Date:04.04.2022

Third Year B. Tech., Sem VI 2021-22

4CS372 : Advanced Database System Lab

Assignment Submission

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Batch: T2

Assignment: 9

Title of assignment: Neo4j Graph Database

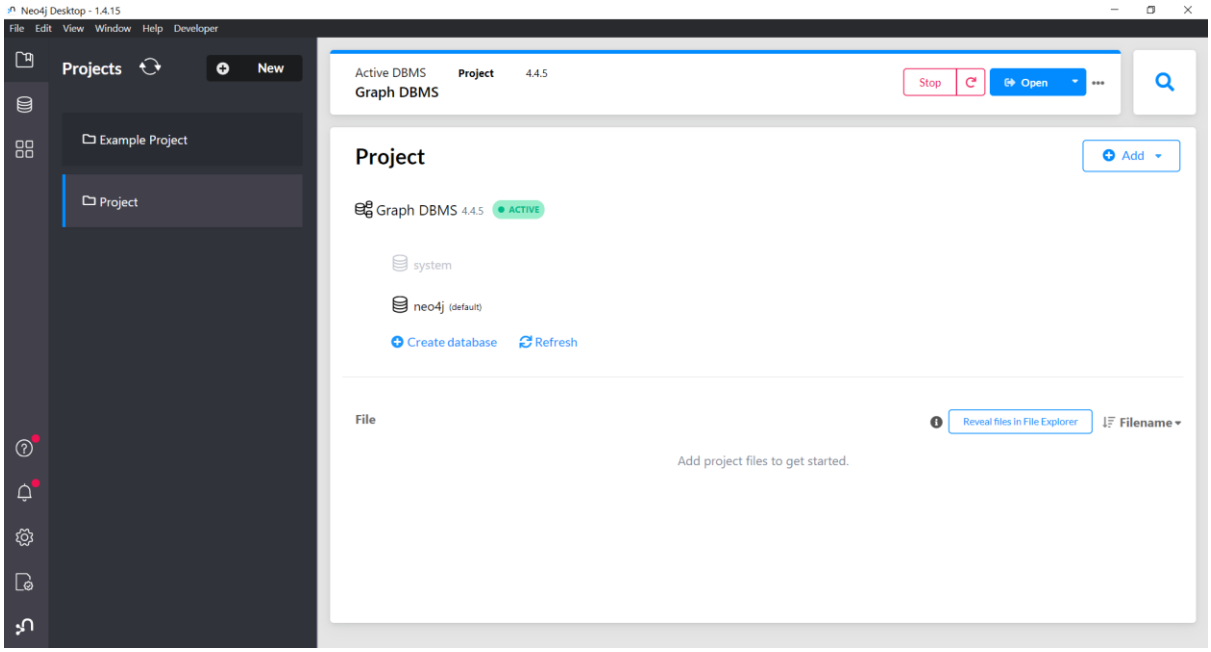
Objective:

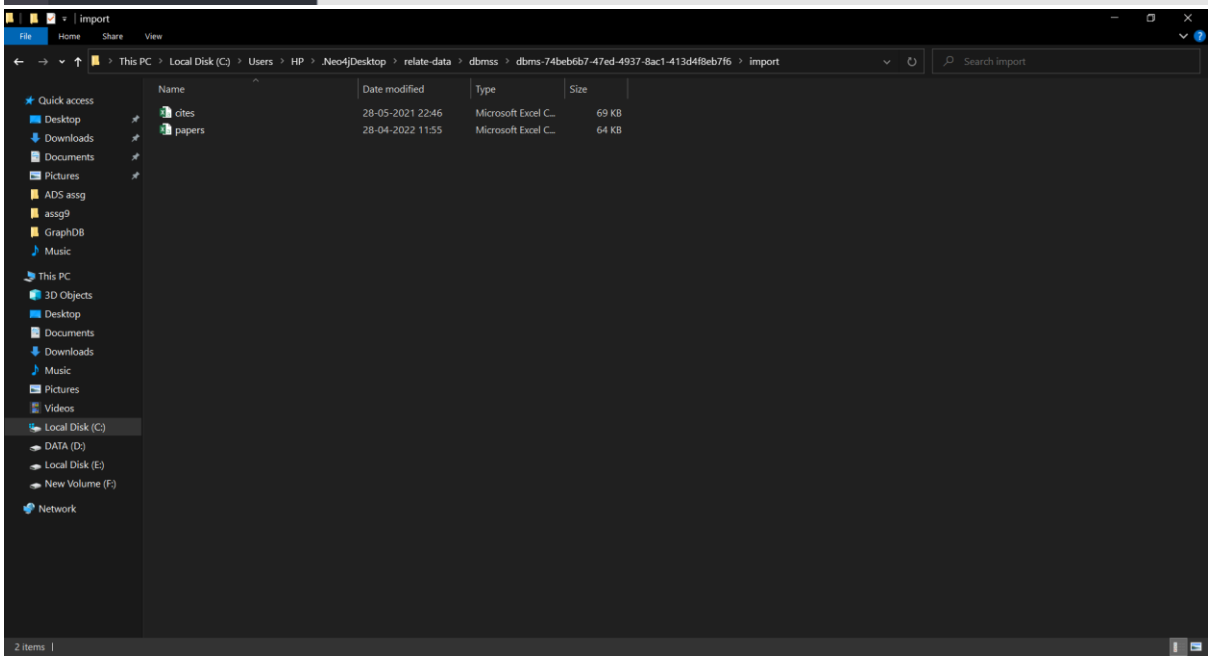
Consider the “Research Papers Database”, load and query this data using Neo4j Data Browser

Introduction & Theory:

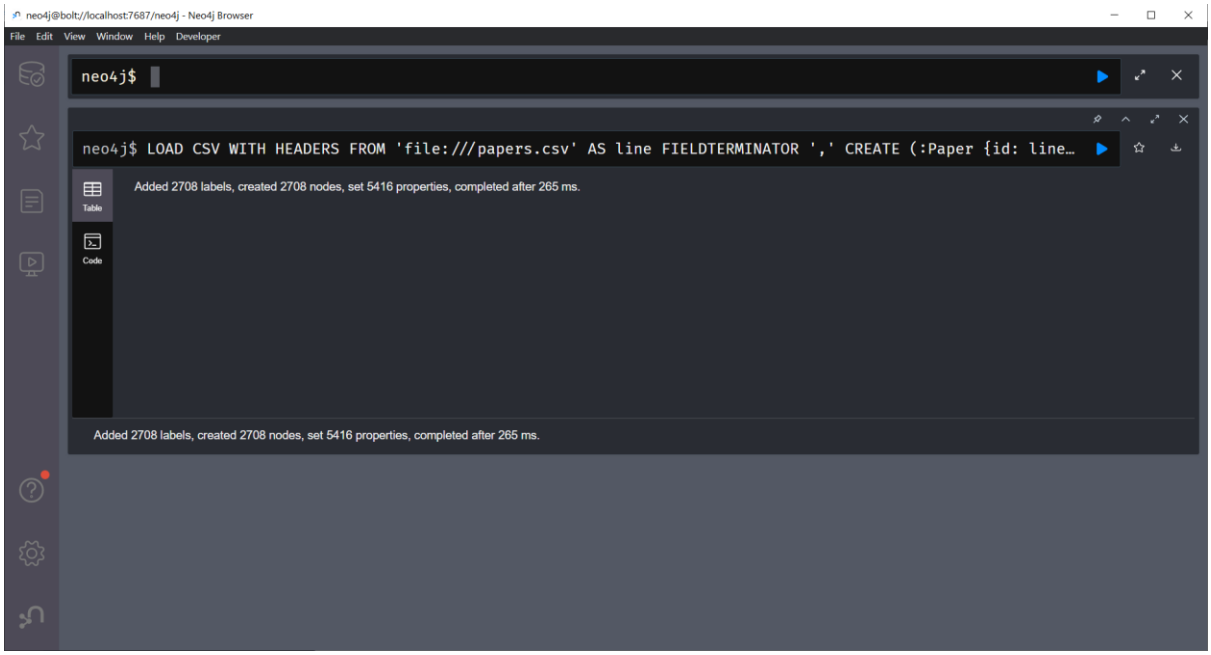
Neo4j is a graph database management system. Neo4j is a native graph database, built from the ground up to leverage not only data but also data relationships. Neo4j connects data as it’s stored, enabling queries never before imagined, at speeds never thought possible.

