Graph Theory and its Applications

Assignment 4

Restaurant Recommender System

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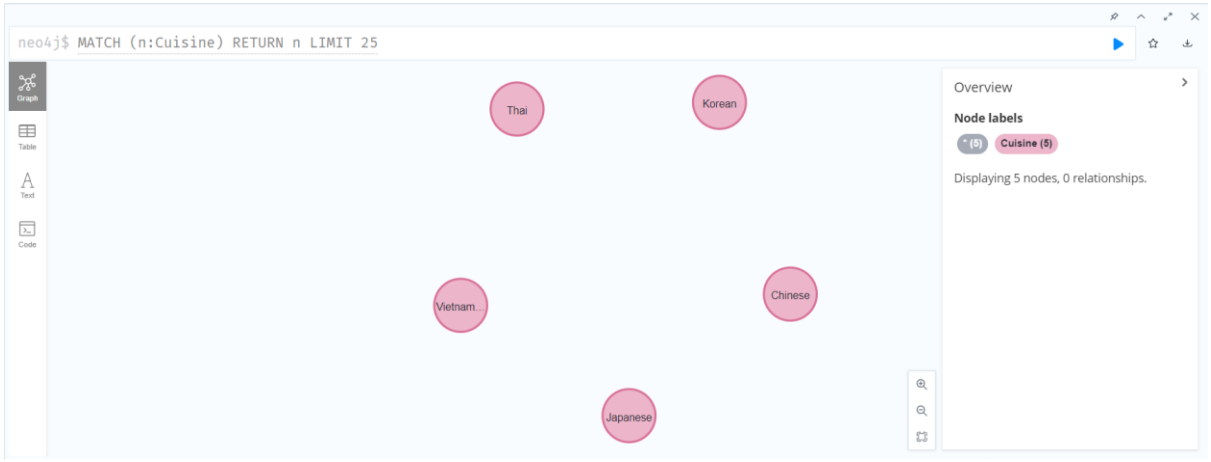
About the Dataset :

For building the Restaurant Recommender System we use 8 main datasets

- Cuisine.csv
- Location.csv
- Person.csv
- Restaurant.csv
- Is_friend_of.csv
- Likes.csv
- Located.csv
- Serves.csv

