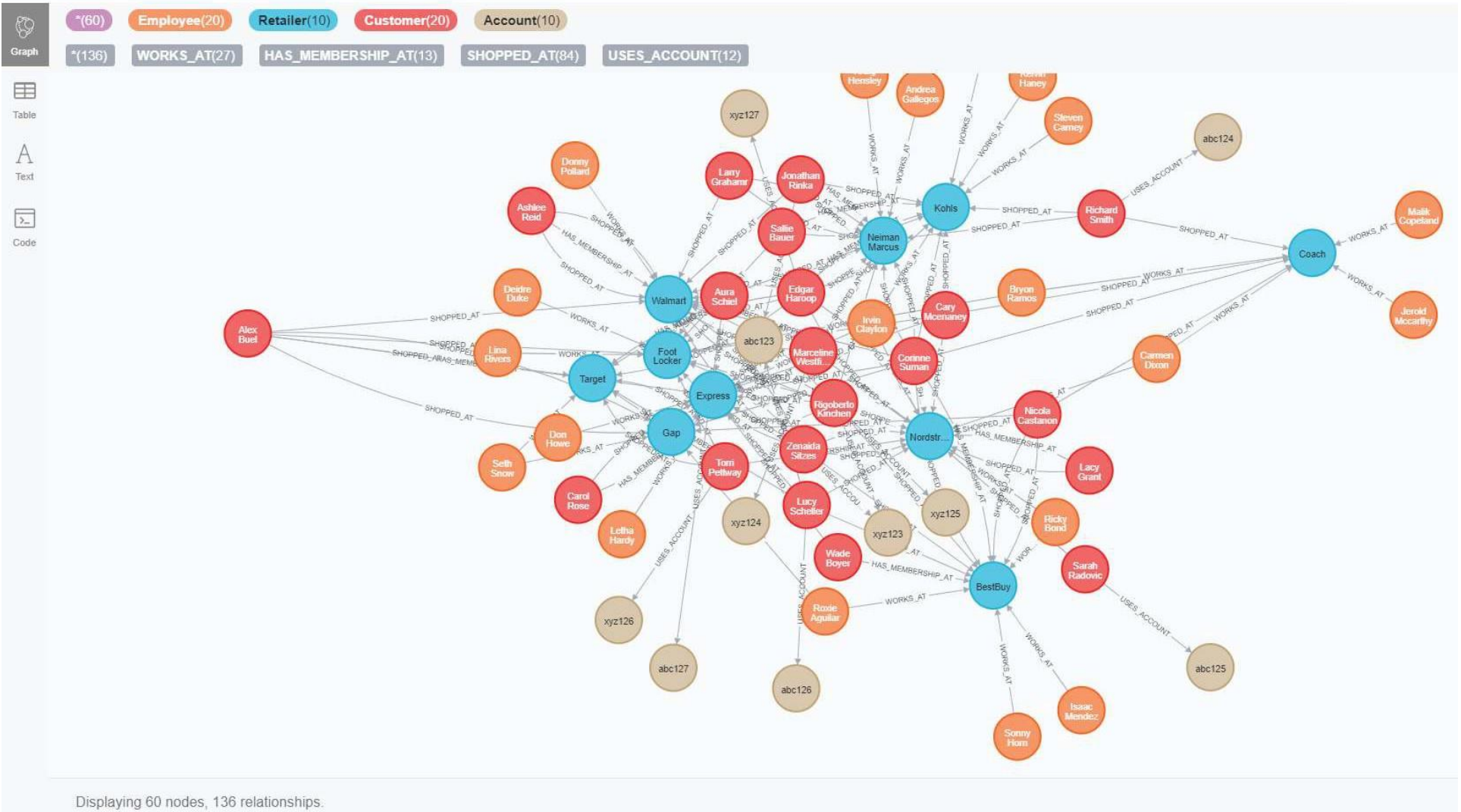
Step 15: Open the Neo4j browser by clicking on the blue Open With and selecting Neo4j browser (this might take a while). Once the Neo4j browser is open, cut/paste the Cypher code that will create the database into the command line and then click on the blue arrow at the far-right hand side of screen. NOTE – newer versions may only accept one command at a time. There are three commands in the file and they are separated by //. To play it safe, you can cut/paste one command at a time which is what I will demo in lecture.