Procedure / Experiment :

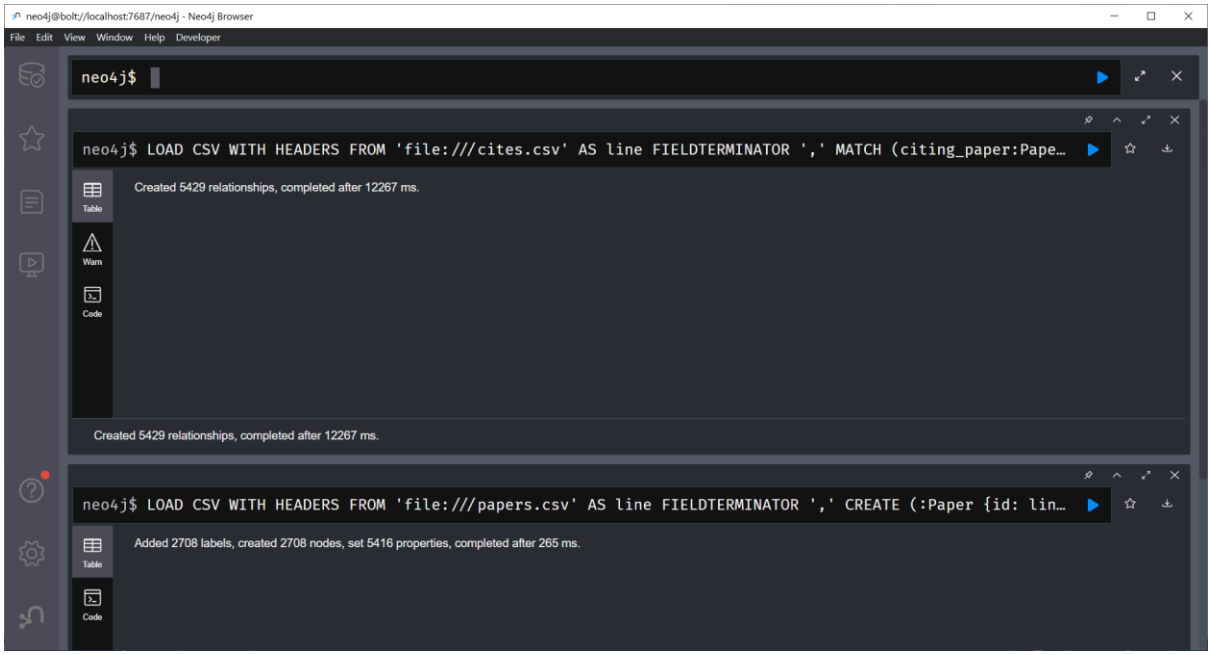




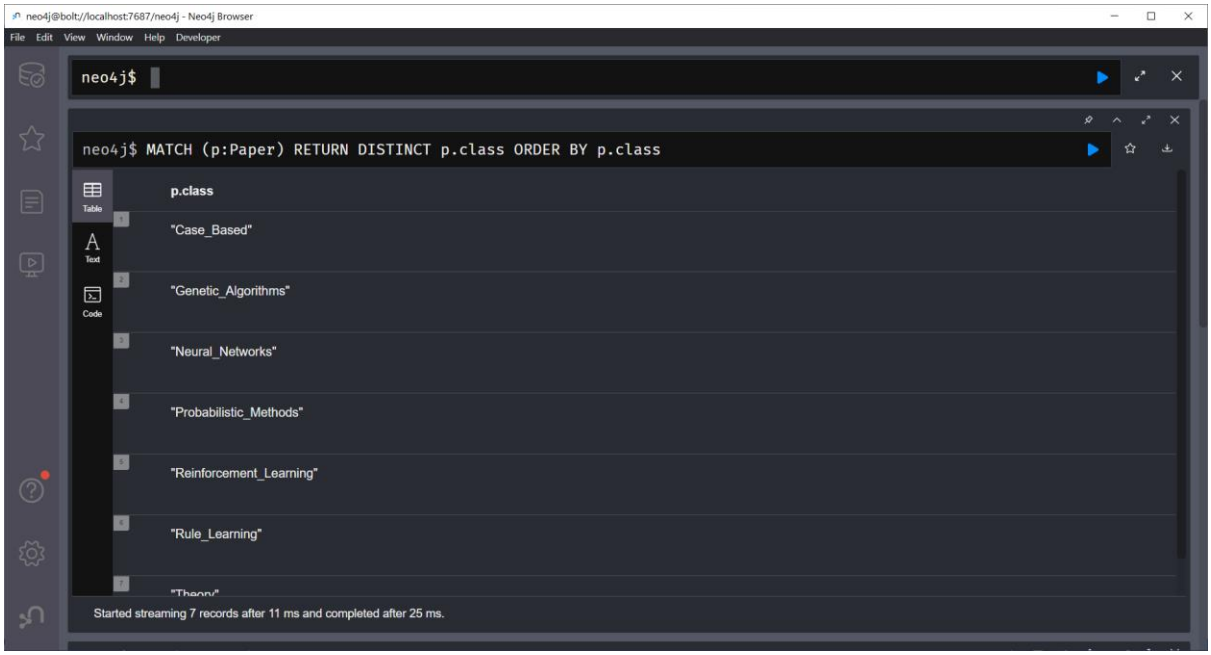
LOAD CSV WITH HEADERS FROM 'file:///papers.csv' AS line FIELDTERMINATOR ',' CREATE (:Paper {id: line.paper_id, class: line.label})



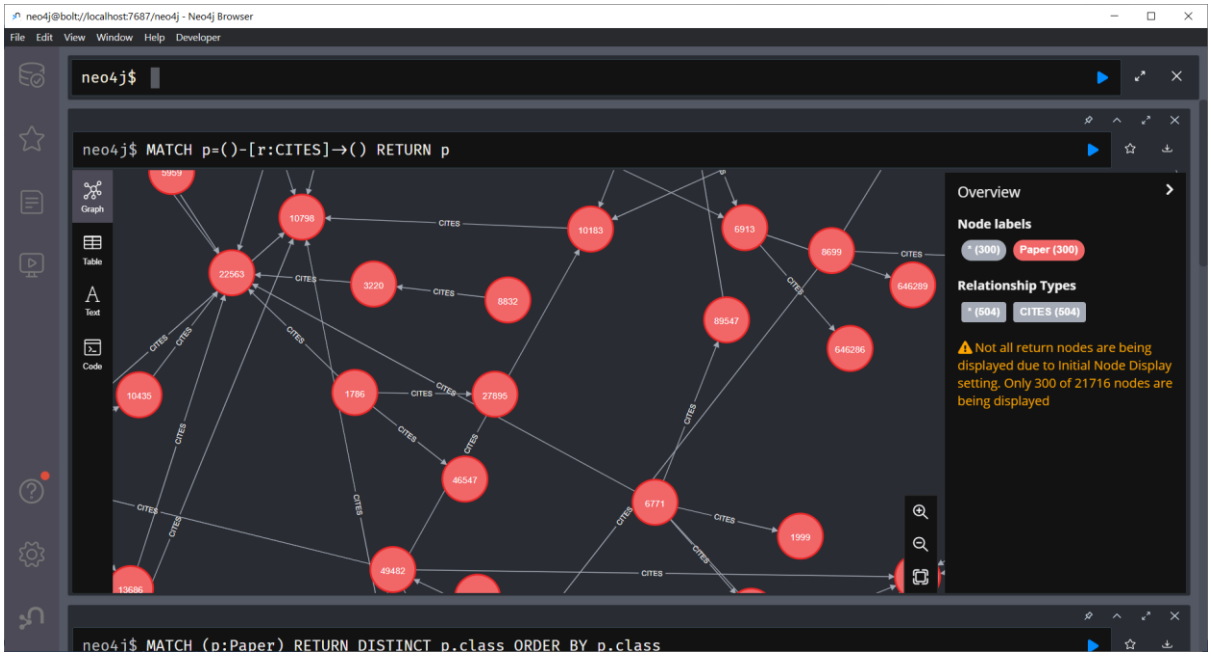
LOAD CSV WITH HEADERS FROM 'file:///cites.csv' AS line FIELDTERMINATOR ',' MATCH (citing_paper:Paper {id: line.citing_paper_id}), (cited_paper:Paper {id: line.cited_paper_id}) CREATE (citing_paper)-[:CITES]->(cited_paper)



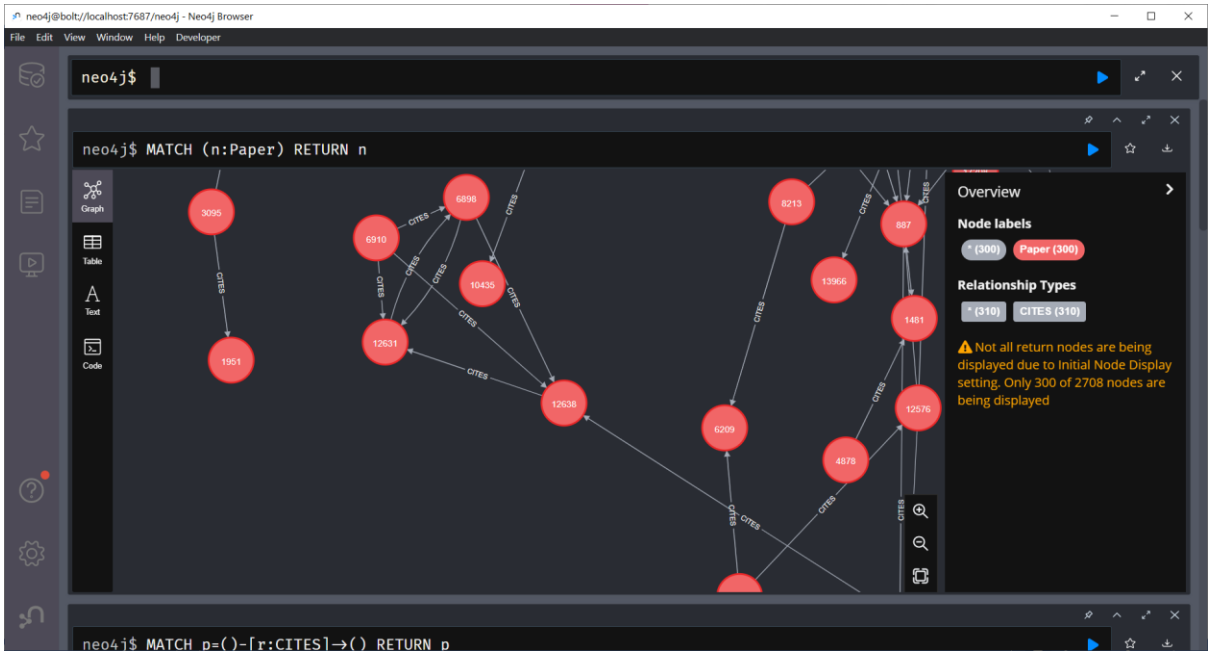
MATCH (p:Paper) RETURN DISTINCT p.class ORDER BY p.class



