Name: _____ ID _____

Lab08: Graph Model (Neo4j)

Objective: To study and practice the Cypher commands in Neo4j to manage data in the graph database.

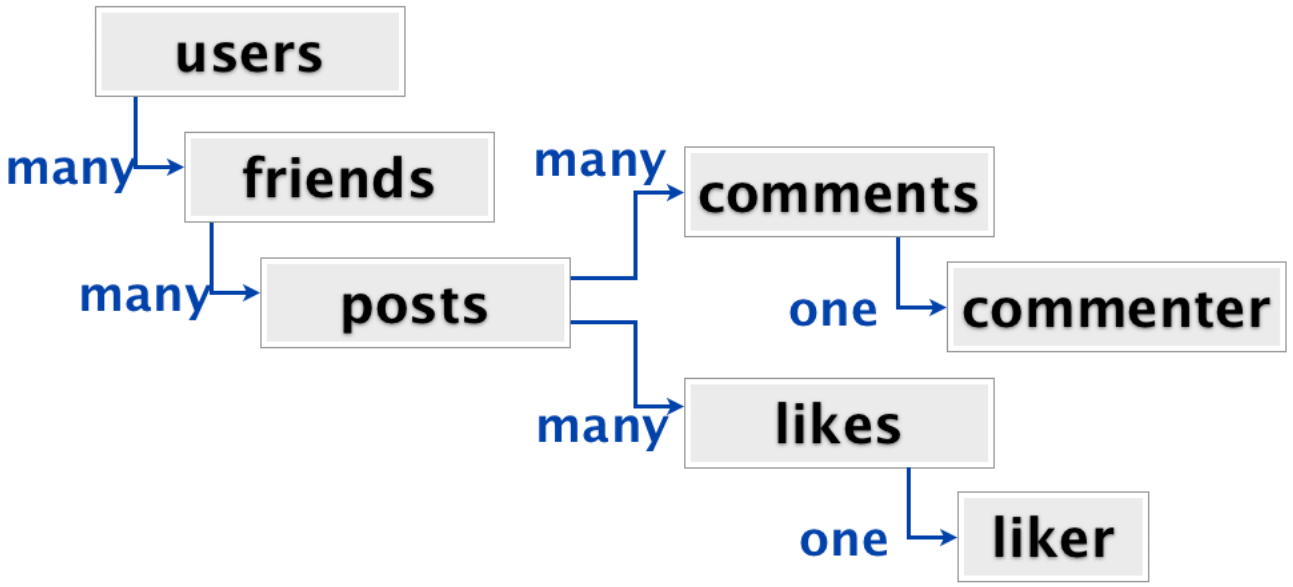
Estimated Time: 2 hours

Number of Tasks:

Due: Thursday 28 October 2021, 11:59 P.M.

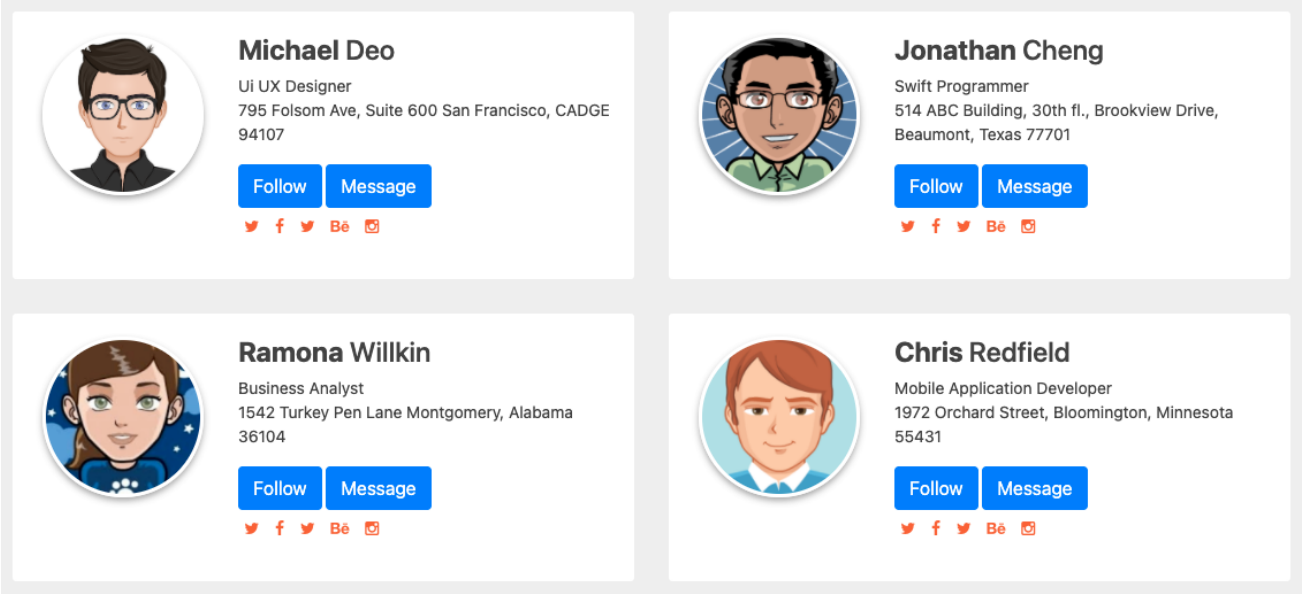
Scenario: Social Network System

This take-home assignment is based on the social network system as previous laboratories. The data maintained in the graph model consists of several components in the social network system, users and posts and all activities occurring in this system are making friends, commenting and reacting (likes) on user posts. The figure below shows the social network data model.



Instructions: For each task you are required to show the appropriate command to correspond to that task and the result to prove that your command works correctly.

Task 1: Consider these 4 users and create them in the graph database. Make sure you include their profile information.



Task 2: Suppose 4 of them are each other's friends, show a correspondent command to make them friends and show the result after adding them in the graph representation.

Task 3: Create 4 posts from all users (1 post each) and let the owner **REACT** his/her own post **(reactions can be Like, Love, Haha, Sad, Care and Angry, choose only one for each post).** Show a successful command and the result after adding such posts in the graph representation.

Task 4: Write a command to let each user react on 2 posts from different users. The following table shows information about who reacts on whose post.

Post Owner ->	Michael	Jonathan	Ramona	Chris
Users				
Michael		Like	Love	
Jonathan			Haha	Sad
Ramona	Care			Angry
Chris	Like	Love		

Show both the command to record the above reactions and the result in the graph format.

Task 5: Write a command to let each user comment on 2 posts. Each comment should store a unique ID, message, a current date and time of creation. The following table shows information about who comments on whose post. (Total of 8 comments for this task)

Post Owner ->	Michael	Jonathan	Ramona	Chris
Users				
Michael			✔	✔
Jonathan	✔		✔	
Ramona		✔		✔
Chris	✔	✔		

Show both the command to record all comments and the result in the graph format.

Task 6: Suppose Jonathan has made a typo in his comment on Michael's post. Please show your command to update this comment and record the time and date that Jonathan has edited.

Task 8: Show the command to count the number of reactions that each user received. Make sure that your command will separate the type of reactions. Also show the result after executing your command.

Task 9: From task 4, Chris would like to UNLIKE Michael's post. Write a command to correspond with Chris' action.

Task 10: Ramona would like to terminate her account. How should the system handle this operation?