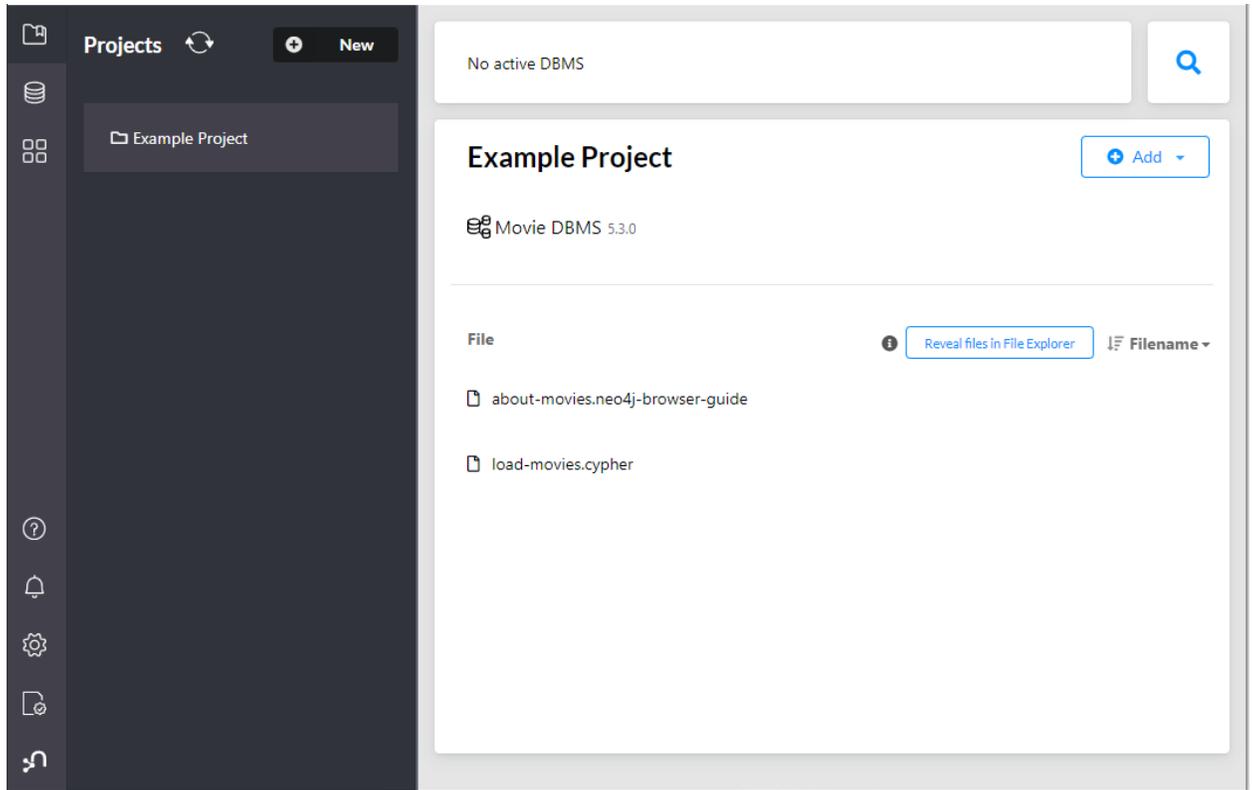
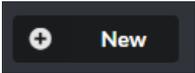
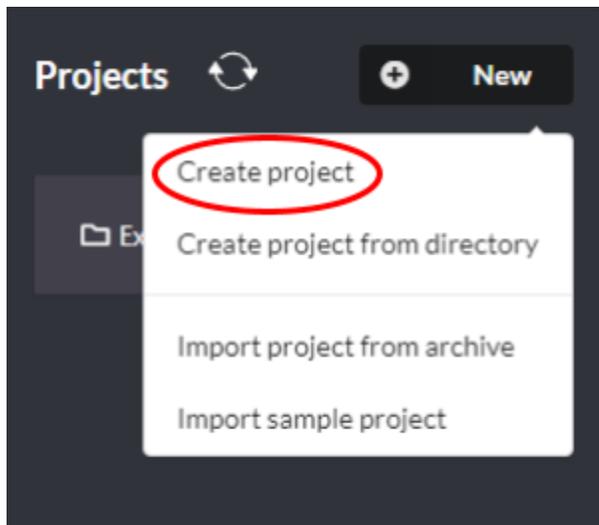