MATCH p=()-[r:CITES]->() RETURN p

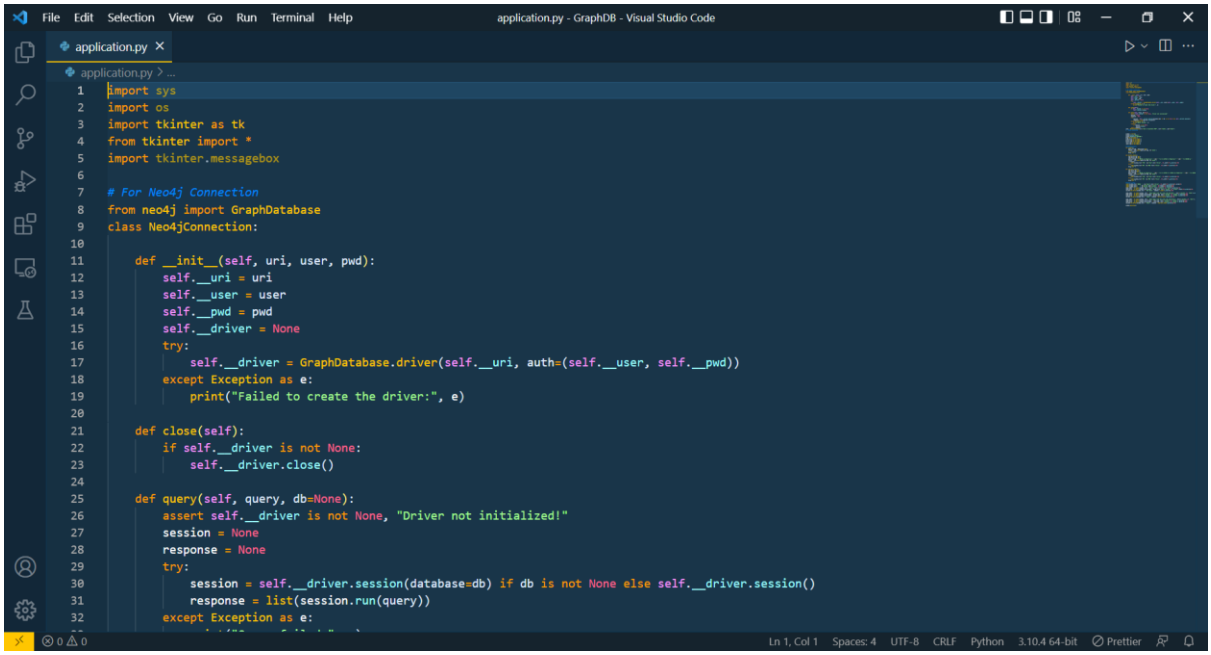


MATCH (n:Paper) RETURN n

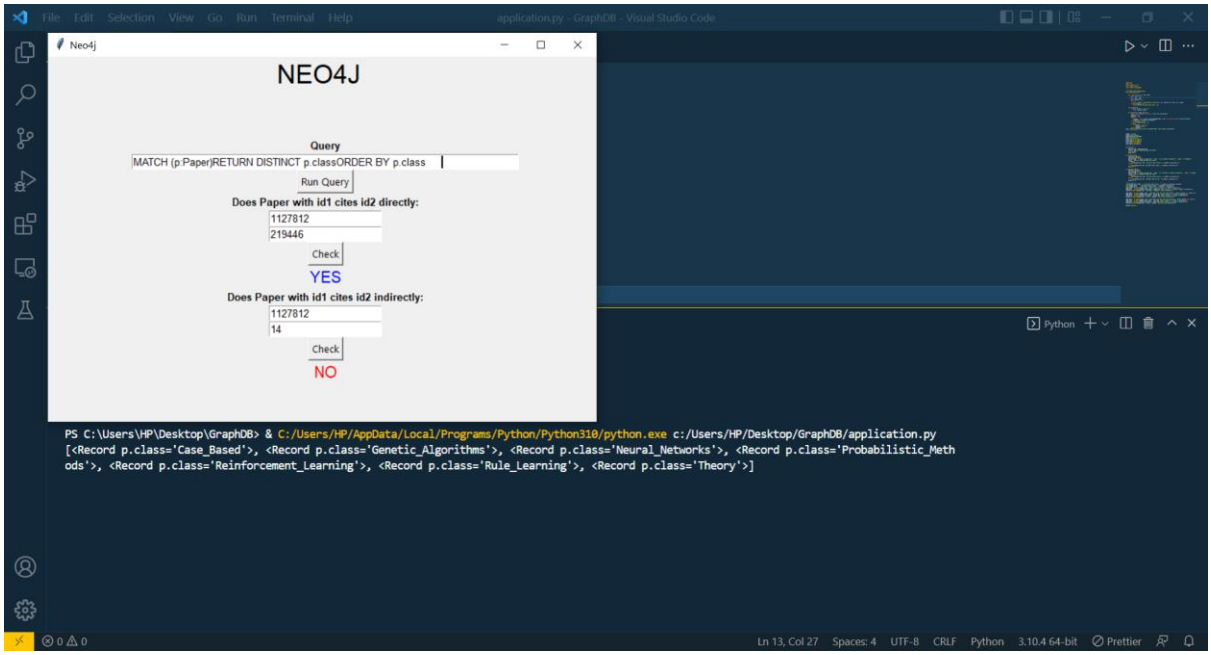


Application

application.py



GUI



Conclusion:

Able to load data from “Research Papers Database” and to perform queries on this data. Able to create python application connected with neo4j database.

References:

https://neo4j.com/