Step 16: After your database has been created, in the neo4j\$ command line, type in the following command and then use the blue arrow to run the line. You will see the graph below show up.

```
neo4j$ match(n) return n;
```

```
neo4j$ match(n) return n;
```



MSDS 420 Assignment 8 – Neo4j Graph Database Fraud detection

Submission: Submit a PDF as [lastname_assignment8.pdf](#) that contains the cypher code and a screen shot of the answer.

After successful installation of Neo4J on your personal computer, startup a new project and add a database with the name Exercise 5.

Create the Graph database for Assignment_8 based on the following business rules:

1. There are four Labels:
 - a. Employee
 - b. Retailer
 - c. Customer
 - d. Account
2. There are four relationships:
 - a. WORKS_AT (Employee WORKS_AT Retailer)
 - b. SHOPPED_AT (Customer SHOPPED_AT Retailer)
 - c. HAS_MEMBERSHIP_AT (Customer HAS_MEMBERSHIP_AT Retailer)
 - d. USES_ACCOUNT (Customer USES_ACCOUNT Account)
3. There are number of retailers that the customer can shop at
4. The retailer has several employees
5. The employee may work in more than one retailer
6. The customer may shop at multiple retailers; hence, a customer might have one or more transactions with one or more retailers
7. Every transaction has a date (timestamp) associated with it, and the transaction could be either Approved or Disputed
8. The customer might have personal online accounts
9. Customers might share the same online account; for example, a customer might share the account with the spouse.

Homework questions:

1. Use the provided Cypher script to create the graph database
 - a. You could use any names for your project and the graph database
 - b. Copy the **ENTIRE** Cypher code in the script and paste it in ne4oj\$ prompt and then click the blue play button on the right.
 - c. NOTE in step 15 above that your version may only allow one command at a time.

d. Run the command below. Find the Customer Ashlee Reid and pull the node to the far left of the screen. Include a screenshot of this view to show you were able to load the database **(5 points)**

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

2. Execute the following Cypher code to get the list of retailers: **(0 point)**

```
MATCH (r:Retailer)RETURN (r);
```

3. Execute the following Cypher code to get the list of employees: **(0 point)**

```
MATCH (e:Employee)RETURN (e);
```

4. Execute the following Cypher code to get the list of customers: **(0 point)**

```
MATCH (c:Customer)RETURN (c);
```

5. Execute the following Cypher code to get the list of all disputed transactions: **(0 point)**

```
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 `TransactionAmount`,
transaction.date AS `Transaction date`
ORDER BY `Transaction date` DESC
```

6. Write the Cypher code to get the number of disputed transactions for every retailer. The output should show the Retailer name and the number of disputes. Sort with highest number of disputes on top. **(10 points)**
7. Write the Cypher code to get the number of disputed transactions and the list of customer names for these disputed transactions for every retailer. The output should show the Retailer and the customer name(s). You can consider using a collect() container, but it is not required. **(10 points)**
8. Write the Cypher code to get the number of disputed transactions for every customer that has more than one disputed transaction **(10 points)**
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. **(10 points)**
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 **(10 points)**

11. Write the Cypher code to show the total amount customers spent shopping at retailers. List the customer's name and the total amount spent. **(10 points)**

12. Write the Cypher code to show the average amount spent at each Retailer. List the Retailer and the average amount spent. Sort with highest amount on top **(10 points)**

NOTE: for more information about aggregations in Neo4j, the following link shows how to use avg, collect, count, max, min and sum: <https://neo4j.com/docs/cypher-manual/current/functions/aggregating/>