STEP BY STEP GUIDE ON SETTING UP A DATABASE IN NEO4J

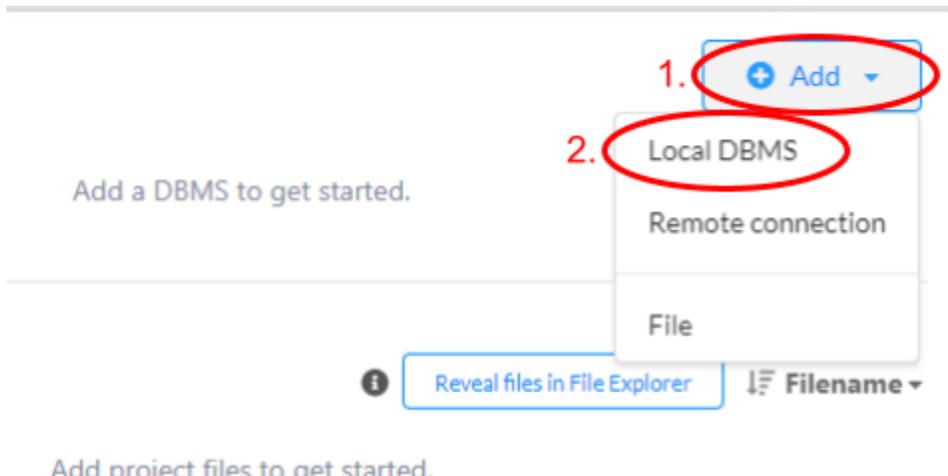
1. Install Neo4J (<https://neo4j.com/download/>)
2. The app should look similar to the following figure.



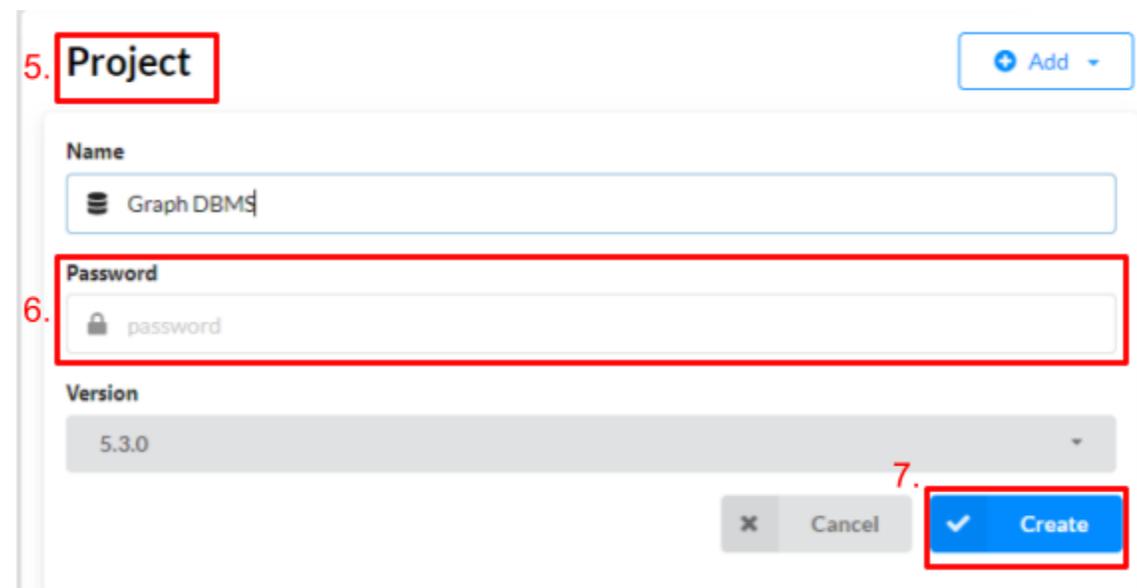
3. Now Click  next to Projects to create a project.



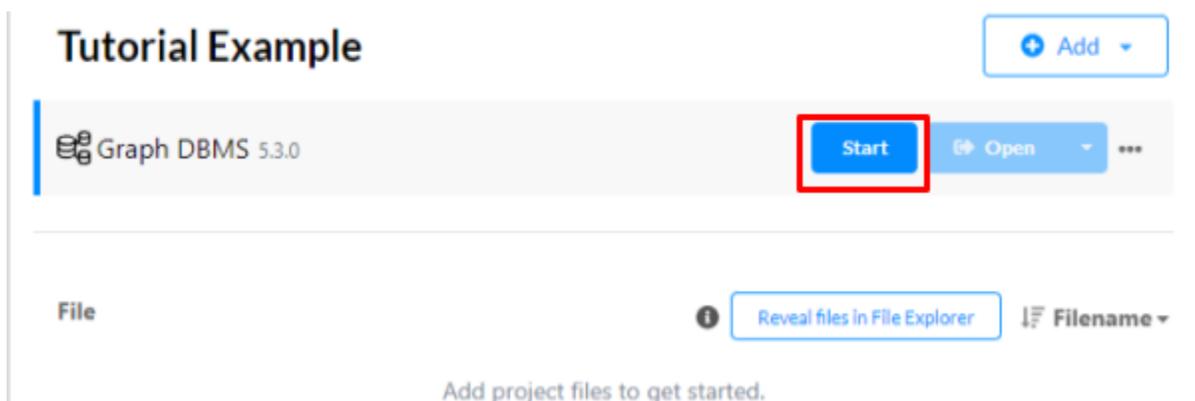
4. Now click “Add,” then click “Local DBMS”



