HEYYOOOO!!

So.. it's me, Arya, and in this document I am going to try to give you a crash course on the database in, hopefully, 5 mins or so..

Lessgoo

SETTING IT UP:

You can download Neo4j Desktop from their website. (https://neo4j.com/download/)
It has an integrated web option as well and is, quite frankly, the easiest and the fastest option to set up the DBMS on your computer.

Once you are done setting it up, open it and create a new project. Add a database to it (you can choose the local option).

Once you are done with that, go to Add, and then choose Files. Select the files you want to import from the pop up and they should be visible on the page.

Hover over the Graph DBMS (local), and click on start/open.

You will now see the Neo4j Web/Browser (leave it be for now).

Go back to the original window and click on the Open option for any cypher script that you have imported. The script should now be visible on the web interface.

Play it and you should get the message that x nodes and y relationships have been successfully created.

Do the same with all the cypher scripts from the folder I have shared with you.

You can now visualize the graphs

FEATURES:

I have given the node labels only two main categories.
"ai" to mark the starting point of every concept map
"point" for every other node.

If you click on any node, It should show you the elementID, ID, label, and most importantly, the name of the cypher file this node is taken from
This is what the WITH command and the file_name commands in the code are for.
Feel free to use any of these properties to train the model

COMPATIBILITY:

If you are planning on going ahead with the StellarGraph, as we originally planned, Neo4j is compatible with it. (I had already shared the link with you but attaching it here again for…drumroll…dramatic effect)

https://stellargraph.readthedocs.io/en/v1.1.0/_modules/stellargraph/connector/neo4j/graph.html
Updated:
https://stellargraph.readthedocs.io/en/v1.2.1/_modules/stellargraph/connector/neo4j/graph.html

HELPFUL COMMANDS:

Simplest way to display all graphs in DB:

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

Command to delete a node:

```
MATCH (n:Label {property: value})
DELETE n
```

Command to form a relationship between two nodes in DB:

```
MATCH (a),(b)
WHERE ID(a) = <id_of_node_a> AND ID(b) = <id_of_node_b>
CREATE (a)-[:RELATIONSHIP_TYPE]->(b)
```

Command to delete ALL nodes and relationships (Basically everything):
(Note: Do NOT be scared of using it. U can just play the scripts again to bring everything back)

```
MATCH (n)
DETACH
DELETE n
```

Command to show all out relationships from a node (form and display a cluster):

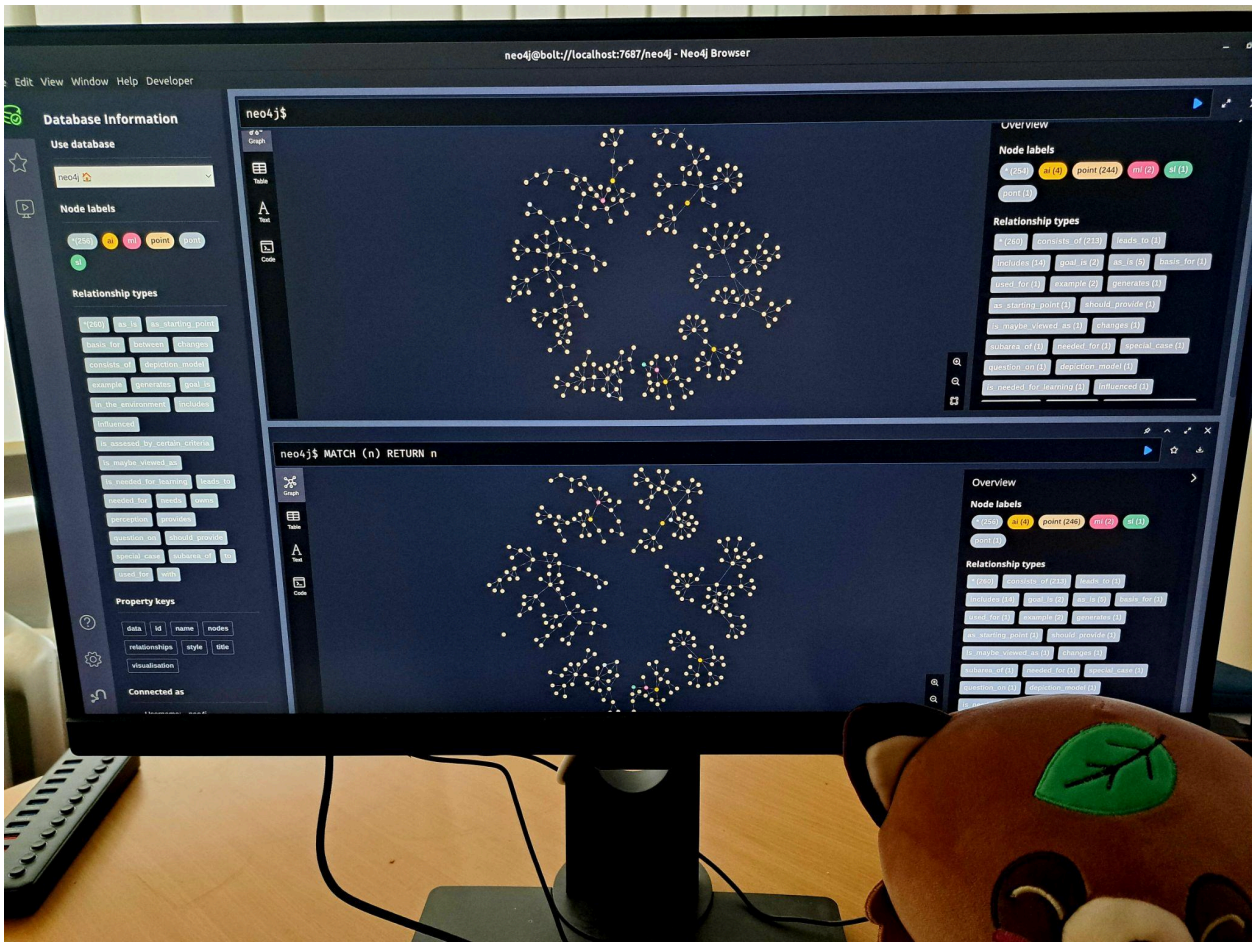
```
MATCH (n)-[r]->(m)
WHERE ID(n) = <node_id>
RETURN n, r, m
```

If you only know the label and not the node id:

```
MATCH (n:Label)-[r]->(m)
RETURN n, r, m
```

Command to delete ALL duplicated nodes:
(Warning: Might wanna stay away from this one since we have some duplicated nodes that we do need)

```
MATCH (n)
WITH n.property AS property, COUNT(*) AS count
WHERE count > 1
MATCH (n {property: property})
WITH n, ROW_NUMBER() OVER (PARTITION BY n.property ORDER BY ID(n)) AS row_number
WHERE row_number > 1
DELETE n
```



ENJOYY!!
Feel free to mail me if something goes wrong or if you need help with anything.

WEIRD THINGY AND FIXES:

If you see a gray coloured node or pont… that means that there is something wrong with that node.

Click on the nearby nodes in direct relationship with the faulty node to see which graph they belong to.
Go to that cypher file and check the relationship section of that node and neary nodes.
Most probably, it will be a minor issue like wrong name, typo, missing comma etc. sso fix that.
Delete the DB
Run the cypher files again
ANd it should be fixed