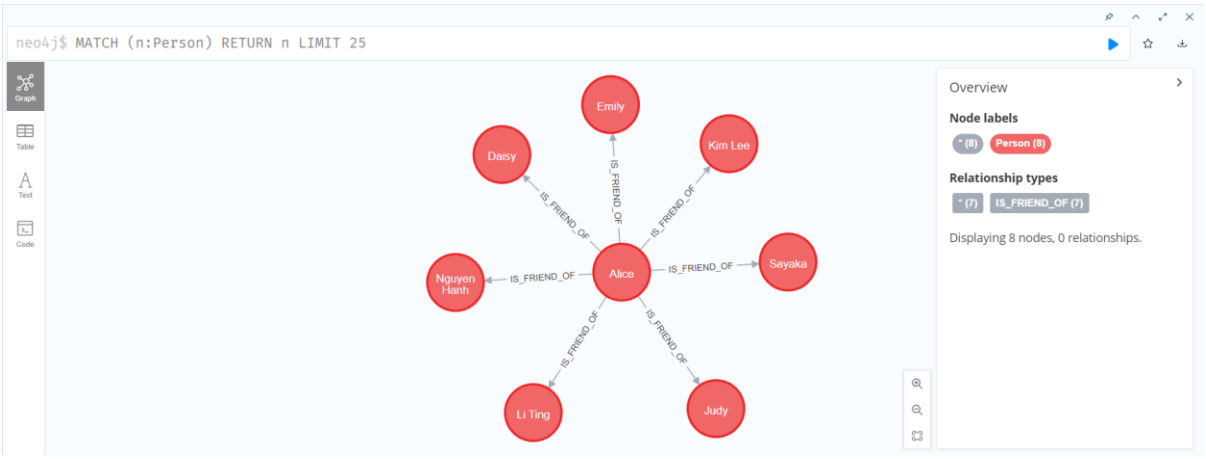
Creating Nodes

A. Cuisine



B. Location

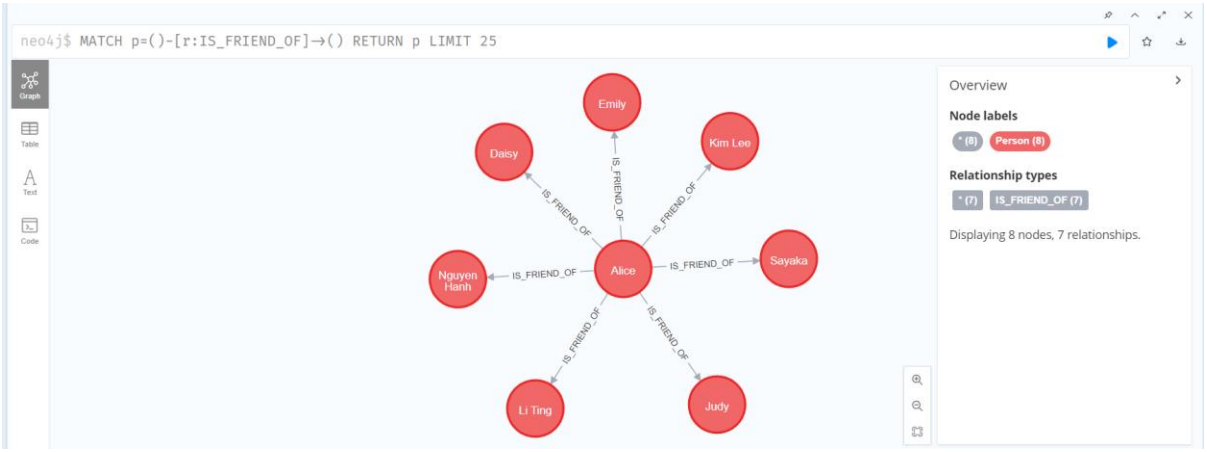
C. Person



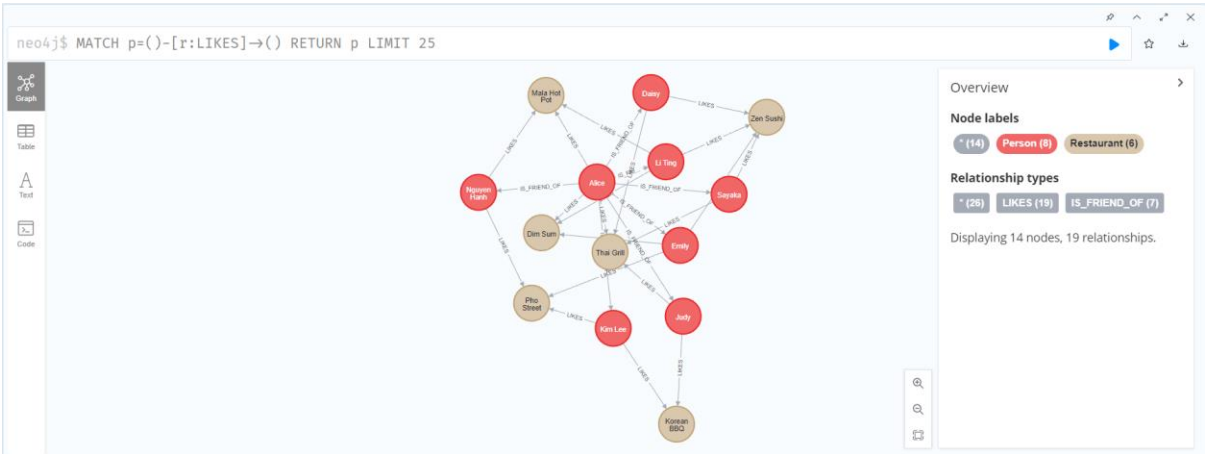