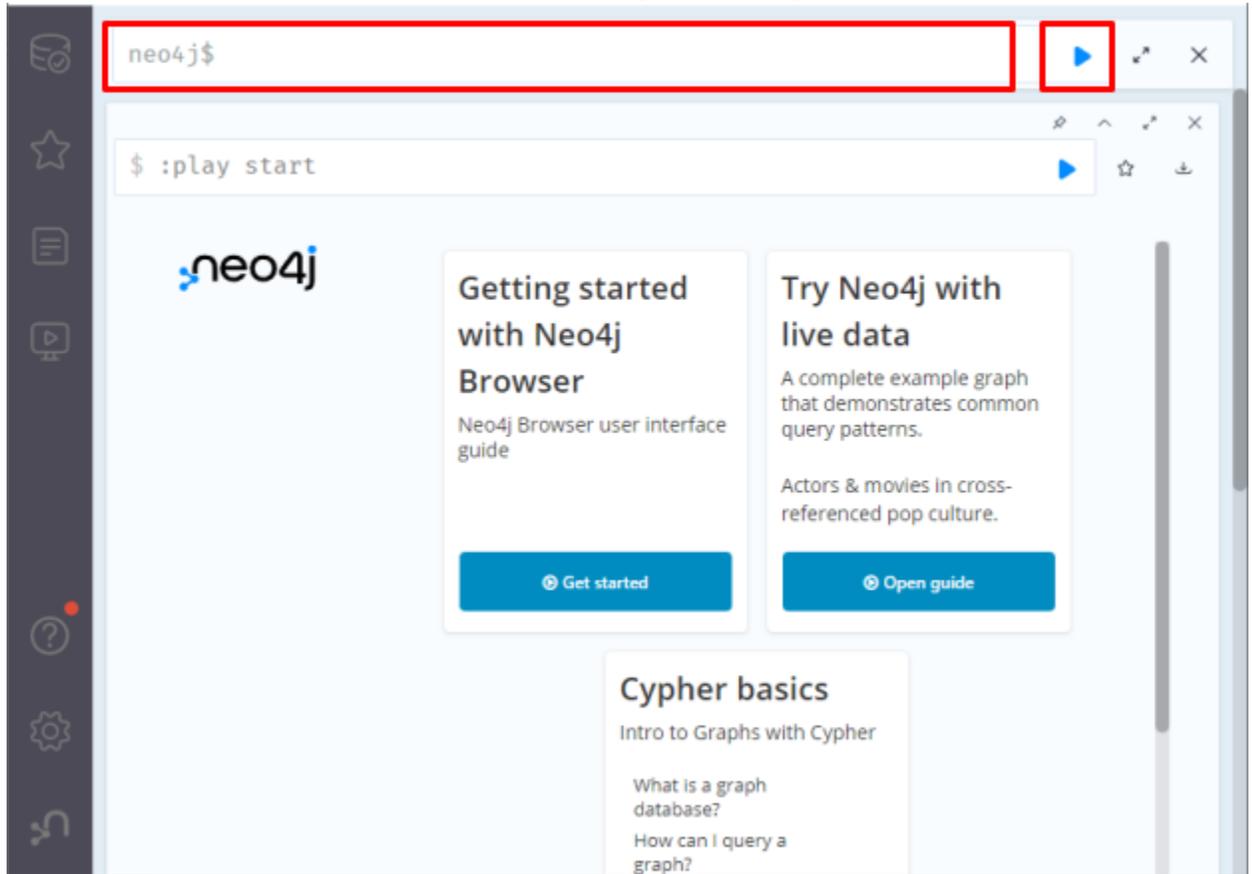
5. You can rename a project by clicking “Project.”
6. The password is required to connect to R or other software to analyze the database.
7. Now click Create



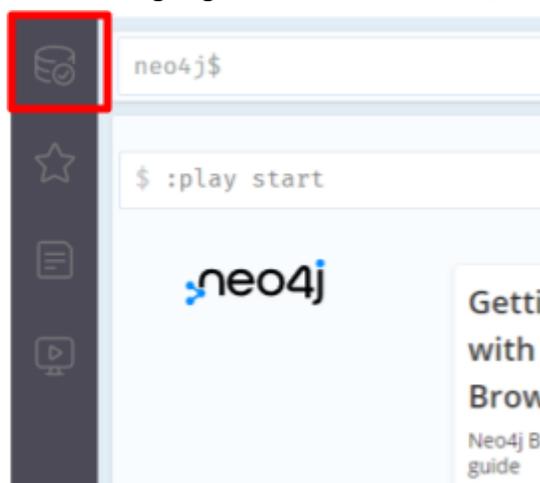
8. Click Start



9. When open, a browser will appear, where we write queries and visualize the data. The red box is where you can input the code generated from CodaSaurus.
 - a. The red box is highlighting the Editor. It is the main interface for entering code and browser commands.
 - b. To run each command, click the blue triangle on the right.



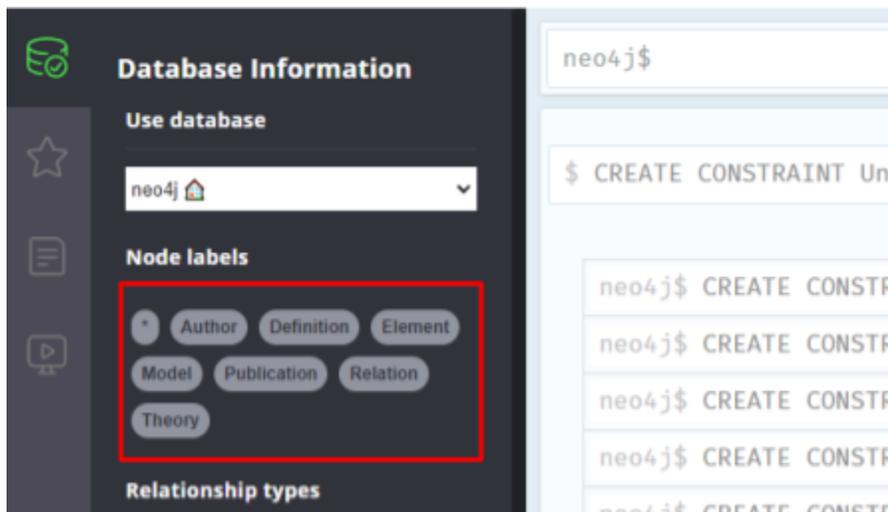
10. Click the highlighted tab to see Nodes, Relationship Types, Property Keys, etc.



11. It is important to create constraints to ensure the integrity of a database.
We recommend the following constraints:

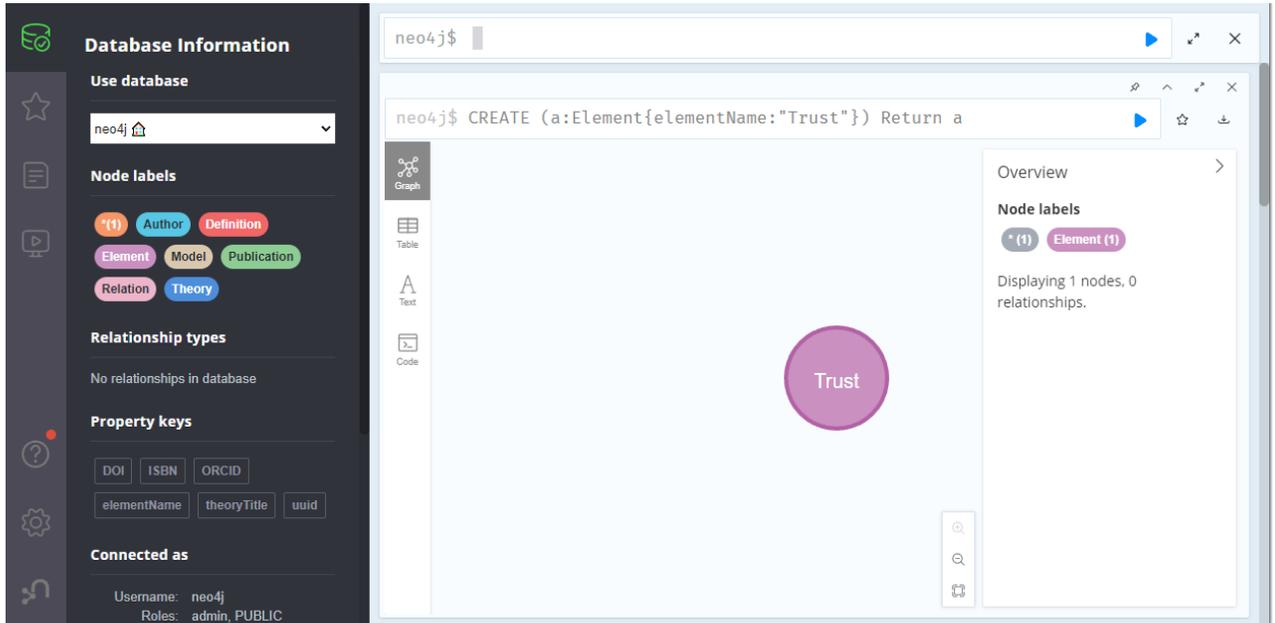
```
CREATE CONSTRAINT UniqueElement FOR (a:Element) REQUIRE a.elementName IS UNIQUE;  
CREATE CONSTRAINT UniqueDefinition FOR (a:Definition) REQUIRE a.uuid IS UNIQUE;  
CREATE CONSTRAINT UniquePublicationDOI FOR (a:Publication) REQUIRE a.DOI IS UNIQUE;  
CREATE CONSTRAINT UniquePublicationISBN FOR (a:Publication) REQUIRE a.ISBN IS UNIQUE;  
CREATE CONSTRAINT UniquePublicationUUID FOR (a:Publication) REQUIRE a.uuid IS UNIQUE;  
CREATE CONSTRAINT UniqueAuthorORCID FOR (a:Author) REQUIRE a.ORCID IS UNIQUE;  
CREATE CONSTRAINT UniqueAuthorUUID FOR (a:Author) REQUIRE a.uuid IS UNIQUE;  
CREATE CONSTRAINT UniqueTheory FOR (a:Theory) REQUIRE a.theoryTitle IS UNIQUE;  
CREATE CONSTRAINT UniqueModel FOR (a:Model) REQUIRE a.uuid IS UNIQUE;  
CREATE CONSTRAINT UniqueRelation FOR (a:Relation) REQUIRE a.uuid IS UNIQUE;
```

12. To create the constraints, simply run the above code in a Neo4j browser. The highlighted portion appears when constraints are added.

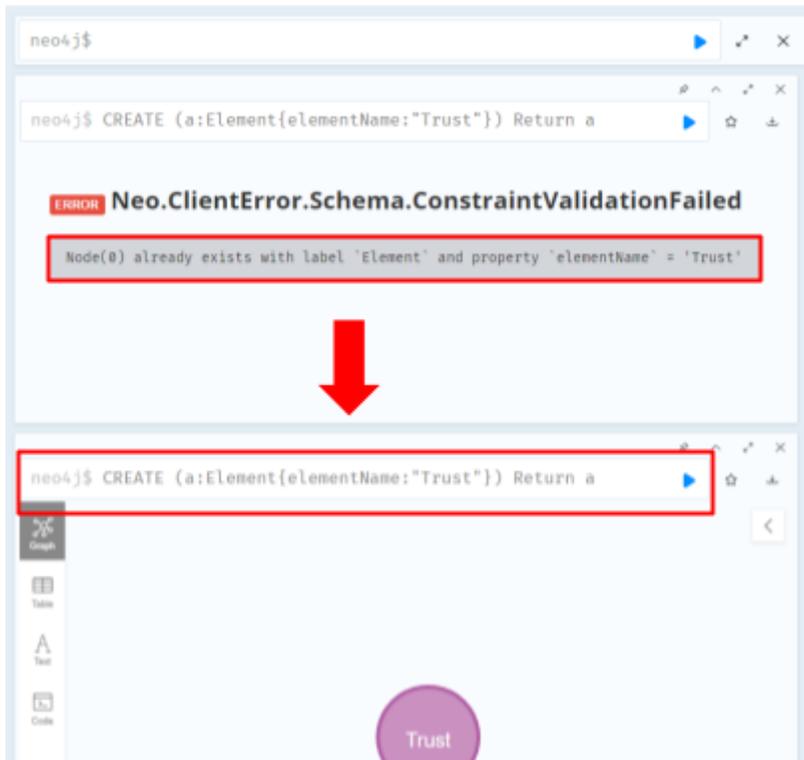


The database now is ready to add more papers. The following situation might occur when multiple papers sharing the same nodes are added to one database.

1. The first time time 'Trust' is added to the database. The following should appear.



2. However, when trying to run the same code again, you will notice this display. Neo4J claims the Node under the category "Element" named Trust already exists



3. To solve this issue, delete the repeated query that creates the same Node.