

ECE:5995 Modern Databases – Fall 2023 Homework 8 – Neo4j

Due Thursday Nov 30th, 2023 11:59pm.

For this homework we will use the movies database you created in Homework 7 within a Java or Python program (your choice).

<https://neo4j.com/developer/language-guides/>

A GUI is optional. Having an infinite loop or a menu-based interaction is also optional. All database operations need to be persistent.

Step 0. Download the driver and connect to your Neo4j server.

Step 1. Ask the user for their id X (value between 1-600).

Search for the user node with id = X. If there is a name property, display: “Welcome, <username>!”. If there is no name property, ask the user for their name and add it to the database.

Step 2. Allow the user to search for a movie title (search for titles that contain the keyword(s) entered by the user). List the movie title, genre, average rating, and a flag whether the user has already seen it (rated it) and their rating for all matching movies.

Step 3. Provide the user with their top 5 recommendations.

Execute query Q5.3 from Homework 7. Display the list of recommendations including movie id, title, average user rating (from all users), and number of ratings (from all users).

Step 4. Allow the user to provide a rating for any of the previous recommendations (by providing the movie id and the rating). Your program should add the RATED relationship between the movie and the user to the database.

Step 5. Make sure to close the connection(s) before your program ends.

Submission:

Submit your source code, readme and a sample output/run of your program to the dropbox for Homework 8 on ICON by **Thursday Nov 30th 11:59pm.**