D. Restaurant

Creating Relation

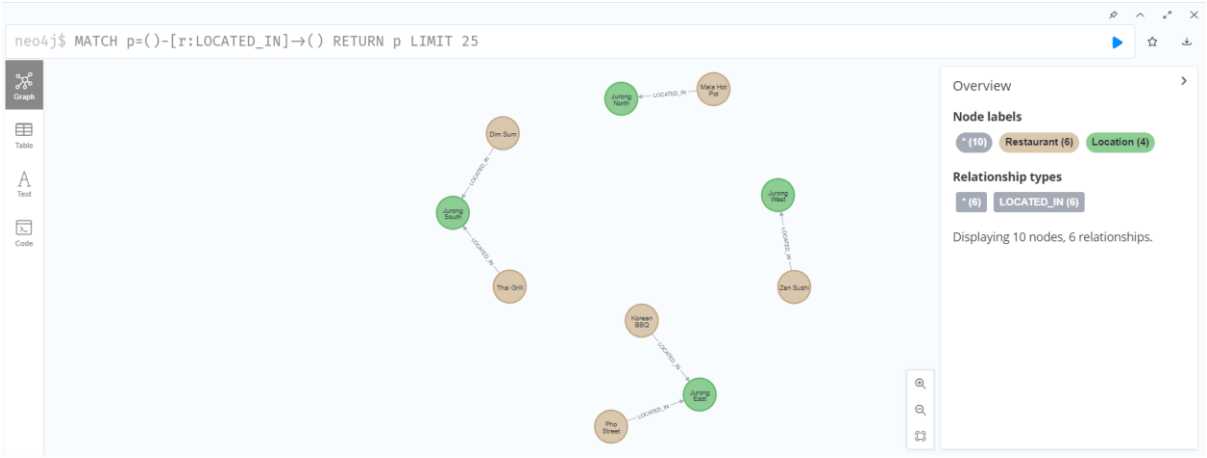
A. Is_friend_of



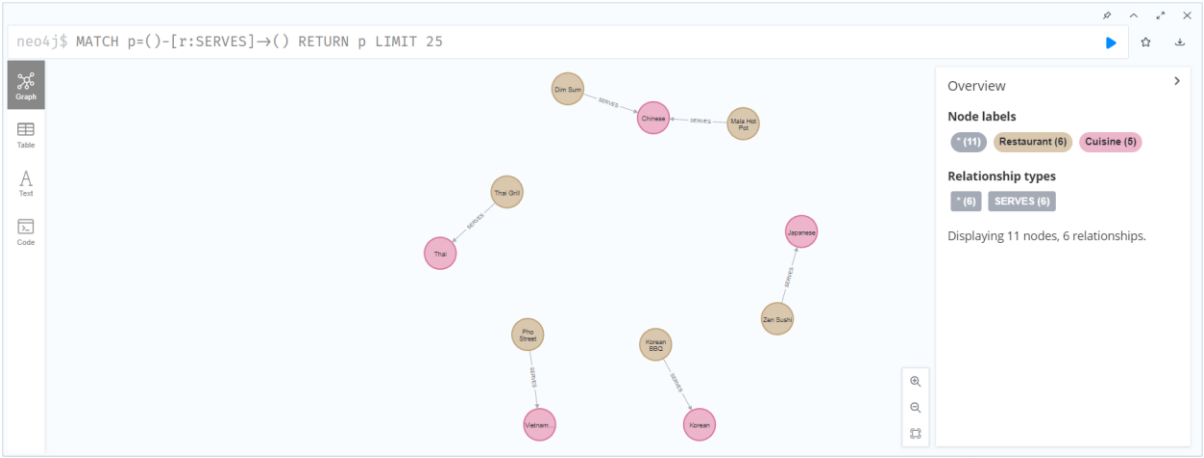
B. Likes



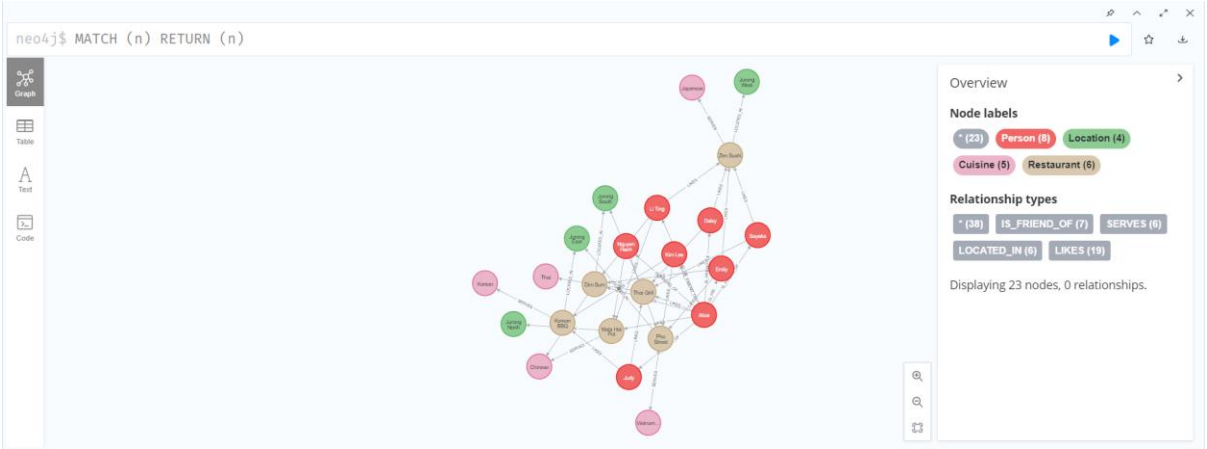
C. Located_in



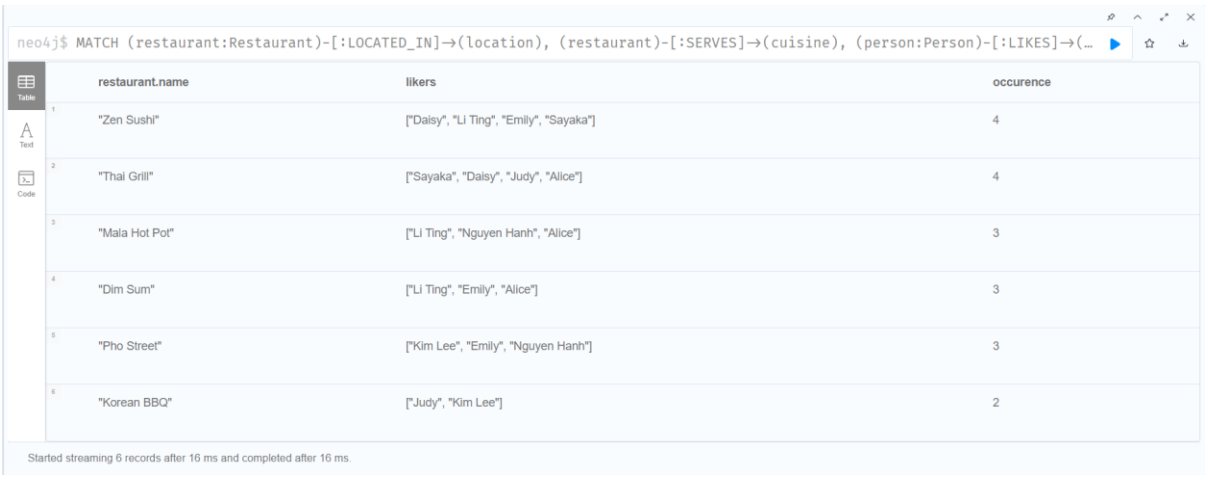
D. serves



Whole Graph



Content Based Filtering :

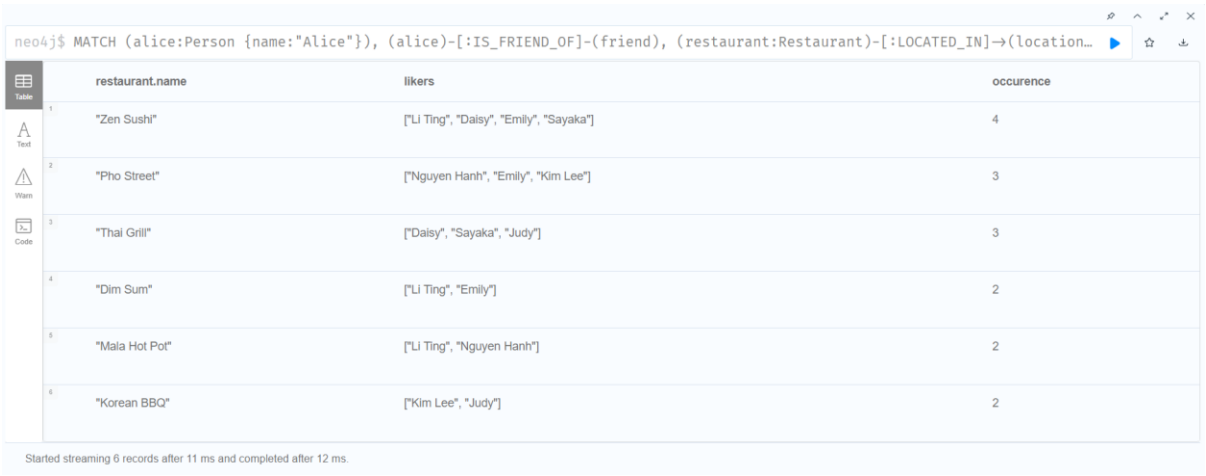


```
neo4j$ MATCH (restaurant:Restaurant)-[:LOCATED_IN]→(location), (restaurant)-[:SERVES]→(cuisine), (person:Person)-[:LIKES]→(…
```

	restaurant.name	likers	occurence
1	"Zen Sushi"	["Daisy", "Li Ting", "Emily", "Sayaka"]	4
2	"Thai Grill"	["Sayaka", "Daisy", "Judy", "Alice"]	4
3	"Mala Hot Pot"	["Li Ting", "Nguyen Hanh", "Alice"]	3
4	"Dim Sum"	["Li Ting", "Emily", "Alice"]	3
5	"Pho Street"	["Kim Lee", "Emily", "Nguyen Hanh"]	3
6	"Korean BBQ"	["Judy", "Kim Lee"]	2

Started streaming 6 records after 16 ms and completed after 16 ms.

Collaborative Filtering :



```
neo4j$ MATCH (alice:Person {name:"Alice"}), (alice)-[:IS_FRIEND_OF]-(friend), (restaurant:Restaurant)-[:LOCATED_IN]→(location…
```

	restaurant.name	likers	occurence
1	"Zen Sushi"	["Li Ting", "Daisy", "Emily", "Sayaka"]	4
2	"Pho Street"	["Nguyen Hanh", "Emily", "Kim Lee"]	3
3	"Thai Grill"	["Daisy", "Sayaka", "Judy"]	3
4	"Dim Sum"	["Li Ting", "Emily"]	2
5	"Mala Hot Pot"	["Li Ting", "Nguyen Hanh"]	2
6	"Korean BBQ"	["Kim Lee", "Judy"]	2

Started streaming 6 records after 11 ms and completed after 12 ms.

Betweenness Centrality: